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Shasta County Department of Resource Management
Planning Division

FOUNTAIN WIND PROJECT

FINAL ENVIRONMENTAL IMPACT REPORT – VOLUME 2

April 2021



Use Permit No. UP 16-007
State Clearinghouse No. 2019012029

Prepared for:
Department of Resource Management
Planning Division

Prepared by:
Environmental Science Associates





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Comment Letter P27

Date: October 20th, 2020

To: Lio Salazar, Planning Department, Shasta County

From: Margaret (Maggie) Osa

Subj: Response to the Fountain Wind Draft Environmental Impact Report

I appreciate the opportunity to respond to the Fountain Wind DEIR and I am completely opposed to this project. Within my comments I present several areas within the DEIR that are inadequate and appear to violate CEQA law. The CEQA violations are found in providing substantial evidence to support the mitigation impacts and lack of alternatives considered due to the purpose of the Project and including the Project Objectives which are narrowly focused and out of scope to the true purpose of the Project.

The fact that the Applicant has named this Project the Fountain Wind Project, the same name as the Fountain Fire from 1992, is insensitive and appalling which continue to bring back those terrifying, life changing, and destructive events that they had to live through.

The DEIR/FEIR for this special use permit should not be certified due to the lack of necessary environmental studies, conflict of interest areas, incomplete data analysis, General Plan and SSC conflicts/inadequacies, lack of evidence of sufficient capacity, reliability, and safety regarding the PG&E transmission grid, increased wildfire ignition points, cultural devastation and erasing of cultural heritage and sacred practices, and pure speculation presented as facts regarding any reduction in mitigation measures.

This is the wrong project, in the wrong area, due to the wildfire reasons alone, which the Applicant or the County failed to prove that it is necessary or safe. The Applicant has targeted Shasta County due to the lack of sufficient zoning code and only rely on standards introduced by the developers from outside the County zoning codes per page 3.11-12 of the DEIR. The examples provided in the examples provide the proof that Shasta County has insufficient zoning codes to adequately and effective industrial wind developments throughout the County. In addition they present their mitigation measures as if they will ever be sufficient to overcome the devastation that it will bring to Shasta County all while introducing “financial incentives” to the socially and financially repressed area to off-set their destruction.

This document is laid out in the sections related to the DEIR and I will step through why this DEIR/FEIR should not be certified and this special use permit denied (UP 16-007) with a No Project Vote as the only vote.

Chapter 1

1.4 CEQA Process Overview

1. Disclose to decision-makers and the public the potential significant environmental effects of a proposed discretionary project. The DEIR is inadequate and clearly fails to provide any evidence regarding the sufficiency, reliability, and safety, of the very transmission grid that the Project proposing to make the interconnection for the Project. To make the assumption that the CPUC is responsible to ensure the safety of the electrical transmission grid will prove deadly as it was in the “Camp Fire Public Report, dated June 2020.

For the DEIR to state on page 3.15-2 “The CPUC regulates services and utilities and assures California’s access to safe and reliable utility infrastructure and services” fails to be substantially supported throughout the DEIR and particular in the wildfire section.

PG&E as the transmission grid operator cannot be held responsible alone in the continued transgression and the failings by PG&E since the CPUC may also be under investigation for the lax of property oversight of PG&E. As been proven the CPUC has regulated PG&E for decades and PG&E still has five felony convictions in the San Bruno explosion in 2010, reckless and negligent decisions to unreasonably ignore risk in the 2018

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Camp Fire, provided fraudulent gas and electrical transmission inspection reports, and in several instances ignored known fire dangers for years.

The DEIR does not disclose the necessary information for the decision-makers since it failed to provide the required information in relation to the PG&E bankruptcy and the state of their transmission grid. The bankruptcy, the largest in U.S. History, which resulted due the numerous wildfires set within the PG&E territories from the lack of safety maintenance and hardening efforts that are needed. Attachment (1) “The Camp Fire Public Report” indicates that PG&E knew of the inadequacies of the grid and failed to maintain it sufficiently. Where in the DEIR has sufficient evidence been presented that the transmission grid is proven to be safe and sufficient as outlined in the Project Objectives and stated as speculation? The DEIR does not indicate that anyone from the CPUC or PG&E has provided documentation that their transmission lines within and near the project site are even safe for this added intermittent power.

In the recent release of the criminal court case within Butte County against PG&E “The Camp Fire Public Report” dated June 2020, proves just how insufficient the PG&E transmission grid is and to assume otherwise for the approval of the Project special use permit could prove too be deadly.

The full report has been provided as Attachment (1) “The Camp Fire Public Report”

“after their months of hard work and review of all matters, returned an Indictment finding sufficient evidence to charge the Pacific Gas and Electric Company with 85 felony counts – one count of unlawfully and recklessly causing the Camp Fire as a result of its gross negligence in maintaining its power line, and 84 individual counts of involuntary manslaughter naming each of the persons directly killed in the Camp Fire by PG&E’s criminal negligence. The Indictment also included three special allegations for PG&E’s causing great bodily injury to a firefighter; causing great bodily injury to more than one surviving victim; and causing multiple structures to burn (listed as approximately 18,804 structures). (See attached Indictment.)” pg 4.

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XIII. RISK MANAGEMENT

Prior to the Camp Fire, risk management for electric transmission was supervised by TAM. During his testimony the Senior Director of Transmission Asset Management at the time of the Camp Fire, stated that the formulation of strategies by TAM relied, in part, on the assessment of risk. He defined “Risk” as “the probability and consequence of an event occurring.” He defined probability as the “likelihood of something happening” and consequence as “the impact of that event occurring.” He defined consequence as the result of an event occurring measured by impact on safety, impact on reliability and impact on the environment.

The Camp Fire investigation focused on two types of risk; risk of equipment failure and risk of fire.

A. Risk of Equipment Failure

The recommendations of the 2010 Quanta reports focused on ways to minimize the risk of equipment failure. In summary, the Quanta reports stated wear is a product of age and failure is a product of wear. All of the complex statistical analysis in the Quanta reports boiled down to the fact a large percentage of PG&E’s transmission assets were very old and needed extra attention. Despite hiring Quanta to assess and analyze its transmission assets and make recommendations, PG&E ignored those recommendations. According to internal PG&E documents, in 2010 a committee was assigned to review and comment on the Quanta reports. Numerous current and former TAM personnel who were part of that committee were interviewed. None of the former committee members could recall who made the decision to disregard the recommendations of Quanta or why. The Senior Director of Transmission Asset Management, who was not on the committee and was not assigned to TAM in 2010 testified regarding the Quanta reports:

“The Quanta study did not look at asset data from those utilities but rather business practices from those utilities. The only age information and corresponding failure data that

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was used in that study was associated with the subset of assets that failed in a two-year period within PG&E and made some assumptions that made the statistical analysis incorrect. So it wasn't sufficient for us to justify significant amounts of investments in the future, and we needed to do additional analysis in order to build the case for our regulators to be able to justify requesting authorization to be able to make additional investments in the infrastructure based on the results of that bullet point at a later date."

Although the Senior Director of Transmission Asset Management was dissatisfied with the Quanta reports, information from the Quanta reports was used and cited in numerous subsequent TAM documents, including documents produced by himself.

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PG&E internal documents and reports and a report filed with the CPUC clearly established PG&E was aware of the risk of equipment failure. In an undated internal PG&E draft report entitled “Transmission Overhead Conductors¹¹⁷” it was stated, “The major root cause of conductor failures is Equipment Failure (35%).” The report also stated inspections and maintenance performed according to the ETPM “are not preventing equipment failure due to wear, corrosion and other factors on conductors and associated equipment (splices).” The report also addressed the use of infrared inspections on transmission conductor: “In most cases, Infrared Inspections identify faults with components just prior to failure. Ariel (sic) inspections are conducted annually. This proactive approach yields little results.” No final copy of this report was located and it is unknown why this report was drafted and to whom this report was distributed.

In another undated, unattributed internal report entitled “EO¹¹⁸ Transmission OH¹¹⁹ White Paper¹²⁰” the effects of equipment failure was again discussed. Whereas the Transmission Overhead Conductors was focused on conductor failure and how to mitigate/reduce the number of conductor failures, the EO Transmission OH White Paper focused on outages and how to reduce outages to improve reliability metrics. According to the OH White Paper, at the time of writing, conductors 105 years old were still in service. According to the OH White Paper, “The root causes of about 85% of the outages due to conductors from 2007 to 2012 can be attributed to trees, hardware, conductor, wind and snow...” Under the heading “Existing Conductor Strategy” the report reflects the strategy “is primarily Run to Failure (RTF), supplemented by” “periodic condition assessment and maintenance” and “program of targeted reliability improvements focusing on poorly performing lines which contribute the most to SAIFI.”

In November, 2017 PG&E filed the 2017 Risk Assessment and Mitigation Phase Report (RAMP)¹²¹ with CPUC. Chapter 10 of the RAMP was dedicated to, non-wildfire risks of the electric transmission overhead system. The RAMP looked at the known risks (identified as risk drivers) to the electric transmission system and explains how PG&E is mitigating those risks. The RAMP identified “Equipment Failure – Connectors/Hardware” as a significant risk. “Deterioration of connectors, splices or other connecting hardware that results in wire down events. This driver was associated with 28 out of 279 (10.0 percent) wire down events from 2012-2016, or an average of 5.7 events per year.” Efforts to mitigate the risk of Equipment Failure – Connectors/Hardware are divided into past (2016), present (2017-2019) and future (2020-2022). The mitigations listed are “Inspection and Maintenance,” “Overhead Conductor Replacement” and “Insulator Replacement.” The 2018 AMP also addressed equipment failure. The 2018 AMP used and defined the term “Risk Driver.” The definition includes reference to equipment failure: “A risk driver is defined as an element which alone or in combination with other drivers has the intrinsic potential to give rise to risk (which can be a single risk or multiple risks). There are 83 risk drivers related to transmission overhead line assets. Though there are many risk drivers, common drivers for transmission line overhead assets include equipment failure, vegetation, natural hazards (wind, snow, earthquakes, etc.) and third-party contact. These risk drivers enable PG&E to evaluate the controls that are in place and to strategically allocate resources to programs that strengthen these controls or create new controls to mitigate these risks.” According to the 2018 AMP “Conductor or connector/hardware failures account for 37% of all wire down events.” The AMP also stated 25% (26 of 103) of wire down events 2013-2017 were caused by failure of “connector/hardware and 42% (44 of 103) of wire down events 2013-2017 were caused by conductor failures.

The documents prove beyond any doubt that PG&E was aware of the risk of equipment failure causing conductor failure or “wire down events.” The undated draft Transmission Overhead Conductors established that at least one person within PG&E TAM was aware that inspections and patrols being done pursuant to the ETPM were doing very little to identify and prevent equipment failures.

¹¹⁷ The author of the report is not identified and was not identified during the investigation. Based upon content it appears the report was written in 2013

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¹¹⁸ EO is the PG&E abbreviation for Electric Operations.

¹¹⁹ OH is the PG&E abbreviation for Overhead.

¹²⁰ The author of the report is not identified and was not identified during the investigation. Based upon content it appears the report was written in 2014

¹²¹ Although not specific to equipment failure, the RAMP stated "Much of PG&E's transmission infrastructure was constructed in the years following WWII. As such, many assets are nearing "end of useful life". As these of assets near the end of their expected useful lives, PG&E will need to increase its level of asset replacements to avoid degradation in overall customer reliability and system performance." Construction of the Caribou-Palermo line began in the months (six months) following WWI.

B. Risk of Fire

Since, at least 2007, fire has been identified as the number one risk for PG&E. Chapter 11 of the 2017 RAMP stated:

"PG&E defines wildfire risk as: PG&E assets may initiate a wildland fire that endangers: the public, private property, sensitive lands, and/or leads to long-duration service outages.

PG&E has designated wildfire as an enterprise risk (in addition to being a top safety risk) since 2006. This risk is reviewed annually by the Safety, Nuclear and Operations, Committee of PG&E's Board of Directors. PG&E's exposure to wildfire risks continues to escalate despite increasing investment in compliance and public safety programs given various environmental and human factors. The most notable investments are the T&D routine VM work and the CEMA VM work related to the drought and the ongoing tree mortality state of emergency.

The CEMA work investment alone amounts to \$190 million in 2016 and \$208 million in 2017.¹⁴ Environmental variations, such as drought conditions or periods of wet weather that drive additional vegetation growth and wildfire fuel increases, can influence both the likelihood and severity of a wildfire event.



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Although vegetation management is rightfully a focus of PG&E's fire mitigation efforts, equipment failure was also identified as a significant fire risk. According to PG&E statistics included in the RAMP, 33% of fires initiated by PG&E assets were caused by equipment failure. Vegetation management caused 37% of fires initiated by PG&E assets. The RAMP breaks equipment failure into three categories: 1) conductor; 2) connector/hardware; and, 3) other. Equipment failure – connector/hardware is defined in the RAMP as "Failure of connectors, splices, or other connecting hardware resulting in wire down and fire ignition." Equipment Failure – Connector/Hardware risk driver accounts for 6 percent of 243 ignitions, or 15.5 per year.

Similar to Chapter 10 discussed above, Chapter 11 of the RAMP identified fire mitigation efforts as past (2016), present (2017-2019) and future (2020-2022). Although the RAMP listed extensive fire mitigation efforts done, being done, or planned to be done, none directly addresses the risk of connecting hardware failure.

The 2017 RAMP was not the first PG&E document that connected equipment failure – connectors/hardware to fire. The draft Transmission Overhead Conductors cited fire risk in a discussion of the "Bolted Connector Program." The Bolted Connector Program was apparently¹²² a name given to the replacement of bolted, parallel groove connectors, which began prior to 2009. As to the Bolted Connector Program the report sets forth: "M&C¹²³ only replacing bolted connectors during routine or emergency work with to those components identified during infra-red inspection or in areas identified as high fire risk."

PG&E records also document a previous equipment failure – connector/hardware on the Caribou-Palermo line. The 2007 Rock Fire was caused by the failure of a connector on a Caribou-Palermo line.

The evidence clearly establishes, beyond a doubt, PG&E was aware of the causal relationship between fire and equipment failure on transmission towers. The vast majority of PG&E initiated fires were caused by something (a tree, an animal, a person, the ground, or a steel structure) coming into contact with an energized conductor. The entire purpose of the electric transmission system is to move electricity from point A to point B through the conductor. The entire purpose of all of the components of the overhead transmission system, except the conductor, is to keep the conductor safely hanging in the air. Essential to keeping the conductor hanging in the air is the hardware that connects the conductor to the structure. PG&E knows that if that hardware breaks the result is a wire down event. Despite all of this knowledge PG&E did absolutely nothing to identify and replace the worn hardware essential to keeping the conductor safely in the air. Pg 62-65

XXII. CONCLUSION

The evidence developed during this investigation clearly established that the reckless actions of PG&E created the risk of a catastrophic fire in the Feather River Canyon, that PG&E knew of that risk and PG&E ignored the risk by not taking any action to mitigate the risk.

The C hook that broke was at least 97 years old. The exact age of the C hook is unknown because PG&E has no record of the hook. Ninety-seven (97) years is assumed because the Caribou-Valona transmission line, of which the Caribou-Palermo line is a segment, went into service in 1921. The records from the Great Western Power Company establish the entire line was built between 1918 and 1921. There are no records of when each tower was built. It is possible Tower 27/222 was built in 1918 and the C hook had been hanging for 100 years as of November 8, 2018. The same is true of the insulator string and the jumper conductor hanging from the C hook.

PG&E also has no records, and no idea, by whom the C hook was made, and more importantly, of what type of metal and how the C hook was made. The type of metal and the process of manufacture

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are what determines the hardness of metal. The transposition towers were designed to allow for movement of the conductor and insulator. The fact the C hook was constantly rubbing back forth against the hanger hole was known. The concept of body-on-body wear from constant rubbing together of two metals is a long established and well known phenomenon. Also long established and well known is the fact the various hardness of the metals rubbing together plays a key role in the body-on-body wear. The fact that PG&E relied on a 97-100 year old C hook it knew nothing about to hold an energized 115kV conductor is, by itself, negligent and reckless.

It is also disturbing that PG&E's only information of the composition of the conductor running through Tower 27/222 comes from a 1922 article in an engineering journal. A conductor is the wire that carries electricity from Point A to Point B. A conductor is the most important component of the transmission system. Everything else in the transmission system is designed around the conductor. PG&E has owned the Caribou-Palermo line since 1930. Based upon the lack of records PG&E has never made any attempt to inventory and catalogue the conductor. The fact that PG&E was using a 97-100 year old conductor for which they knew almost nothing is evidence of absolute indifference on the part of PG&E.



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Perhaps even more disturbing is the fact the conductor was aluminum reinforced with a steel core. 452.3 kcmil Aluminum Conductor Steel Reinforced to be exact. According to the Quanta report the average age of non-copper conductor was 36 years and the “greatest risk of failure in transmission conductors is thought to be with the oldest steel reinforced conductors” Although PG&E knew almost nothing about the conductor they did know it was at least 97 years old and made of steel reinforced aluminum. Despite this knowledge, PG&E did nothing and made no plans to replace that conductor. Even though because of updated NERC guidelines, PG&E was forced to replace conductor on some segments of the Caribou-Big Bend section, they elected to leave in place the 97-year-old aluminum steel reinforced conductor in other areas. The fact that the Senior Director of Transmission Asset Management preached the cost effective value of bundling projects but had no plans through 2022 to replace the 97-year-old aluminum, steel-reinforced conductor speaks volumes. What it says is that PG&E fully intended to run that conductor to failure. A reasonable person doesn't need an electrical engineer or Quanta Technologies to tell him that failure of an energized 115kV is extremely dangerous. PG&E's decision to leave the 97-year-old aluminum, steel-reinforced conductor in service was extraordinarily reckless.

In addition to basic engineering principles and common sense, PG&E had actual knowledge that both the C hooks and the hanger holes suffer wear and would eventually break if not replaced. At some unknown point between 1921 and 2018 somebody added the hanger plate brackets to Tower 27/222. Although there are no records of when or why the hanger plate brackets were added the only reasonable conclusion, based upon the wear observed on the original hanger holes, is somebody noticed the wear and was concerned enough to take action.

In 1987 PG&E had absolute knowledge of the wear to both the C hooks and hanger holes. The photographs in the 1987 Laboratory Report document channeling on the C hooks and key holing on the hanger holes similar to what was found on the Caribou-Palermo line. The similarities are not surprising because the transmission line on which the C hooks and hanger holes were found, the Oleum G line, was also part of the original Caribou-Valona line. The fact PG&E chose to only perform tensile strength testing in 1987 and did not subject the hooks and hanger plates to metallurgical analysis tends to show PG&E was not concerned with the wear or the expected useful life of the hooks and holes. Although in 1987 the evidence indicated at least some action was taken based upon the observed wear on the C hooks and hanger holes, when similar wear was found on hanger holes on the Jefferson-Hillsdale transmission line in 2011 the only action taken was the replacement of the hanger plates. According to the email string a PG&E Engineer correctly surmised that this wear was “probably caused by years of rubbing between the c-hook and the plate.” Based upon the reaction, or lack thereof, to the photographs of the wear it appears that the wear was neither a surprise nor was it considered a major issue by PG&E engineers.

In 2018 the discovery of keyhole wear on hanger plates on the par transmission line caused enough concern that the Transmission Line Supervisor sent the plates to the PG&E lab for analysis and evaluation. Unlike in 1987, in 2018 the lab actually did a metallurgical evaluation. A PG&E lab scientist, with a PhD in Material Science and Engineering, used the available data to opine the keyhole wear was occurring at a rate of .007 inches per year. Based upon the average wear rate, the PG&E lab scientist determined the useful life of those hanger plates to be between 97 and 100 years. PG&E now had scientific confirmation of the body-on-body wear caused by the constant movement of the C hooks within the hanger holes and had an estimate of average wear per year. Nothing was done. The report was not distributed through the company and no targeted inspections of older C hooks and hanger holes were ordered. Based upon this report, a reasonable person, knowing they had C hooks which were 90+ years old hanging in hanger holes that were 90+ years old would have taken immediate action to determine the condition of those hooks and holes. The fact PG&E did nothing is evidence of complete and absolute indifference to the inherent danger of a C hook or hanger hole breaking.

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Knowledge of the danger inherent in a C hook or hanger hole breaking is firmly established in PG&E documents. Since at least 2006, PG&E has recognized bad things, especially fire, happen when equipment failures occur on transmission lines. Everything in the overhead electric transmission system is designed to keep the conductor hanging in the air and away from persons or objects it could harm. Despite this knowledge PG&E put almost no effort into ensuring the components that keep the extremely dangerous overhead transmission lines hanging safely in the air were safe. Based upon the assertions of the PG&E personnel assigned to inspect and patrol the Caribou-Palermo line, it was not possible to assess the condition of the C hooks and hanger holes from either the ground or a helicopter flying 30 to 40 miles per hour a couple hundred feet above the line. Although claims it was impossible to assess the condition of the C hooks and hanger holes from a helicopter were completely discredited by BCDA investigators, the results of the post Camp Fire “enhanced” inspections and the Exponent Report clearly establish this was not solely a Caribou-Palermo line or Table Mountain Headquarters problem. This was a systemic PG&E problem.

During the post Camp Fire inspections, worn C hooks and worn hanger holes were found throughout the PG&E Overhead Transmission System. Despite the knowledge C hooks and hanger holes wear over time and despite the knowledge of the danger inherent in the failure of a C hook or hanger hole, the evidence clearly established nobody in PG&E was inspecting C hooks and hanger holes.

Despite the efforts of PG&E personnel to distance the company from the “Run to Failure” model, the evidence clearly establishes quite the opposite. PG&E had knowledge of the potential consequences of failure of the nearly 100-year-old C hooks, yet PG&E continued its policy of “Run to Failure.”

Because nobody was looking at and assessing the C hooks and hanger holes, there were very few, if any, notifications/tags generated for worn C hooks or hanger holes. As a result, the need for replacement of C hooks and hanger holes never came to the attention of Transmission Asset Management. The lack of verified records for many of the older, acquired transmission lines made the problem worse. In large population areas PG&E was staffed by experts, trained and qualified engineers and specialists having decades of experience. In less populated areas, Transmission Line Management was almost completely dependent upon less qualified Troublemakers, Linemen and Towermen and other personnel. For approximately ten years the M&C engineer assigned to the rural northern area was not an actual engineer and had no engineering education, training or background.

Very little effort was made to audit the lack of findings of line personnel. Equipment failure related outages were repaired as they occurred and no effort was made to investigate the root cause of the failure. Transmission Asset Management essentially employed a strategy of either intentional or incompetent ignorance.

In essence, in 1930 PG&E blindly bought a used car. PG&E drove that car until it fell apart. The average reasonable person understands the basic proposition that older equipment needs more attention. A reasonable person doesn’t buy a used car blindly and without at least a test drive. A reasonable person doesn’t drive that used car for 200,000 miles without, at the very least, changing the oil and rotating the tires. A reasonable person has the common sense to know that service and maintenance become more important as the car ages and the miles accumulate.

This is, in essence what PG&E did. PG&E bought a used transmission line in 1930. PG&E knew next to nothing about the transmission line and made no attempt to learn about the line. PG&E ran the line for 88 years with minimal maintenance and repair. But for the Camp Fire, PG&E would have continued using the line with minimal maintenance and repair. Catastrophic failure of the Caribou-Palermo line was not an “if” question; it was a “when” question.

Although Quanta Technologies is well known and well respected in electrical utilities circles, the conclusions and recommendations of the 2010 Quanta Reports were essentially common sense findings. The basic findings of Quanta were that PG&E’s infrastructure was aging and continued use

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required increased inspections and maintenance. According to the Senior Director of Transmission Asset Management, the Quanta Reports were discredited because of issues with tower failure data. The PG&E criticisms of the Quanta Reports may have been well founded, but the areas criticized have very little relevance to the ultimate conclusion that the transmission assets were old and needed more attention and care. PG&E obviously didn't take issue with the Quanta conclusions about the age of the transmission infrastructure. Transmission Asset Management continued to cite the Quanta age data and conclusions in subsequent internal and regulatory documents for the next seven years.

The evidence established that despite common sense and the Quanta Report, PG&E went the opposite direction. PG&E internal emails and documents established that by 2007 PG&E was aware of the aging electric transmission infrastructure problem. Former employees of the predecessor departments to the current Transmission Asset Management established PG&E was aware of its aging electric transmission infrastructure problem by the early 1990s.

Despite its knowledge that many of its assets were built prior to World War 2 and despite its lack of knowledge of the components of acquired electric transmission lines, PG&E had consistently reduced the frequency and thoroughness of inspections and patrols on those lines. In other, more populated areas, PG&E routinely used the fact that transmission lines were built after World War 2 to justify repair and replacement.



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The 2014 RIBA process demonstrated how PG&E manipulated data to achieve desired results. It is beyond reasonable comprehension that a project to replace temporary poles not expected to stand through the winter scored lower for safety than an unnecessary project proposed solely to allow PG&E to transfer money spent from the expense budget to the capital budget. The fact that PG&E minimized and, ultimately, ignored a serious safety issue is reckless and negligent. The fact that they did so in the middle of a historic drought in an area known for consistent, extreme winds, is criminally negligent.

Despite its knowledge that its transmission assets were nearing the end of useful life and deteriorating PG&E decreased the expertise of the persons doing the inspections. This pattern continued after and in spite of the Quanta Reports. This is the exact opposite of how a reasonable person would have been expected to respond. The evidence clearly demonstrated PG&E understood the relationships between age of components and wear, wear and equipment failure and equipment failure and fire, but unlike a reasonable person, devoted less time and qualified personnel to inspecting the oldest assets.

This trend continued even in the face of the devastating effects of climate change. According to data from the US Geological Survey three of the four worst droughts in the recorded history of California have occurred since 2001. PG&E risk analysis reports, both internal and regulatory have consistently identified wildfire as the number one enterprise risk since 2006. The evidence clearly established PG&E was aware of the drought and the danger of catastrophic fire by 2013. Internal PG&E documents established that in 2013 PG&E identified the Feather River Canyon as a high fire danger area. Despite its knowledge of the increasing risk, the evidence established PG&E not only did nothing to mitigate the fire risk in the Feather River Canyon, it ignored known fire dangers for years.

Prior to 2006 PG&E had identified parallel groove connectors as a fire danger. In PG&E's 2006 "Risk Analysis of Urban Wild land Fires", the replacement of the parallel groove connectors is listed as a proposed mitigation. Unfortunately the proposal was only applied to Urban-Wildland Interface areas, which PG&E limited to the Bay Area. In the Feather River Canyon hundreds of known fire threats were left in transmission towers until 2016. Although the parallel groove connectors were ultimately replaced before causing a known fire, the fact those connectors remained in use for ten years, through two historic droughts, shows the complete disregard and indifference to the potential consequences by PG&E.

PG&E electrical transmission policies and records prior to the Camp Fire mirrored PG&E gas transmission policies prior to the San Bruno catastrophe. The investigation of the San Bruno catastrophe established that prior to the explosion, PG&E gas transmission had made very little effort to investigate and catalogue the components of the acquired gas transmission assets. Instead PG&E relied on assumed values. The San Bruno investigation also established PG&E intentionally was using the least expensive method of inspection in the least expensive manner. The chosen inspection method also saved money because problems that are not found do not need to be repaired. The investigation also established records relating to inspections, both justifying methods of inspection and the inspection reports, were fraudulent.

P27-2
cont.

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Somehow, the lessons of San Bruno were not learned on the electric transmission side. The evidence established that despite the lessons of San Bruno on the electrical transmission side, since 2010 PG&E has continued to rely on assumed values, the least expensive method of inspection and done nothing to ensure the veracity of inspection reports. The tragedy of San Bruno somehow had no effect on the electric transmission division. The five felonies for which PG&E was convicted changed nothing on the electric transmission side.

The philosopher George Santayana is credited with saying “Those who cannot remember the past are condemned to repeat it.” By ignoring the lessons of San Bruno PG&E condemned itself to another catastrophe. Based upon its own history PG&E knew it was creating a high risk of causing a catastrophic fire but, unlike a reasonable person, chose to ignore that risk.

Because of PG&E’s reckless and negligent decisions to unreasonably ignore risk, 18,804 structures, including almost 14,000 residential structures were destroyed – and 84 Butte County citizens needlessly lost their lives. Pg 82-87

PG&E was entrusted by the People of the State of California to provide safe and reliable electricity. PG&E took advantage of that position of trust and was able to generate billions of dollars in profit. Pg 89



P27-2
cont.

The DEIR also did not provide any documentation from CALISO regarding the Round Mountain Substation and the current reliability transmission grid upgrades that are in process and will not be completed until 2024. The DEIR only indicates that the Round Mountain Substation upgrade appears to be underway and that they have a separate CEQA lead, under a different agency, with different objectives, without taking to required action to determine how the Fountain Wind Project would affect and/or worsen the current reliability issues at the substation.



P27-3

Without the required data analysis areas identified, PG&E and CALISO specially, regarding the on-going transmission grid, hardening, safety, and reliability issues not addressed how can Shasta County indicate they have the necessary information for the decision-makers in this DEIR/FEIR? Specially how can the DEIR/FEIR indicate that the wildfire risk has been mitigated from “potentially significant” to “less than significant” when the current transmission grid environment clears indicates that the risk still remains “significant” and not “potentially significant”.

The DEIR also fails to provide sufficient evidence that the on-going PG&E PSPS events, within and near the Project site, will not be exacerbated by the Project. The only mention of the PSPS events is to indicate that the Project will only do “emergency work” during the PSPS time. For the decision-makers to understand how increased threat they need to also review and evaluate the on-going PSPS after event reports. A copy of the recent Sept 2020 PSPS event is provided as an overview in Attachment (2)



P27-4

2. Prevent or minimize potential damage to the physical environment through the development of project alternatives, mitigation measures, and mitigation monitoring.



P27-5

The DEIR does not provide the required documentation from CPUC, PG&E or CALISO regarding the additional damage the Fountain Wind Project will inject into the antiquated transmission grid. Without the needed documentation regarding how the Fountain Wind Project can add additional damage to the physical environment how can these areas be properly evaluated by Shasta County decision-makers or the residents?



P27-6

On page 3.16-17 of the DEIR the Applicant indicates they will “substantially increase the wildfire risk above the baseline conditions due potential sources of ignition. Potential construction and decommissioning could increase the risk of surrounding communities, exposure to pollutant concentrations from wildfire and the uncontrolled spread of wildfire to a level that is substantially higher then existing baseline conditions, which



P27-7

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would result in a potentially significant impact.” With the intentional exclusion of CPUC, CALISO, and PG&E data, regarding additional wildfire, reliability, sufficiency of the transmission grid, and safety, within the development area the DEIR is inadequate regarding the factual overall environmental impacts. How will the decision-makers know if they have the complete evaluation areas for the “physical environment” needed for this review? What factors will the decision-makers use, and what thresholds will be measured, to determination if the migration measures and mitigation monitoring are inclusive of the additional CALISO and PG&E transmission safety upgrades and reliability issues at the substation? How will the mitigation measures and mitigation monitoring efforts be imposed and enforced?

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P27-7
cont.

4. Involve other potentially affected governmental agencies’ through coordination, early consultations, the scoping process, and State Clearinghouse review.

Since the Projects application in 2016 many of the “physical environmental” factors near the Project area has changed. Some of those factors include the Camp Fire in Nov 2018, PG&E bankruptcy in Jan 2019, and the Round Mountain Substation upgrade approved in March 2019 the PG&E residents near the development site have become aware of the transmission grid reliability and safety issues due to lack of maintenance. The Butte County Camp Fire Public Report provides a detailed assessment and proved neglect of the PG&E transmission grid, through their secret criminal grand jury, and those facts cannot be ignored by the DEIR/FEIR nor Shasta County decision-makers. The overwhelming evidence and on-going safety issues outlined in the final report by Butte County have been briefed numerous times during the Shasta County Planning Commissioners, Board of Supervisors meeting during the public comment period, and forwarded to the Planning Department during the scoping comments.

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P27-8

The DEIR/FEIR must be required to adequately justify and prove that the PG&E Northern transmission grid is sufficient, reliable, safe, and will not introduce any additional wildfire risk during construction, materials delivery, operation, and maintenance, with the injection of power from the Fountain Wind Project. To show anything less will only put additional lives at risk and Shasta County will also be held liable for the approval of such a high risk, unnecessary, and unproven safety of the Project. The Project will not be able to prove in any way that they can mitigate any of the risk to the lives of the residents and communities surrounding the Project site.

I have not found any feedback within the DEIR from the CPUC (including the wildfire safety division), CALISO, nor PG&E regarding any outreach to consultations and/or governmental agencies with regards to the transmission grid safety and reliability issues. Why have the all the consultations listed in the DEIR ignored the outreach to obtain the required data analysis, from the other governmental agencies and presented it within the DEIR, been ignored so they can provide the proper “physical environment” regarding the safety and reliability of the transmission grid? I believe this outreach was not done due to the answers that the Project would receive – that as indicated by PG&E themselves (the very same transmission grid for the interconnect for the Project) have at least 12-14 years to complete hardening and safety upgrades and that the PSPS events are expected to continue over the next 10 years as stated by the CEO.

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The DEIR is inadequate since it does not identify what the decision-makers will use as thresholds to make a determination regarding the “balance the benefits of the proposed Project against any significant unavoidable environmental effects it may have” without all the required feedback from the consulting agencies? How can the decision-makers determine if the benefits outweigh the significant adverse impacts, or adopt a statement of overriding considerations that find the environmental consequences to be acceptable, without the consultation from the experts themselves of the transmission grid itself? Who are the County decision-makers, which have the expertise to negate the PG&E’s CEO statements regarding the hardening and safety requirements in order to adopt any statement of overriding considerations, to inject the power from the Project? How can the DEIR state that the CPUC has the sole responsibility for the safety of the transmission grid when

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P27-9
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we have shown documentation from PG&E and CALISO themselves that the grid has safety, hardening, and reliability issues that are under review and construction right now? What factors did Shasta County use to try to separate the Round Mountain substation reliability issues and the PG&E safety transmission grid issues for the Fountain Wind Project when in fact they are riding on the very same transmissions grid?

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cont.

1.4.6 Finding of Fact

The DEIR is inadequate to show the ‘finding of fact’ that the proposed benefits of the Fountain Wind Project outweigh the irreversible cultural and environmental impacts and the special use permit should be denied. This project will only add to the cumulative environmental impact and negative effects of the Hatchet Ridge project and will continue erasing the local cultural and scared areas of the Pit River Tribe which will never be recovered by the Hatchet Ridge Project let alone the additional of the Fountain Wind Project.

The Pit River Tribe has submitted a Resolution in objection to the Fountain Wind project. In addition the Pit River Tribe also submitted an appeal to the Hatchet Wind project in 2008 to get that project denied to no avail. Members within the Planning Department indicate that no one is complaining about the Hatchet Ridge wind turbines but the fact is no one is listening to the complaints. With over 600 people signing the petition to stop the Hatchet Ridge project, including two appeals, shows the facts that they are complaining and they are being ignored. Numerous residents within the Intermountain area have already determined that the approval of the Fountain Wind Project is a done deal. They don’t believe their voices were heard regarding the opposition to the Hatchet Ridge project so they have given up their voice to oppose the Fountain Wind Project. Many Intermountain residents have stated it is “just about the money for Shasta County” and even though they don’t want another industrial project they believe their opposition falls on death ears. Additionally, the disrespect and destruction regarding the Pit River Tribe surrounding their sacred lands and culture resources and ways must be stopped. The social injustices issues that are seen around the World and taking place across the Country are not only related to the BLM movement but the injustices against the Native Americans.

P27-10

In addition the Findings of Fact will show that this project clearly does not meet the criteria in the Zoning Plan Section 17.92.020.F for approval.

Pursuant to Zoning Plan Section 17.92.020.F. no use permit shall be granted unless the following findings of fact are made:

That the establishment, maintenance or operation of the use, building or facilities applied for will not, under the circumstances of the particular use, be detrimental to the health, safety, peace, morals, comfort and general welfare of persons residing or working in the neighborhood of the proposed use or be detrimental or injurious to property and improvements in the neighborhood or to the general welfare of the county.

Pursuant to the Zoning Plan Section 17.92.025.g, High Voltage Electrical Transmission and Distribution Project may only be approved or conditionally approved if **all of the following findings are made** based on substantial evidence in record:

1. ***The proposed project is consistent with the General Plan and any applicable specific plan(s);***
2. ***There is a demonstrated need for the proposed project;***
3. ***The project is justified when compared with alternatives, and there is no feasible alternative that would substantially reduce the adverse effects of the project as proposed;***
and
4. ***The proposed project will not be detrimental to the health, safety, peace, morals, comfort, and general welfare of persons residing or working in the neighborhood of the proposed***

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project or be detrimental or injurious to property and improvements in the neighborhood or to the general welfare of the County.

All of these required findings have not been met and cannot be met!

1. The proposed project is not consistent with the General Plan since the plan has not been updated since 2004 and is out of date. The General Plan energy section does not even include the development of industrial wind turbine projects let alone where they would/should be considered and what other factors need to be considered for successful results. These same objections were presented by community members during the Hatchet Ridge project and still have not been resolved. In addition the Project conflicts with the written intent regarding the Rural Community Centers that will be completely surrounded by the Project.

The DEIR also does not indicate how the Project supports or the objectives of the Fire and Safety portion (54firesafety) of the General Plan. Figure FS-1, within the 5.4 Fire Safety and Sherriff Protection portion of the General Plan, clearly identifies the entire Project site within the “Very High Fire Hazard Severity Zone”. The DEIR indicates the Project indicate will take the current wildland fire hazard assignment to substantially higher than baseline conditions so it conflicts with the Introduction section 5.4.1 itself:

This element discusses conditions and issues relevant to the protection of public health and safety from fire damage. It also addresses sheriff protection in Shasta County. These topics are required under the State mandated safety element which reads:

*"A safety element for the protection of the community from fires...wildland and urban fires."
(Government Code Section 65302(g)).*

The Project does not add any safety elements for the protection of the community from fires but will only add additional significant ignition points that are not within the development site currently.

As stated in section 5.4.3 Objective FS-1: *“Protect development from wildland and non-wildland fires by requiring new development projects to incorporate effective site and building design measures commensurate with level of potential risk presented by such a hazard and by discouraging and/or preventing development from locating in high risk fire hazard areas.”*

As outlined in this objective, the level of potential risk presented by the Project should be enough for the denial of the use permit. In review of the wildfire section of the DEIR the level of significance is “potentially significant” and the mitigation measures listed will do nothing to reduce the threat of wildfire (wildland or non-wildland) but only add to the dangers. Additionally further updates are needed within the General Plan and SSC to incorporate verbiage that no additional large scale industrial developments within the heavy forested timber lands in Shasta County will be allowed in order to meet the FS-1 safety objective.

The tens-of-thousands of additional ignition sources for the Project fall within both Hazard Classifications (wildland fires and Non-wildland fires) since the development is proposed in the “Heavy” Fuel Load classification and will include structural, chemicals, petroleum, electrical, vehicle and other man-made material fires. As outlined in this section of the General Plan the non-wildland fires also pose the greatest threat to human life and property.

Page 5.4.02 of the General Plan identifies the wildfire safety issues with regards to topography:



P27-10
cont.

The influence of topography on fire hazard increases with slope, as steep slopes cause fires to burn faster and increase travel time for emergency equipment. Thus, as slope increases, the ability to control fire decreases.

The Project indicates that the topography of the development site will include steep slopes which as stated above will hinder the travel time for emergency equipment and will cause the fire to burn faster. The type of topography for the development site in conjunction with the inclusion of both hazard classifications will only add to the difficulty and/or inability to provide effective and sufficient wildfire support in the best of circumstances.

Page 5.4.02 of the General Plan states "As a general rule, wildland fire hazards do not preclude development; yet they do require that development meet special standards commensurate with the degree of risk. The State of California has adopted minimum fire safety standards per Section 4290 of the Public Resources Code. The California Department of Forestry and Fire Protection (CDF) is responsible for administering these standards."

In addition to the conflict with the overall safety objective FS-1, where in the DEIR are these special standards commensurate with the degree of risk identified, weighted, and thresholds identified? Also, where in the DEIR does it show how these special standards will be mitigated and against what measures? Has the CDF been contacted to review the Project and provided a response regarding how these special standards are aligned with the degree of risk? If they have been contacted where is the data to support development efforts for these special standards commensurate with the degree of risk?

So pursuant to Zoning Plan Section 17.92.020.F., no use permit should be granted, based on wildfire facts alone, due to the fact the Project's will be detrimental to the health, safety, peace, comfort, and general welfare of the persons residing or working in the neighborhood.

2. There is no demonstrated need for the proposed project as stated by PG&E themselves. PG&E and the CPUC indicate they are ahead of their renewable goals and the reduction in wind energy facilities may be reduced due to the continued injection of solar at a much lower cost and less environmental impacts. PG&E has indicated that they are not looking to purchase any additional renewables since they have met their goals until at least 2030. Shasta County continues to generate more renewable energy than can be used by the area and is being asked again to inject additional destruction into the region for the sake of meeting generic renewable energy mandates. The energy industry needs to do more due diligence to determine how to store the excess solar and wind energy that is available during peak production times so that we don't have to push the power to other states, at times paying \$18 million dollars just to take our excess power, to stabilize the current grid situation. In addition the Hatchet Ridge turbines have been working with the scheduling coordinator to reduce their power when it is not needed.
3. There are feasible alternatives however the DEIR chose to intentionally limit their project objectives so the area within Shasta County would be the only viable site and doing so limits the alternative options in the DEIR.
 - a. Why does it need to be Northern California Grid since the power will be distributed throughout California to meet the SB 100 goals?
 - b. Why is it limited to wind energy since there are other alternatives that can be considered but the objectives narrowly limited the scope to wind? What about biomass, additional hydro?

P27-10
cont.

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- c. Without the required data analysis from the CPUC, PG&E, and CALISO who has made the determination that the existing transmission grid has the sufficient capacity to reduce the impacts and costs required by the Project as listed in the objectives? The sufficiency of the very transmission line proposed by the Project is pure speculation and has not been proven to be reliable, hardened, nor safe as witnessed during the on-going PSPS events which are available at the PG&E site and Shasta County web site. Also, how do those impacts and costs get evaluated if another wildfire breaks out due to transmission grid instability, insufficient capacity, and/or hardening efforts have not been completed by PG&E or CALISO?
4. The proposed project IS detrimental to the health, safety, peace, morals, comfort, and general welfare of the residents residing and working in the neighborhood. The project will inject tens-of-thousands of additional ignition sources that are not located in the area today. As we are witnessing over 17,000 firefighters are risking their lives and working to save our communities from the devastating wildfires across the state in 2020 with over 4 million acres burned. Several communities and CALFIRE has stated that they do not have any additional resources for the numerous fires burning across California so if one broke at on the Project site how quickly would that wildfire also get out of control? It will only be a matter of time before this Project introduces another wildfire when CALFIRE resources are stretched beyond capacity across the state.
- As the DEIR states the wind turbines alone will increase the wildfire risk “substantially above baseline conditions” and additional lightening risk just due to their height and mechanics. Countries and Communities around the World are restricting any additional industrial wind turbine developments within forested areas due to the increased wildfire risk. Australia has prohibited any additional wind turbine developments within their forested areas due to a wildfire caused by a turbine destroying over 200,000 acres and Shasta County needs to consider the same. The Applicant themselves indicate they will “substantially increase the wildfire risk above baseline conditions” and work to minimize the impacts by wildfire safety plans and training. It is impossible to introduce another culturally devastating project and wildfire risk and not cause the harm to the community as outlined in this finding of fact. The proposed financial benefits from the Project will not provide any general welfare benefits to the residents residing in Shasta County but only introduce additional air quality and health related illness at the worst time.



P27-10
cont.

Community members will be submitting close to 2,000 signature are from across all of the Shasta County Districts, and we want to make sure that you hear our complaints again that we want these projects to stop.

In addition Shasta County must take the time to update their zoning codes and General Plan incorporating sufficient measures to protect local residents from future turbines developments. The verbiage in the zoning code and General Plan now only allows developers to continue to target Shasta County rural areas without any recourse or protections to the residents regarding the sacred cultural areas or elevated wildfire risk, just to name a few, that cannot be mitigated or ever replaced.

Chapter 2

Project Overview

Why does the cover page of the DEIR not show one 679 foot turbine on the horizon of our Intermountain area let 72 of them? Why does the DEIR not indicate that these turbines will complete with the tallest skylines in California (San Francisco and Los Angeles)? They will also be ranked #16 in height in competition with the most populous cities in the state. Why does the DEIR not indicate these will be the tallest



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turbines currently in the U.S. at or near off-shore capacity and heights? Where in the DEIR is the proposed 38 turbine laydown as outline in Appendix A, page 1.

The 206-meter-tall turbines would have individual generating capacities of up to 5.7 MW. If the 5.7 MW turbines are eventually used, only 38 would be required to be installed to achieve the project’s generating capacity. All 72 turbine sites would be required if 3.0 MW turbines are used. The largest potential 3.0 MW turbine being considered has a hub height of 120 meters and rotor diameters of 138 meters, with a maximum potential height of 189 meters. The difference between these two turbine sizes would be detectable in views from 1 mile away but it would not be discernable at 3 miles away.

Also, Appendix A indicates it is an “Administrative Draft, not for public review”. Should we continue to use Appendix A as a resource in the DEIR review or will an update be released that is for public review?



P27-11
cont.

On page 2-1 the overview identifies the Project in “Section 2.4 refinements made since the July 2017 Use permit application” filing date. Why does the Applicant indicate that the filing date is in July 2017 when the actual filing date was Nov 2016 as stated on the Shasta County Fountain Wind web site? Also, if they indicate that the filing date is July 2017 then how can the initial Biological and Site Characterization studies (Appendix C) submitted to Pacific Wind LLC by WEST be completed by Jan 2017? How can this site characterization study report not be, (or not even an appearance) of a direct conflict of interest for the Applicant and the County? It is only through additional scoping comments from the CDFW and residents that they backtracked in an effort to update and correct their assessments based on independent feedback in 2018 and 2019. The NOP to the community was not held until Jan 2019 and the CDFW was not consulted until July 2017 and the assessments were already submitted however the ESA and the county told us these studies would be handled through a contractor hired by the County but in fact it was a contractor hired directly by the Applicant.



P27-12

The maps in Chapter 2 are used to confuse and overwhelm the reviewers intentionally without giving clear and concise landmarks at and/or near in relation to the Project. Why is the scale of the Project maps used in the document to minimize the actual footprint of the Project in relation to the local focal points of the community?

Why are the key community focus areas not clearly outlined and documented so the viewers can reference the site accurately?

- 1) Hill County Community Clinic
- 2) Round Mountain Sub-station
- 3) Montgomery Creek School
- 4) Pit River Tribe Rancheria
- 5) Montgomery Creek Cemetery
- 6) Pit River Tribe Store and Post Office
- 7) Round Mountain Community Center
- 8) Terry Mill Road
- 9) Big Bend Road
- 10) Hillcrest Road
- 11) Fenders Ferry Road
- 12) Fountain Fire View Point
- 13) Moose Camp Road
- 14) Moose Camp Community and roads
- 15) Overlay of the geographical and cultural area affiliated with the Pit River Tribe (100 mile square)
- 16) Rest area on Hwy 299 close to the project site
- 17) Transfer station on Terry Mill Road
- 18) The PG&E tie-in for the Project



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2.3 Project Objectives:

#2 Interconnection to the Northern California electrical grid.

If the intent is to support objective #4 support SB 100 why does this project need to make the interconnection to the Northern California grid? This objective is narrowly focused and unreasonable since this Project could be proposed in another area of California (that has less of a wildfire risk) and still support the SB 100. In addition California is generating more renewable power than the current transmission grid can handle as has been proven by the PG&E bankruptcy and the paying of \$18 million dollars to Arizona to take excess power off of the overloaded grid. CALISO is also curtailing power every day which is supported from the CALISO web site.

PG&E in their recent bankruptcy stated they have enough renewable energy contracts until at least 2030. In addition the state requirement regarding all new home construction, starting Jan 2020, needs to have solar will further add to the renewable portfolio on the California grid. This new requirement could eliminate any new industrial wind turbine construction in the future, alongside the current repowering efforts, and the fact that the best industrial wind turbine locations have already been taken in California as outlined by Greentech Media, Wind article, "California's Wind Market Has All But Dried Out. Could Grid Services Revenue Help, March 30, 2020.

#3 Locate the Project in close proximity to an existing transmission line with sufficient capacity to reduce impacts and costs associated with building new transmission infrastructure.

The DEIR goes through various areas for the environmental analysis: aesthetics, air quality, biological resources, communications interference, cultural and tribal cultural resources, energy, forestry resources, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, noise and vibration, transportation, utilities and service systems, and wildfire – however they do not address the sufficiently of the very transmission grid that they want to connect too? Where in the DEIR does it state that the transmission lines have sufficient capacity needed for this Project? Where in the DEIR is the documentation from CALISO, PG&E, or the CPUC that indicate that the proposed lines are safe, hardened, and reliable? If the transmission grid is sufficient then why do we continue to experience PSPS events now and they are expected to continue for the next 10 years? PG&E, the CPUC, and Shasta County have the PSPS events published on their webpages. Where is any documentation from the transmission grid operators, and/or oversight authorities indicating that the grid is sufficient/hardened/reliable and/or safe and who within Shasta County are reviewing the published PSPS Event Reports to indicate where the greatest risk is for Shasta County? The DEIR indicates that that these lines have sufficient capacity as if it is a fact without any documentation as to why they have come to this conclusion or what data supports it. This conclusion stated within the Project objectives is not accurate, as stated by the transmission grid CEO, and the DEIR cannot reflect or dispute the PG&E CEO statements otherwise. To take this objective as fact the County would be acting irresponsibly and not taking known facts into account in and accurate assessment of the increased wildfire risks as outlined by CALISO, PG&E, and the CPUC themselves.

Also where are the facts related to the PG&E bankruptcy and why are they being ignored in relation to Fountain Wind Project?

The recent PG&E bankruptcy revealed the outdated transmission grid which include hardening and safety upgrade requirements that are not addressed in CEQA. Even without the facts outlined in CEQA this is our new "Environmental Reality" that can no longer be ignored for the sake of "meeting renewable energy goals". The safety and well-being of the residents and communities must take a priority over the green goal objectives and

P27-14

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PG&E must be given sufficient time to hardened and upgrade their antiquated transmission grid. If Shasta County does not allow PG&E to complete the required upgrades they will only invite another Camp Fire event.

In June of 2020 the CEO of PG&E took responsibility for the involuntary manslaughter of 84 persons from the Camp fire in 2018. The CEO also stated they had 12-14 years to complete over 7,100 miles of transmission upgrades and hardening. The DEIR indicates that the CPUC does not provide the oversight for portions of the Project, since the Applicant is not a public utility, so how does Shasta County decision-makers know what factors will be used to ensure that the transmission grid is sufficient and how will they then make that determination? Shasta County decision-makers know the implicitly that the transmission grid is unsafe as thousands of residents continue to deal with PSPS events. The Applicant's interconnection agreement will not be sufficient to make any determination regarding the sufficiency of any of the remaining transmission lines so where is the data from CALISO, PG&E, or the CPUC? Without the required consultation and cross-governmental outreach and feedback, from the transmission grid operators, how will Shasta County decision-makers take on the safety, hardening and reliability liabilities as the approving agency that will be required?

The antiquated PG&E transmission grid, with billions of dollars of upgrades and hardening efforts over the next 12-14 years, along with PSPS events throughout the region, cannot be ignored. The Project DEIR/FEIR must be inclusive in the Fountain Wind Environmental reports for the decision-makers and the residents within the project site to understand the additional wildfire risk. Without this required information the Shasta County decision makers will not have the needed reports, modeling, and/or data to make an informed decision regarding this Project.

In additional, Industrial wind projects across the U.S. are pulling out of their interconnection agreements, due to needed upgrades to the local transmission grids, and this has not been addressed anywhere in the DEIR.

PG&E over the last 18 months has been in court and testified that their grid is outdated and the cause of starting numerous deadly fires with the loss of life. How can the Applicant and the County intentionally exclude the facts, which have been presented over the last 18 months regarding, all hardening work that needs to be done to at least 7,100 miles covering PG&E territories? How does the DEIR exclude the transmission grid safety upgrades, hardening requirements, and reliability issues, stated by PG&E, that will last over the next 12-14 years with the estimated \$40 billion price tag for those upgrades? If PG&E indicates that their transmission grid is not sufficient then how can it be inferred in the DEIR as if it were a fact without any necessary upgrades needed? Where in the DEIR are the facts, regarding how many wildfires have been started within the PG&E territories, due to the outdated transmission grid issues with the latest being the Kincade Fire in 2019 and now possibly the Zogg fire in Shasta County in 2020? How will the residents, communities, or County decision-makers be able to determine if any of the \$40 billion dollars in upgrades are targeted at or near the Project? The DEIR is inadequate because it does not reflect what type of transmission grid hardening and safety work needs to be completed to ensure the residents are safe in addition to the injection of the Project power.

Why is there no mention that PG&E is still in the middle of a nine-month investigation into the utility's blackouts that effected more than 2 million Northern California's over several days in late 2019 which still continue today? (Many residents in the Montgomery Creek area where without power 14 out of 30 days in October in 2019). What do the on-going PSPS events at and/or near the Project site indicate about the safety, reliability, and sufficiency of the transmission grid since we had another PSPS event in Sept 2020 and now two in Oct 2020? Why is there no mention of the secret criminal investigation from Butte County DA, with the outcome, indicating why PG&E plead guilty to 84 counts of involuntary manslaughter? Why is there no mention that PG&E neglected maintenance of their power lines for so long that it eventually caused a series of wildfires that killed more than 100 people and destroyed thousands of homes and businesses in 2017 & 2018?

P27-14
cont.

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The DEIR is inadequate because it does not accurately reflect the on-going transmission grid thermal overload and overvoltage issues.

Where are the facts related to the Round Mountain Sub-station upgrades? We already know that the sub-station is being upgraded, independent of the Fountain Wind turbines, but where is the data regarding what additional risks that will be introduced due to the injection of the Fountain Wind power? Where in the DEIR maps do they show the tie-into the 230 kV lines from their proposed sub-station? Where is the data regarding any studies and/or modeling of the proposed N-15 line and the injection of the Fountain Wind Project to worsen the thermal overload and overvoltage issues outlined in the 2018-2019 CALISO Transmission Report? Where in the DEIR does it state that the Fountain Wind project will help the thermal overload and overvoltage issues? When is the best time to review the data simulation and/or modeling of the Round Mountain Sub-station in regards to the Fountain Wind intermittent power injection and what agency will have the responsibility to obtain the data? Why hasn't Shasta County reached out to the Round Mountain sub-station CEQA lead to obtain the required information needed regarding the reliability issues and what additional modeling needs to be completed prior to the injection of the Project? How can the decision-makers have enough information to make any decisions regarding additional threats due to the increase in thermal and overload issues at the Round Mountain sub-station and the injection of the Project power?

Based on the 2018-2019 CALISO Transmission Plan in February 2020 the Round Mountain sub-station contract was awarded in Feb 2020, estimated at \$160 - \$190 million, to upgrade and address thermal overload and over voltage issues. As stated in the DEIR the upgrades would indeed happen independently of the Fountain Wind Project. What the DEIR fails to mention is these same type issues were mentioned in 2008 by the Transmission Authority of Northern California (TANC) regarding the Hatchett Wind Project and it appears those issues were never resolved or addressed at that time. TANC also requested studies from PG&E and made reference to the same in the Hatchet Ridge DEIR comments. Also, the DEIR indicates that the Dynamic Reactor only affects the 500 kV line however the CALISO document clearly states that the 230 kV, 115 kV, and 60/70 kV lines are also affected which the Project indicate that is where the PG&E interconnection will take place (230 kV). Again Shasta County must include the Round Mountain Dynamic Reactor upgrades in consideration in approving or denial of the Fountain Wind project for the safety of the residents and communities.

Page 3.1-27 of the DEIR states:

The County is aware of a Round Mountain 500 kV Area Dynamic Reactive Support project that is being considered as part of the California Independent System Operator's transmission planning process (CAISO, 2019a, 2019b) to maintain reliability for the transmission system in response to increasing variable loading on the transmission system and in anticipation of retiring the Diablo Canyon nuclear power plant in 2025. The County anticipates that the CPUC would analyze the potential environmental impacts of any transmission reliability work proposed to take place in connection with the Round Mountain Substation once sufficient details about such a proposal are known. That project would be proposed many miles away from the Project Site and would have a different applicant, a different CEQA lead agency, and different objectives than the Project analyzed in this EIR. It is anticipated that any reliability upgrades that could be proposed in connection with the Round Mountain substation would be evaluated whether or not the Project proceeds. Although overall electrical system capacity and issues of grid reliability are beyond the scope of the County's consideration under CEQA of impacts of the proposed wind project, the County further notes that a regional grid reliability project at or near the Round Mountain Substation appears to be proceeding (TransmissionHub, 2020).

This statement in the DEIR is misleading but it also at the heart of the matter regarding reliability of the transmission grid issues that the residents believe must be addressed in the DEIR/FEIR for the decision-makers. If the County is aware of the Round Mountain 500 kV Area Dynamic Reactive Support project then where is the data from the CPUC which shows the necessary analysis? Why would the County not take the action to

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reach out to the CPUC (cross-governmental agencies) to obtain the required data to be evaluated by the decision-makers to determine if the transmission grid has sufficient capacity and/or evaluate any additional environmental impacts? Why would the County anticipate (assume) that the CPUC will take any action regarding additional reliability studies at the Round Mountain sub-station, and that it would be within the proposed CEQA approval process in Shasta County, when they have not reached out to the CPUC to even inform them about the Project? If Fountain Wind has not applied to the CPUC for the power how would the CPUC even know about the Project and/or what additional studies need to be completed? We know that modeling was completed at the Round Mountain sub-station regarding reliability but where is the data analysis to indicate that the Fountain Wind power was even evaluated within their studies and if not how would we know what additional impacts/risks the Project power may present? Until the County receives the necessary data analysis, required from the CPUC, regarding any additional potential impact of the transmission grid reliability this project must be denied because the County can only speculate about the transmission grid reliability issues. The County cannot take a 'wait and see' approach stating the responsibility is on the CPUC. The County is responsible for coordination across the governmental agencies and obtaining the required data to make accurate decisions regarding these industrial projects. These were the same issues that were not addressed in the Hatchet Wind Project and cannot be allowed to continue for the safety of the residents in Shasta County as has been proven in recent years wildfire tragedies. The required data is needed to ensure the decision-makers have the correct data to make the correct decisions for the community. Without the necessary data, to evaluate if this transmission grid is sufficient for the Project, these assumptions outlined in the DEIR only put residents within Shasta County at an increased risk.

PG&E was entrusted by the People of the State of California to provide safe and reliable electricity. PG&E took advantage of that position of trust and was able to generate billions of dollars in profit.

The 2018-2019 Transmission Plans states specially that the 230 kV lines (which the Project will make the interconnection) overvoltage and thermal overload are in relation to the same effects on the 500 kV lines. The Project special use permit must be denied until all the required modeling and analysis is complete in coordination with CALISO, PG&E, and the CPUC (in addition to allowing PG&E time to complete their hardening and safety upgrades over the next 12-14 years). How can Shasta County try and separate the Fountain Wind Project Objectives, regarding the safety and reliability Project Objectives of the Round Mountain Substation, without taking the safety and maintenance evaluation issues into account and publishing those results for the residents, community members, and decision-makers? Are the CALISO and CPUC reliability studies and the Fountain Wind project not inclusive of the same objectives - to provide safe and reliable electrical power to the residents and the communities within the Northern California PG&E transmission grid? How can Shasta County justify the separation of the two projects when they know the facts of the connection to the 230 kV lines and the reliability studies that have been completed by CALISO? Why is it the responsibility of the residents near the project site to do the cross governmental outreach, to try and obtain the answers regarding the reliability and safety concerns, when these facts have been brought before the responsible Shasta County representatives to ensure an adequate assessment and impacts of the two projects are being addressed? The complete 2018-2019 CALISO report is found in Attachment (8).

Page 7 of the CALISO 2018-2019 Transmission Plan provide the Key Reliability Study Findings which are related to the Round Mountain Substation upgrade.

Key Reliability Study Findings

During the 2018-2019 cycle, ISO staff performed a comprehensive assessment of the ISO controlled grid to ensure compliance with applicable NERC reliability standards and ISO planning standards and tariff requirements. The analysis was performed across a 10-year planning horizon and modeled a range of on-peak and off-peak system conditions. The ISO's assessment considered facilities across voltages of 60 kV to 500 kV, and where reliability concerns existed, the ISO identified transmission solutions to address these concerns or assessed the ability of previously approved projects to meet those needs. This plan proposes approving 11 reliability-driven transmission projects representing an investment of approximately \$607.4 million in infrastructure additions to the ISO controlled grid, all of

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which are located in the PG&E service territory. These are comprised of 9 smaller projects each less than \$50 million totaling \$168 million and two dynamic voltage support projects totaling \$440 million.

The two dynamic reactive support projects are eligible for the ISO's competitive solicitation process.

In addition to the identification of new reliability requirements, the ISO also reviewed a number of previously approved transmission projects in the PG&E service territory, which had been identified in previous planning cycles as needing further evaluation. These reviews looked not only at canceling projects where changing circumstances no longer supported the need for the project, but re-scoping of projects where needs still existed and changing circumstances could lead to more effective and economic solutions:

- Six transmission projects with cost estimates totaling \$440 to \$550 million that were found to be no longer required and are recommended to be canceled.
- One project will continue to be on hold pending reassessment in future cycles. Going forward, individual projects will continue to be considered for review on a case by case basis, as the need arises.

Page 90 of the 2018-2019 ISO Transmission Plan March 29, 2019 California ISO/MID 81

Detailed assessment of the need and requirements of the voltage support was assess in both the northern (Round Mountain area) and southern (Gates area) of the PG&E area 500 kV system as follows.

Round Mountain 500 kV Dynamic Reactive Support

An assessment of reactive support in the Round Mountain area of the northern portion of the PG&E 500 kV system was conducted. The detailed assessment is included in Appendix B.

High voltage issues at Round Mountain 500 kV substation bus occur frequently in real-time operation under non-peak conditions when the COI flows are typically lower. High voltage issues have resulted in limited clearance opportunities to do maintenance work on system elements and in some cases the clearance had to be cancelled to bring the element back in service to address voltage issues. The worst condition occurs under the N-1 contingency of Round Mountain 500/230 kV transformer which is a 3-winding transformer with 4 x 47.7 Mvar reactor connected to its tertiary winding. The loss of the transformer disconnects the reactors and as a result high voltage condition worsens. Round Mountain bus voltage under N-0 and N-1 conditions in a 2019 minimum load case are 549 kV and 554 kV respectively.

To address the issue, a device with 500 Mvar reactive absorption rating is assumed at Round Mountain 500 kV bus. The reactive device is sized to bring the voltage close to 540 kV which is PG&E's maximum normal operating voltage. The studies showed that with reactive device in service, the voltage at the Round Mountain 500 kV bus drops to 538 kV and 541 KV under N-0 and N-1 conditions, respectively. In addition to high voltage issues under light loading conditions, Round Mountain bus voltage varies significantly on a daily basis with the output of solar generation in California which results in COI flow changes on a daily basis. The hourly voltage fluctuations are expected to increase in future with more solar integration in California and the expansion of EIM in the northwest. To address the voltage variability at Round Mountain 500 kV bus, the recommended reactive device should be a dynamic device to be able to actively manage the voltage as the need for reactive support changes based upon the flows on COI.

The analysis of the study results demonstrates the need for a dynamic device at Round Mountain to absorb up to 500 Mvar reactive power. The benefits of the Round Mountain voltage support device having a dynamic range to inject reactive power is discussed in the following section.

The maximum voltage drop at Round Mountain 500 kV bus occurs following the trip of PDCI under a scenario in which both PDCI and COI are highly dispatched. This scenario is more severe under spring off-peak load conditions and is expected to happen typically in the evenings when imports from northwest are high to manage the evening ramp and the higher flows in the non-solar hours. The study results show that following the PDCI contingency and after all the automatic switching of the existing

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reactive devices (post transient condition), the voltage drop at Round Mountain 500 kV bus is around 35 kV. To prevent voltage from dropping below low end of emergency operating voltage of 495 kV, system operators keep the pre-contingency voltage quite high to ensure acceptable post contingency voltage. Having high voltage on 500 kV system will result in high voltages on 230 kV and to some degree the 115 kV and 60/70 kV lower voltage networks. High voltages across the PG&E system have been observed in real-time and planning studies under light load conditions that poses ongoing challenges for system operations. A dynamic device that has both reactive and capacitive range at Round Mountain, will enable system operations to be able to set the pre-contingency system voltages at lower values so that the post-contingency reactive power injection at Round Mountain 500 kV bus will support the voltage within acceptable ranges for normal operations and after the contingency. Study results show that with 500 Mvar injection from Round Mountain dynamic reactive device, the voltage drop after PDCI outage will be only 18 kV. The results show that the voltage in the area ranged between 488 kV and 558 kV in the existing system which is outside the acceptable range, especially on the high voltage. After implementing the Round Mountain ±500 Mvar dynamic voltage support, the voltage in the area ranged between 503 kV and 548 kV which is within acceptable range.

P27-15
cont.

Further review of the engineering detail for the termination of the Round Mountain 500 kV Reactive Project is required due to siting issues at Round Mountain for the project. Board of Governor approval is recommended, and the additional detail will be posted as an addendum to the transmission plan. The competitive procurement process for the project will commence after that has taken place. The reactive device is to be installed in a minimum of two equally-sized blocks independently connected to the 500 kV to accommodate maintenance and contingencies of the reactive device. The reactive power support is required to provide continuous dynamic reactive power support over the complete range of the capability (unless the facility experienced a planned or forced outage). It can be one of the following types of devices: SVC (Static VAR Compensator) with Thyristor Switched Capacitors (TSC), STATCOM (Static Synchronous Compensator), or Synchronous Condenser. An appropriately sized and configured inverter associated with a battery storage project could also provide the reactive support. Voltage support requirements would take precedence over any other operation of the battery storage facility. The estimated cost of the project is \$160 million to \$190 million with and expected in-service date of June 2024.

#5 Create temporary and permanent jobs in Shasta County and contribute to the County' tax base.

This objective within the DEIR is only listed to entice the County's decision-makers in order to have them focused on the money. If the objective of this industrial wind turbine development were to reduce climate change effects (support SB 100) then the financial benefit regarding jobs and increase into the tax base are only secondary factors due to the efforts of the Project and should not be listed as an objective. With the enticement of the financial gains for the County then the decision-makers will have to keep that as a primary goal as opposed to only the true environmental impacts of the Project.

On page 2-28, under the Description of Alternatives, the DEIR states:

"Whether the alternative would meet most of the basic project objectives. Section 2.3, Project Objectives, identifies nine Project objectives. Of these, the County has determined the following to be the "most basic" project objectives: Provide up to 216 MW of wind energy to PG&E's Northern California grid, create temporary and permanent jobs in the County, and contribute to the County's tax base. Any alternative determined not to meet these most basic of the Project objectives was not carried forward for more detailed review."

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Since the County has narrowed their focus to these "most basic project objectives" listed within the DEIR (wind project and the creation of temporary and permanent jobs to contribute to the County's tax base) then they have missed the opportunity to widen their focus to other alternatives intentionally. Why hasn't the County listed the most basic project objective is to reduce climate change effects and

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support of SB 100 as opposed to the financial gain for the County which would have opened the alternatives considered for more detailed review? The most basic project objective listed in this section of the DEIR only substantiates the community outrage that this Project is only about the money. Since the County not even list this objective out of the nine (#4 the support of SB 100) as one of the most basic objectives further supports that assessment about the money.



P27-16
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Obviously, it is not the intent of the Applicant to provide any support to the County’s tax base nor provide permanent and temporary jobs but only because they have to in order to get the County’s support. If the Applicant could get away without providing anything financial support to the County, or entice the local residents with a Community Benefit Agreement, they would be just as happy since their objectives are to make money and get their Project approved with as little financial output as possible.

The true intent of this renewable Project, as well as any others introduced to the County, should only be focused on supporting the SB 100 objectives set by the state with the financial incentives removed. For the County to even consider these types of Projects, encompassing massive destruction to the environmental, cultural sacred resources, and even more elevated wildfire risks is unacceptable otherwise.

#6 Obtain entitlements to construct and operate a commercially financeable wind energy project.

Why is this a project objective even listed? How will the decision-makers make a determination and what factors will be used to determine if this objective is met to denial or approve the Project? Does the Applicant currently have the financial backing for this wind energy project on hand without the “entitlements”? If they don’t get their “entitlements” will they continue to pursue the Fountain Wind development? When does the decision for the Fountain Wind project have to be made to determine if they will obtain their “entitlement” end of 2020, 2021? If the special use permit is approved will the Applicant then try to get their financial backing to start the project? These “entitlements” they feel they need to obtain are the hard earned dollars of tax payers who have been paying for this start-up industry for over 30 years that can’t yet sustain itself. The Big Wind developers have taken billions of dollars in “entitlements” and yet they still can’t develop wind energy projects without taxpayer subsidies? The corporate welfare to the Big Wind corporations needs to stop. If the Applicant can’t finance their own proposed wind energy project then it should not continue to move forward. The destruction to the local cultural and environment cannot continue to benefit billion dollar Big Wind corporations while leaving the residents to deal with the devastation for decades to come. These “entitlements” they are seeking are only available because of the hard working tax payers, paying some of the highest energy cost in the County, that only benefit the developers who need to obtain these “entitlements”.



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#7 Support landowners through diversification of revenue streams.

Why is this objective listed? Where in CEQA is this an objective considered and where does it also make any consideration of surrounding landowner diversifications of revenue streams?

When the property owner bought the property they knew it was currently being used for timber harvesting and did not have industrial wind turbines on the land. How will the decision-makers make a determination, and what factors will be used, to determine if this objective is met to denial or approve the Project? Who is going to diversify the revenue streams of the residents surrounding the Project once these monstrosities are built? How will the Pit River Tribe ever regain their sacred cultural areas again or are they just wrapped up in this landowner diversification scheme? How will this removal of the Pit River Tribe history ever benefit the cultural and sacred areas most important to the Pit River Tribe?



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The surrounding landowners did not give up our rights to enjoy the serene, quiet, and calm living environment (as identified in the Shasta County General Plan Rural Community Centers) just so the surrounding wealthy landowners can get someone else to come in and diversify their revenue streams and take over the area to increase their revenue streams. What happens to the residents when our property values drop and the properties are even more difficult to sell due to the continued industrialization of our rural communities? How will these financial impacts of the surrounding residents be determined when this Project is brought to them for a decision if one of the objectives is to determine if the land lease owners revenue streams has been diversified? For the Applicant or the County to state that the drop in property values will not happen is pure speculation. Even though the Applicant indicates that they can present evidence through their independent studies just as many studies can be shown that the opposite is true. Some industrial wind developers are even providing financial incentives to communities, which are located within 5-10 miles of their developments, just to provide bribe money to get the community to agree to the developments. That being the funny thing about data....there are always two sides.

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2.4 Description of the Project

The Project description in the DEIR is not adequate since it lacks an accurate, finite and stable project description. The maps within the DEIR indicate the approximate location of the 72 turbines however the mitigation measures throughout indicate that the final turbine laydown has not been finalized. If the turbine locations and final design are not within the DEIR than the residents have not been given an accurate, finite and stable description of the project to review. You can't do an accurate assessment without an accurate description. The Applicant can make changes to the entire project site once they get the special use permit without any additional considerations and/or review by the community members and decision makers. Would Shasta County accept these types of inaccuracies from landowners looking to build homes or other industrial complexes within Shasta County?

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An example of this deficiency is in the Aesthetics section, Mitigation Measure 3.2-1 Project Design to reduce aesthetics impacts to KOP 1.

“When finalizing the design for the Project, the Applicant shall site turbines to avoid placing turbines within the view shed of KOP 1. For example, if the turbines were to be moved further downslope they would be less visible. When submitting site plans to the County of Shasta to be approved the Applicant shall demonstrate to the County that the impacts from KOP 1 have been avoided or reduced.”

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P27-19

If the DEIR does not show the final design for the turbines then how do the reviewers and/or decision-makers know if the correct environmental analysis and impacts have been studied? When the DEIR states that the turbines were to be moved further downslope how much further downslope must they be moved to meet this mitigation? If they are moved downslope where is the alternate laydown area and/or maps indicating where they would be moved? Has this downslope area been reviewed for any additional environmental impacts? Will this move make the environmental impacts more significant or less significant? Are the maps and layouts in the DEIR not the same site plans that will be submitted to the County for approval? If the site plans approved by the County are different then the plans presented in the DEIR how the reviewers and/or decision makers know if KOP 1 view shed issues have been avoided or reduced? How far downslope do you need to go to avoid and reduce a 679 foot turbine? In addition, how many turbines need to be moved downslope to avoid or reduce the KOP 1 view shed? What is the criteria to avoid or reduce the KOP 1 view shed...5 feet, 100 feet, 679 feet?

The description of the project in the DEIR gives conflicting information and is misleading. The Applicant has proposed the turbine laydown in the available maps but also state that the turbines can be moved without any indication where they would be moved to and what criteria would be used to

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evaluate their movement. In addition the statement by the Applicant “When finalizing the design and site plan” indicate that the turbine laydown in the DEIR has not been finalized by the Applicant nor the County. The DEIR also does not indicate what will be the height of the turbines and where would they be placed and where? Will they all be 679 feet? Will some be shorter and could some be taller if chosen at a later date once the special use permit was approved? Will shorter turbines be placed in view shed KOP 1 to eliminate the obstruction or view shed issue? Why is KOP 1 the only view shed discussed regarding which turbines need to be relocated for the view shed?

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If the Applicant is unable to provide these required details due to a delay in construction and/or selection of the turbines then they are not ready to bring this project before the County and residents for a decision. An accurate, stable, and finite project description is needed for an informative and legally sufficient DEIR/FEIR.

2.4.1 Wind Turbine Generators

The description in this section further supports the statement that an accurate, stable, and finite project description has not been provided and is required for and informative and legally sufficient DEIR/FEIR.

“The site plan shown in Figure 2-2 depicts 72 turbine sites that are being considered as part of the Project. Final design may include fewer than 72 turbine sites. The 72 turbine sites represent feasible locations for a range of turbine models each with different dimensions, generating capacity, and layout requirements. “

This statement again indicates not enough information has been provided by the Applicant nor the County to do a proper review. Will the project have all 72 turbines? Appendix A, Aesthetics section indicates that if all of the turbines used are 5.7 MW then the turbine laydown will be at 38 sites. Where in the DEIR is the 38 turbine laydown and why is it not listed as Alternative 3? If the number is less, how much less, and where will those turbines be located? What sites are feasible for the 5.7 MW- 679 foot turbines, which sites are feasible for smaller turbines (3.0 MW and what will be the heights of the 3.0 MW), which sites are feasible for taller turbines? How will the layout requirements for the turbines change the locations of the turbines and/or reduce the number of turbines? Is the Applicant ready for construction now and what are the “other Project-specific factors” that need to be taken into consideration and how would they affect the project?

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Why doesn't Figure 2.4a reflect the proposed turbine height for the Project at 679 feet? The tallest turbine in figure 2.4a is at 615.8 feet, at least 63 feet shorter, than the turbines proposed in the Project site. Figure 2.4a continues to misrepresent the oversize height and size of the turbines in the description of the Project further providing confusion to the reviewers and decision-makers with intentional inaccuracies. If the Project is proposing 3.0 MW turbines then what are their heights?

Page 2-8 indicates that “Turbine foundations would be designed based on the findings of a Project-specific, site-specific geotechnical investigation that would be prepared once final turbine locations have been verified.”

If the DEIR does not reflect the final turbine locations then this only supports the statement that this is NOT an accurate, stable, and finite Project description! In addition this statement indicates that the Project-specific, site-specific geotechnical investigations have not been completed showing the inadequate modeling and data analysis that has been provided for this Project. Why have the reviewers and decision-makers not been provided with the required information regarding the needed geotechnical investigations? How will the reviewers and decision-makers determine if any additional mitigation measures are needed or what additional environmental impacts the Project will introduce related to the geotechnical investigations?

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The Section 1803 investigations need to be completed at each of the turbine sites locations, relative to the proposed turbine height for each location (3.0 MW or 5.7 MW) and all the geotechnical investigation data recirculated for the review to the community and decision-makers before any decisions can be considered. Shasta County has not provided the necessary geotechnical investigations and data for a proper evaluation by the decision-makers regarding the Project.

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2.4.4.1 Access Roads

Figure 2-5 Road Network indicates the Project road laydown however in the description the DEIR states “The road laydown may be modified as final Project designs are developed to maximize the use of existing road.” Without an accurate, stable, and finite Project description the DEIR continues to expand their inaccuracies in the data analysis and correct modeling evaluations for the reviewers and decision-makers. If you don’t have the final Project designs then how can you make any determinations regarding drainage improvements and how would you know if the National Pollution Discharge Elimination System (NPDES) permit requirements have been met have been evaluated properly and/or even met?

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P27-21

The DEIR is inadequate since it also does not provide the independent and required Section 404 Clean Water analysis from the USACE. The DEIR implies that the request has been made however have not received a response so without this data the DEIR remains inadequate.

2.4.5.3 Materials Delivery

The description of the turbine delivery is inadequate and more information is needed for the residents and surrounding communities to be informed regarding even the potential impacts they will face for over 24 months of potential construction. Even with the mention of coordination with CALTRANS the DEIR doesn’t provide any feedback from the CALTRANS representatives or permit information for a proper evaluation or assessment. The additional wildfire implications alone, generated from the over 12,000 deliveries, increases the wildfire ignition sources to unacceptable levels. Also, why isn’t there any indication that the material transport, particularly the oversize loads, will cause damage to the County roads? In addition to the potential damage to the County roads for transport will the Applicant post financial bonds enabling the County to make the needed repairs for those damages? Will the Shasta County taxpayers also be held responsible to make the repairs to the roads imposed by the developers during construction and during materials deliveries? This is an area that as outlined is lacking in the SSC and General Plan updates regarding these types of Projects.

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P27-22

In addition (Appendix H Transportation) section 10.0 Summary – indicates that the design of the project is preliminary. If you are using Appendix H (Administrative Draft) to base your assessments then why is the analysis based on a “preliminary project design”? Where are the accurate, stable, and finite Project plans? In addition, section 2.4.5.3 (Materials Delivery), DEIR page 2-19, and section 3.14 (Transportation) mislead the reader and decision-makers by minimizing how much vehicular traffic will be increased over the proposed 250 construction days. Page 2-19 state “approximately 12,070 total material delivery truck trips (east and west combined).” As listed in Appendix H summary, the project would generate approximately 93,100 trips (68,800 of these trips by commuting trips by construction workers and project staff). Approximately 2,744 trips (excluding pilot cars) will be needed for turbine component deliveries with the aggregate being responsible for the largest portion of the material trips. Without the review of Appendix H the basic DEIR minimizes the cumulative impacts regarding transport and commuting trips the Project will introduce.

2.4.5.5 Construction Schedule and Workforce

When the Project states it would require up to 400 workers, some of whom would be local, and others specialized workers that are outside of the area? How many of the 400 workers will be local so the County can truly evaluate the potential for local employment? How many will need to be specialized and only travel from Project to Project as these types of projects get approval? Will the final 12 permanent jobs be from within the

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local communities or are they specialized and need to be brought to the area from other regions? Without this data analysis the Project adds confusion to the decision-making process by these generalized statements that entice financial incentive decisions to the County tax base that will never be realized.

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2.4.6 Operation and Maintenance

Since we are in the highest wildfire hazard zone in California (as zoned by CALFIRE and CPUC) why is this proposed Project-specific Fire Prevention Plan (FPP) not provided for review in the DEIR? Again, this is an area that the Applicant wants to get the approval for the special use permit without providing the necessary information for the review.

The Applicant implies that the FPP would address all the issues, including mitigation, regarding the tens of thousands of additional wildfire ignition sources that the Project will introduce during the construction, material deliveries, operation, and maintenance. As we are witnessing across California a fire prevention plan will do nothing to minimize or stop the wildfire as it will take only one spark during a high wind event which will leave residents fleeing for our lives. Having a fire prevention plan in place will not be enough to stop a wildfire, brought on by the winds that the Applicant seeks to make the turbines operational, and this must be a No Project location for this Project and others in the future.

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The residents who seek out the quiet and serene environment amongst the Rural Community Centers realize our current wildland fire risk and are doing our best to sustain the current environment. However we will not support/accept adding any additional and unnecessary risk which only injects additional wildfire ignition sources (let alone tens-of-thousands of them) for the sake of profit. This Project cannot be considered in such a wildfire prone area and must seek approval in a less wildfire prone environment.

2.4.7 Decommissioning and Site Restoration

The Applicant wants to get the special use permit approved without obtaining the necessary permits and plans for review by the residents or decision-makers. Without the necessary reviews and permits in place how will the decision-makers have the necessary independent and unbiased information needed for an assessment?

The statement “Prior to operation of the Project, the Applicant would prepare a Draft Decommissioning Plan that details a restoration plan and how Project facilities and infrastructure would be removed.” Since Shasta County does not have the necessary zoning code or General Plan updates regarding industrial wind turbine developments what information would be required in this Draft Decommissioning Plan and how would you know if it will meet the Counties requirements for success or prove to be adequate? Will the recommendations presented only by the Applicant prove to be enough to provide the necessary execution of an effective decommissioning plan and who will make that determination? Why isn’t the Draft Decommissioning Plan available within the DEIR for review? Why is the Draft Decommissioning plan only going to be made available prior to operation and once the special use permit has been approved? How would the reviewers and decision-makers know if the decommissioning plan proves to be adequate and complete, including the site restoration costs, in order to remove the old turbines? If this Project permit is approved will the County demand that the Applicant establish a decommissioning and site restoration account now, which will only be used exclusively for decommission and site restoration, of the turbines (estimated annually to include any rate increases deposited into the account) so that the County taxpayers are not further burdened with this cost? Why are there no estimates regarding cost for decommissioning and site restoration anywhere in the DEIR? Where and how will these turbine blades be recycled? Where is the data that supports other decommissioning plans that are effective regarding the disposal of the turbine blades? Since many industrial turbine projects sites are abandoned where are the assurances that the same will not happen regarding this Project and that the County will not be strapped with the financial burden for the removal costs and site restoration? How will the decommissioning plan be presented to the Pit River Tribe, and shown to be effective in meeting their needs,

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regarding the destruction of their sacred and cultural areas? How would this effectiveness even be measured and how has it been shown to be successful in other areas of the Country regarding restoration of Native American Tribal lands and sacred cultural areas?

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2.4.8.1 Water and Wastewater

The DEIR indicates that water will be provided from the Burney Water District (BWD) but no analysis has been provided regarding the impacts to the local water district or to the residents from the Burney Water District representatives. The Project indicates that construction would require up to 49 acre-feet of water however it doesn't provide any analysis to compare the current water usage from the Burney Water District and what additional impacts the Project inject? Also, there isn't any data or analysis impacts to other surrounding water districts that the BWD resources feed into. What impacts to the water tables, in and the surrounding areas, may be affected by the construction requirements from the Project which are not being addressed or realized?

In addition where is the modeling and/or analysis regarding contamination of surrounding resident's well water or areas located within the Moose Camp area? If the Project is expected to drill down 50 feet into the bedrock where the assurances that our wells and waterways will not be contaminated are and that we will still be able to use the local streams, springs, creeks, in everyday water usage? Also, without the appropriate analysis how will the County determine is contaminants will not be transported downstream from the project site due to blasting, and other construction activities? With the contamination of our water recourses our homes and community areas will become inhabitable since we do not rely on local water districts for our water resources. Communities within Ontario have recently filed suit against three turbine projects due to the contamination of their wells so what assurances are being provided by the County that these events will also not happen within our areas?

P27-26

As listed throughout the DEIR the final turbine laydown has not been determined so how can the water assessment be properly analyzed to evaluate the full Project impacts to the water resources? Where is the US Army Corps of Engineer assessment regarding the project, Clean Water Act Section 404 Nationwide Permit and why is it not included in the DEIR?

2.4.8.2 Waste

The DEIR indicates that the same amount of waste would be generated during construction, 10,000 pounds of solid waste as with the deconstruction per week. The DEIR indicates that during construction, (e.g., scrap lumber and metal) and operational debris (e.g., office waste and some paper waste). The DEIR states that during "decommissioning and restoration would generate the same amount of solid waste as the construction phase (10,000) per week." How could this statement even be remotely true? This type of statements within the DEIR mislead the reader intentionally to minimize the environmental impacts.

The fact is this statement cannot be true and further supports that some of the documents is pure speculation. The DEIR indicates that the Project will utilize three concrete batch plants during the construction of the Project. The thousands of tons of concrete generated from the concrete batch plants are not mentioned in the construction debris (to be evaluated in the 10,000 pounds of waste/week) but cannot be eliminated in the deconstruction phase of the project. How can the blatant omission of the decommissioning and restoration plans be allowed for a proper evaluation within the DEIR?

P27-27

The Project calls for 3.0 -5.7 MW turbines. We know that the 5.7 MW turbines will weigh much more than the 3.0 MW turbine example I have used below.

In models provided by Windwatch.org the Vestas V90 3.0 MW model the nacelle weighs more than 75 tons, the blade assembly weighs more than 40 tons, and the tower itself weighs more than 152 tons = 267 tons

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for each 3.0 MW turbine. The 5.7 MW turbines will weigh even more only adding more weight, waste, and time for decommissioning.

If the Project consisted of 72 (3.0 MW) turbines the estimated waste tons will be 19,224 tons (38,448,000 pounds) in turbine waste alone. Again, only more weight will be added for the 5.7 MW turbines. If the Applicant indicates that the same amount of waste weight (10,000 pounds/week) for decommissioning then it will take the Applicant nearly 74 years to decommission the 72 turbines. The information provided from the Applicant is misleading and inadequate for a proper evaluation regarding what type and what measures would need to be included and evaluated in a decommissioning and restoration plans presented to the County.

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P27-27
cont.

2.4.8.3 Hazardous Materials

Table 2-3, Hazardous materials is a perfect example of the tens-of-thousands of ignition sources proposed by the Project only increasing the wildfire risks that are not currently in the Project area. It not only introduces ignition sources but as stated in the DEIR introduces hazardous materials at and/or near water drainage or basin areas only adding additional contaminants to ready sources of water used frequently by the surrounding residents for drinking and home usage.

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P27-28

As stated in the General Plan, page 5.4.02, Non-wildland fire include just the materials listed in the DEIR , as opposed to wildland fires, also pose the greatest threat to human life and property. Since the development area is not considered an urban area, but still introduces hazardous materials with ignition sources, it will still undoubtedly increase the need for fire protection services which are not currently available. The fires across California in 2020 have been unprecedented and have stretched firefighting resources beyond the boundaries of reasonableness.

2.5 Description of Alternatives

As I have stated earlier in the comments the DEIR is inadequate because it lacks an “accurate, finite, and stable” Project description which by default leads to a lack of reasonable range of Project alternatives.

The basic project objectives cannot be met as outlined in section 2.3 of this review. The proposed 216 MW to the PG&E Northern California grid is limited in scope therefore an accurate alternative evaluation cannot be completed and has not been presented in the DEIR. Page 2-28 of the DEIR indicates that of the nine Project Objectives, the “most basic” objective is to Provide up to 216 MW of wind energy to PG&E’s Northern territory. If the most basic objective is to provide 216 MW of wind energy even Alternative 1 nor 2 will meet the basic objective since they state the reduction in available power. These narrowly focused objectives restricts “reasonable alternatives” that have not been included in the scope of the DEIR.

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P27-29

Also section 2.3 of this review outlines the PG&E and Round Mountain sub-station transmission grid instability issues inaccurately and should be enough alone to vote No for the special use permit on this Project.

The Project’s desire to locate the industrial turbines within Shasta County is also limited in scope because the Project can be located outside of Shasta County and still add the 216 MW of power in support of SB 100 without contributing any financial gain to Shasta County. In additional the financial gain for Shasta County cannot be evaluated since it fails to properly state how many jobs will be within Shasta County and how many jobs will be transferred outside of the area due to limited expertise. The financial incentives of \$50 million/30 year and a \$1 million community enhancement agreement will account for nothing when a wildfire ignites from the Project site as we have witnessed to the Camp Fire. Even without the Project’s added wildfire risks the insufficiency of the condition of the PG&E transmission grid, by the PSPS events alone, indicate that the impacts will be detrimental to the health and welfare of the communities. The cumulative environmental impacts that the Project will bring to Shasta County is unacceptable and needs to be added in consideration of this Projects basic objectives: the continued destruction and erasing of tribal and cultural resources of the Pit

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River Tribe, the tens-of-thousands of increased wildfire ignition sources, the deaths of thousands of birds, bats, and other wildlife, the aesthetic degradation, the increase in air quality hazards introducing additional health hazards, the destruction of the local hydrology resources, the increase in noise and infrasound relating to increase in health hazards, just to mention a few.

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cont.

2.6 Permits and Approvals

The DEIR indicates that the permits and approvals ‘could’ be required for site preparation, construction, operation, maintenance, and decommissioning. Several of the permits are required and need to be provided in the DEIR so the reviewers and decision-makers to ensure a complete evaluation before the decision of the special use permit can be reached. For the Applicant to indicate they will obtain the permits after the Project has been presented to the decision-makers is not adequate and the County has failed to provide the necessary coordination and receiving feedback across other governmental agencies.

↑ P27-30

Several members of the CIO FWP briefed the planning department, planning commissioners, and Board of Supervisors regarding the U.S. Army Corps of Engineers Clean Water Act, Section 404 Nationwide Permit and it is still not available for review yet the DEIR has been released for review. With that in mind what other permit reviews have been eliminated from the review that would benefit the community review and decision-makers?

Where is the needed data from the USFWS to determine the results of the permit in the take species?

Where is the Clean Water Action, Section 404 Nationwide Permit results and analysis?

Where is an evaluation from CALFIRE regarding the increase in wildfire risk and evaluation of the proposed wildfire mitigation measures outlined in the wildfire section? CALFIRE needs to be required to do a separate evaluation regarding the increase in wildfire ignition sources, presented by the Project, and not just the approval of a Timber Harvest Plan? If this evaluation is not completed then the residents will not be able to understand the true wildfire impacts brought on by the Project.

Chapter 3

3.1.2.2 Impact Significance Criteria

The DEIR states “CEQA lead agencies rely on impact significance criteria as benchmarks to determine whether changes to the existing environment caused by a project or an alternative would cause a significant adverse effect.”

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How are the ‘benchmarks and thresholds’ determined for the impact significance criteria? The major area of concern is within the wildfire section which indicates “potentially significant” yet it has been mitigated down to less than significant. How can this be possible since it is already listed as “potentially significant” in the DEIR, the CPUC assigned the area as Tier 2/3, and CALFIRE assigned the areas as “Very High Fire Hazard Zone” and yet the Project introduces tens-of-thousands of additional ignition points and it is proposed to be mitigated to “less than significant?” Anything above the current “baseline wildfire” conditions is unacceptable and the Applicant can’t do anything to reduce the current assignments just by providing and following a fire prevention plan. As been shown across California many fire prevention plans are in place yet they have done nothing to minimize the over 4 million acres lost in 2020. With the mitigation impacts measures presented in the DEIR wildfire section alone they cannot possibly take a Tier 2/3 and “Very High Wildfire Hazard Severity Zone” area and reduce the significance to “less than significant.”

3.1.2.3 Impact Significance Conclusions

What are the thresholds and benchmarks in evaluating the significance of the impacts and conclusions? How were those thresholds determined? How was the significance level of that threshold determined? How was it determined that the migration methods reduced the impacts to the threshold levels listed in Table ES-2?

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An example area is the wildfire section – how do you know the Fire Prevention Plan, coordination plan with CALFIRE, or any other plans will be effective and what studies or data are they based upon to reduce the impacts to “less than significant”?

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P27-32
cont.

Without the necessary data files, needed studies, expert opinion from CALFIRE, PG&E representatives, CALISO, and others the reduction to “less than significant” in numerous areas within the DEIR is only speculation and conjecture without the data to support the conclusions.

3.1.2.4 PG&E Interconnection Infrastructure

This portion of the DEIR is wholly inadequate and does nothing to address the transmission grid safety, reliability upgrades under contract now, and hardening efforts outlined by the grid operator themselves. The DEIR indicates that the CPUC regulates private investor-owned utilities including PG&E. The DEIR also indicates that the CPUC does not regulate aspects of the Project to be constructed by the Applicant (such as the switching station and collector lines). So if the CPUC does not regulate the Project and they also indicate that they are working with PG&E for transmission grid hardening efforts then who is responsible to ensure that the transmission grid is safe? Where is the documentation that the Project has requested authority from the CPUC for the interconnection and what are the upgrades needed for the interconnection into the PG&E lines? How will this interconnection agreement lessen the wildfire risk and provide any increased reliability and/or safety measures into the PG&E grid within Shasta County or surrounding areas?

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PG&E has just come out of the biggest bankruptcy in U.S. History which they have plead guilty to 84 counts of involuntary manslaughter in Butte County and nothing is documented or mentioned in the DEIR regarding the PG&E Interconnection issues for the Fountain Wind Project. PG&E leadership has stated that the company will need to complete over \$40 billion dollars in transmission grid upgrades, over the next 12-14 years, and nothing is mentioned in the DEIR for the largest industrial wind project in Shasta County regarding any additional safety measures needed for the PG&E Interconnection or to address the additional wildfire risks. Many of the residents were not aware of how antiquated the PG&E transmission grid is and all the issues that have come to light due to the PG&E bankruptcy.

To support the facts that the PG&E transmission grid has been proven to be, and remains insufficient, I have provided the Butte County District Attorney’s public report regarding the secret grand jury, with their findings regarding the involvement in the devastating Camp fire where 85 lives were lost. Currently PG&E is under investigation in another devastating fire, the Zogg Fire, within Shasta County that has taken 4 more lives and the destruction of over 56,000 acres, including 200 structures.

PG&E has been implementing on-going PSPS events throughout Northern California since the devastating Camp Fire. These on-going PSPS events are at and/or near the proposed Project site only prove that the transmission grid area surrounding the Project is not safe nor hardened to provide safe and reliable electrical service for the residents and communities. How can the Applicant or the County separate the on-going PSPS events in relation to the transmission grid safety and reliability efforts in relation to the injection of the intermittent power from the Project? Who in Shasta County will make the determination that the on-going PSPS safety events can be separated from the consideration of the safety and reliability of the transmission grid that the Project wants to make at the interconnection site within the development area?

The California Governor and other representatives continue to threaten a state take-over of the failing utility and the DEIR only mentioned the interconnection site for the Fountain Wind project, as if the failing transmission grid has no bearing regarding the environmental, or additional wildfire issues that will be added due to the Project. How can the Applicant and the County indicate that the PG&E upgrades and safety measures, including the Round Mountain sub-station are mutually exclusive from

the Project when it comes to the safety of the residents and communities within Shasta County? The Applicant indicates in the Project Objectives that they want to locate the Project in close proximity to an existing transmission line with sufficient capacity – who in Shasta County will make the determination that the existing transmission line has the sufficient capacity for the Project integration? Who within Shasta County will make the determination that the interconnect to the Northern California electrical grid is safe and reliable based on the on-going efforts by PG&E and CALISO at the Round Mountain sub-station? How will these objectives be measured to be safe, reliable, and effective and who is the expert within Shasta County that will provide this data analysis and statement? Without the required input from CALISO regarding the Round Mountain sub-station reliability work currently under contract until 2024, the PG&E transmission grid reliability reports and safety hardening efforts the Applicant and the County will prove to be negligent. The review and consideration can't possibly be considered for certification of the FEIR for this Project, or any other in the future, until the necessary modeling and data studies are made available and the transmission grid has proven to be safe. At the very least this Project should be tabled until 2024 and until an independent third party has indicated that PG&E has caught-up on the transmission hardening and safety upgrades in the next 12-14 years and the lines are proven to be safe. Anything other than the required data analysis and completion of the required hardening efforts by PG&E are pure speculation from the Applicant and the County.

P27-33
cont.

3.1.4.6 Energy Resources

The DEIR indicates that “According to CEQA Guidelines, a project would result in a significant impact to energy if it would: “Conflict with or obstruct a state or local plan for renewable energy or energy efficiency” either the Project or alternatives would have an impact in this respect.

If the “specific existing sources of energy that could be replaced by this Project are unknown” then how can the Applicant make the statement that it does not conflict with energy efficiency? True energy efficiency is not to construct or use unnecessary resources unless you have a plan in place to distribute the power. The statement used by the Applicant is subjective so where is the data to support that assessment? Where is the application submitted by the Applicant to the CPUC regarding this project? Does the Applicant currently have a purchaser for the power or are they hoping to obtain one once the Project is completed? Is this a “we will build it and they will come buy from us” situation or can the Project truly show that they will not conflict with the CEQA energy efficiency guideline?

The Applicant will be using enormous amounts of resources and energy to construct the Project yet they can't determine who and what the energy will be used for or what it is proposed to replace? Is Shasta County willing to introduce all the environmental impacts in the area for energy that is not needed nor currently propose to be placed on contract via the PG&E utility? With the CALISO efforts to curtail power over the last 8 months proves that this power is not needed. How the County even reviewed any of the CALISO curtailment reports over the last year or done any independent data analysis regarding just how much power is being curtailed on a daily basis or year-to-date? If this power is needed then where is the power purchase agreement with PG&E to procure the power for distribution over their transmission grid? In the recent bankruptcy PG&E has indicated they have enough renewable power to last until at least 2030 or later. In fact they are looking to shed some of those renewable agreements in order to focus more on the transmission grid capabilities and not renewable power purchase agreements. In review of the CPUC renewables portfolio they are well ahead of their projected renewable power needs and expect the requirements to fall as more solar comes on-line including repowering efforts within California within the existing turbine location areas. One of the major problems that still remain is the current transmission grid can't handle the power loads without back-up battery and storage capacity. Due to these inefficiencies California has had to contact neighboring states and off-load excess power, to the point of paying Arizona \$18 million dollars, to take the excess power off the transmission grid to stabilize the grid.

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3.1.4.10 Land Use and Planning

As outlined in the first moratorium request, dated June 11th, 2019, the current General Plan and Shasta County Zoning Codes outline for Large Industrial Wind Energy Conversion Systems is insufficiently to protect the surrounding residents and communities. It is due to the lack of zoning requirements, for these types of industrial developments, that Big Wind energy developers will continue to target Shasta County with little regard to the safety, health, peace, comfort, or general welfare of the residents working and residing in the area.

Adopting the moratorium would allow the County Planning Department, Commissioners, and the Board of Supervisors, time to study and make changes to the County's General Plan and Zoning Codes for industrial scale wind developments within the County. Shasta County Code (SCC) does not currently address any type of Large Scale Wind Energy Conversion System and these unique types of developments should not be lumped into the "Unclassified" or "Timberland" development language of "Public Utility" without the proper due diligence of developing appropriate General Plan and Zoning Code updates; the applicant identifies themselves as a Wind Energy Generation Development not a Public Utility. Nor should they be developed under SCC 17.88.035 which addresses small wind energy systems and is wholly inadequate for these unique industrial developments. Many communities throughout the Country have developed specific zoning regulations because of the unique issues inherent with these types of developments. Due to Shasta Country's lack of proper Energy Siting Regulations or Ordinances for these types of developments, approving any further projects of this type under the current zoning code will likely lead to litigation for years to come. These Industrial Wind Turbine developments do not support the Shasta Country General Plan objectives regarding the quality of life for Shasta County residents, particularly for those in the Rural Community Centers. The General Plan recognizes that the Rural Community Centers provide opportunities for persons desiring to live in an environment characterized by few, if any urban services, and in close proximity to the surrounding natural environment. The natural, as opposed to the man-made environment, is the dominant theme in Rural Community Centers, and physical access to the natural environment for living and recreational purposes is an important element of daily life in them. Placing Industrial Wind Turbines in these environments is diametrically opposed to the General Plan's objectives for these areas.

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The neglect of the Board of Supervisors to place the moratorium as an agenda item to be addressed, per Attachment (3) and the response by the Planning Department, memo dated August 15th, 2019, Subject: Consistency of Large Scale Wind Energy Facilities with the General Plan and Zoning Plan does not address the issues raised by the Citizens in Opposition to the Fountain Wind Project. We still find that the issues regarding large scale industrial wind projects do nothing to protect the residents and community members who are subjected to these industrial developments without comprehensive guidance in place for the residents and developers alike.

The vague verbiage within current zoning code and as indicated in the memo "In the absence of an established term for such systems, they are referred to as "large scale wind energy facilities" in this memorandum further indicates more work in required in this area.

If Shasta County wants to approve large scale industrial projects why would there be an absence in an established term for large scale wind energy facilities when the term has been used for decades? This generalization outlined in the current General Plan and zoning code only allows Shasta County to approve what they want without taking the time to apply the due diligence with the needed General Plan and zoning updates providing clear guidance and how these "large scale wind energy systems" are defined.

In addition the memo indicates that "Furthermore, pursuant to Zoning Plan Section 17.88.100.B, public utilities are permitted in all zoning districts with the approval of a use permit. Pursuant to Zoning Plan Section 17.02.430, public and private facilities which produce energy for public consumption are classified as public utilities." However, 17.02.430 also states that "Public Utility" means use of land for public utility purposes by an entity providing pipeline, gas, electrical, telephone, telegraph, water or sewage service that is subject to the jurisdiction of the CPUC. How can they be considered a public utility without any oversight from the CPUC? Is the intent of this portion of the SSC that it is both ways, under the CPUC and not under the CPUC and if not how is the breakout defined? The Project DEIR states that they are not under the oversight of the CPUC since

they are not considered a public utility so who will provide the oversight for such projects within Shasta County? Who within Shasta County will provide the oversight for the overhead lines and other areas of the Project that are not regulated by the CPUC.

If Shasta County wants to consider and approve Large Scale Wind Energy Systems then they need to take the time to properly update and outline how they are defined and approved within Shasta County. When Attachment (3) was submitted to Shasta County for consideration we suggested a County Wide Advisory Plan to gather to update and incorporate the data into the General Plan and zoning codes which was completely ignored. As outlined in the Shasta County Framework for Planning “Past experience in Shasta County and elsewhere have shown that responding to adverse change after the fact is not a viable alternative” and should not be the planning method for these types of developments shows to still be true today. Now is the time to take the action needed to avoid the adverse changes introduced by the Project and Shasta County needs to take action to update the General Plan and SSC to reflect what the County requirements will be without being dictated by Big Wind developers

Page 3.11-12 of the DEIR, Impact 3.11-2 identifies the areas that introduce hazards from turbine failure. Since Shasta County has no guidance in their General Plan or SSC in relation to the hazards introduced from turbine failure they have allowed the Applicant, to direct them through other Counties within California, and the work that they have completed to update their General Plan and zoning codes. Page 3.11-13 of the DEIR has listed at least six other Counties and the work they have done to state what they will accept, and not accept, with regards to turbine set-backs. The inadequacies in the DEIR, with using these set-back standards, is that they may be out of date in relation to the size of turbines being proposed with the Project. The turbines proposed by the Project were not even available during the timeframe that the set-back guidance referenced in the DEIR were published. Numerous General Plans and zoning codes have been updated to restrict and exclude the size turbines, proposed by the Project, due to the sheer size and introduction of massive environmental impacts to their areas. Shasta County cannot continue to rely on direction by the Big Wind Developers who want to capitalize on insufficient or non-existent General Plan update and zoning code to address such industrial developments.

Where the following issues addressed in the DEIR and who within Shasta County can determine if they meet any proposed definitions within the current General Plan or SSC?

- What height turbines will be the maximum considered within Shasta County?
- Will they be allowed in the forested “Very High Wildfire Hazard Zones”?
- Will they be required to submit and fund a decommissioning plan even prior to consideration?
- Will they be required to fund County staff to prepare and complete the CEQA DEIR analysis prior to opening the permit process so that the County is not burdened with the cost?
- Will they be required to outline the benchmark and threshold levels for the mitigation measures to determine adequacy of the impacts?
- How close will they be allowed to State and County parks?
- What will be the limit to turbines considered for each Project proposed?
- Will CALISO curtailment reports be required to be analysis prior to submission for a special use permit?
- Will they be allowed in areas currently undergoing PSPS events? And if not how far out will they be considered?
- What will be the minimum set-back requirements to residents, property lines, schools, community clinics, etc. (1, 2, 3 miles)?

The last General Plan was updated in 2004 and is out of date even in relation to the approval of the Hatched Wind Development since wind energy is not listed as an energy source at that time within the General Plan. The General Plan currently lists solar, biomass, cogeneration and hydroelectricity even though large scale wind developments have been populated across the state. Without the needed updates to the General Plan and Zoning code Shasta County relies upon the developers to set the standards to suit their needs and not the needs of the surrounding residents and community members. Other Counties throughout the Country have taken the

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cont.

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time to review and publish Large Scale Industrial Zoning updates based on input and feedback from community members and independent industry standards without due influence by developers who approach Shasta County. Attachments (4) & (5) have been provided as examples of General Plan updates and zoning codes that have been implemented to protect and set their own standards of what is acceptable and what will be excluded with input from their local residents.

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P27-35
cont.

3.1.4.14 Public Services

The DEIR states that “According to CEQA Guidelines, a project would result in a significant impact to public services if it would result in substantial adverse physical impacts associated with the provision of new of physically altered governmental facilities, the construction of which could cause significant environmental impacts.”

This statement within the DEIR is out of context and further only confuses the reader and/or decision-makers into thinking they are addressing the Public service areas correctly. The question within CEQA is “are you building a new (or physically altering) a governmental facility that results in significant environmental impact?” The answer is no. The Project DEIR relates to the construction of a new industrial turbine development and has nothing to do regarding physical impacts of new or physically altered governmental facilities so why is this statement and reference even used?

The DEIR further goes on to try to justify how this question is supported under the Fire Prevention Services – “The Project and Alternatives 1 and 2 would result in no impact relating to the maintenance of acceptable performance objective for fire prevention services because they would not provide or require the construction of new of physical alternation of existing governmental facilities, the construction of which would cause significant environmental impacts.” This statement of course is true since it has nothing to do with the Project presented in the DEIR!

However, the facts are that the Project will increase the wildfire risk due to the tens-of-thousands of ignition sources from the construction, materials delivery, operation, and maintenance of an industrial turbine development that is not remotely related to a governmental facility but are reflected within the General Plan regarding fire safety and is in direct conflict with objective FS-1.

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Electric Power and telecommunications Facilities

What the DEIR fails to do is address is the reality of the “antiquated transmission grid environment”. The public has been made well aware of the safety and hardening efforts since the reveal of the PG&E bankruptcy which as I stated before has become our environmental realities that have not been addressed by CEQA yet to date. CEQA has failed to provide updates and address the insufficiency of the antiquated PG&E transmission line that the Project plans to make with their interconnect. The DEIR implies that the injection of the intermittent power from the Project will be benign and only support meeting renewable energy goals when the residents know the safety of our communities and our lives are at risk.

The DEIR indicates that scoping input “suggested that these lines are at or over electrical capacity during peak times 7 months or more of the year.” This is not a “suggestion” it is the facts based on the 2018-2019 CALISO transmission report modeling and data analysis listed below. .

Page 7 of the CALISO 2018-2019 Transmission Plan provide the Key Reliability Study Findings which are related to the Round Mountain Substation upgrade.

Key Reliability Study Findings

During the 2018-2019 cycle, ISO staff performed a comprehensive assessment of the ISO controlled grid to ensure compliance with applicable NERC reliability standards and ISO planning standards and

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tariff requirements. The analysis was performed across a 10-year planning horizon and modeled a range of on-peak and off-peak system conditions. The ISO's assessment considered facilities across voltages of 60 kV to 500 kV, and where reliability concerns existed, the ISO identified transmission solutions to address these concerns or assessed the ability of previously approved projects to meet those needs. This plan proposes approving 11 reliability-driven transmission projects representing an investment of approximately \$607.4 million in infrastructure additions to the ISO controlled grid, all of which are located in the PG&E service territory. These are comprised of 9 smaller projects each less than \$50 million totaling \$168 million and two dynamic voltage support projects totaling \$440 million.

The two dynamic reactive support projects are eligible for the ISO's competitive solicitation process.

In addition to the identification of new reliability requirements, the ISO also reviewed a number of previously approved transmission projects in the PG&E service territory, which had been identified in previous planning cycles as needing further evaluation. These reviews looked not only at canceling projects where changing circumstances no longer supported the need for the project, but re-scoping of projects where needs still existed and changing circumstances could lead to more effective and economic solutions:

- Six transmission projects with cost estimates totaling \$440 to \$550 million that were found to be no longer required and are recommended to be canceled.
- One project will continue to be on hold pending reassessment in future cycles. Going forward, individual projects will continue to be considered for review on a case by case basis, as the need arises.

Page 90 of the 2018-2019 ISO Transmission Plan March 29, 2019
California ISO/MID 81

Detailed assessment of the need and requirements of the voltage support was assess in both the northern (Round Mountain area) and southern (Gates area) of the PG&E area 500 kV system as follows.

Round Mountain 500 kV Dynamic Reactive Support

An assessment of reactive support in the Round Mountain area of the northern portion of the PG&E 500 kV system was conducted. The detailed assessment is included in Appendix B. High voltage issues at Round Mountain 500 kV substation bus occur frequently in real-time operation under non-peak conditions when the COI flows are typically lower. High voltage issues have resulted in limited clearance opportunities to do maintenance work on system elements and in some cases the clearance had to be cancelled to bring the element back in service to address voltage issues. The worst condition occurs under the N-1 contingency of Round Mountain 500/230 kV transformer which is a 3-winding transformer with 4 x 47.7 Mvar reactor connected to its tertiary winding. The loss of the transformer disconnects the reactors and as a result high voltage condition worsens. Round Mountain bus voltage under N-0 and N-1 conditions in a 2019 minimum load case are 549 kV and 554 kV respectively.

To address the issue, a device with 500 Mvar reactive absorption rating is assumed at Round Mountain 500 kV bus. The reactive device is sized to bring the voltage close to 540 kV which is PG&E's maximum normal operating voltage. The studies showed that with reactive device in service, the voltage at the Round Mountain 500 kV bus drops to 538 kV and 541 kV under N-0 and N-1 conditions, respectively. In addition to high voltage issues under light loading conditions, Round Mountain bus voltage varies significantly on a daily basis with the output of solar generation in California which results in COI flow changes on a daily basis. The hourly voltage fluctuations are expected to increase in future with more solar integration in California and the expansion of EIM in the northwest. To address the voltage variability at Round Mountain 500 kV bus, the recommended reactive device should be a dynamic device to be able to actively manage the voltage as the need for reactive support changes based upon the flows on COI.

The analysis of the study results demonstrates the need for a dynamic device at Round Mountain to absorb up to 500 Mvar reactive power. The benefits of the Round Mountain voltage support device having a dynamic range to inject reactive power is discussed in the following section.

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The maximum voltage drop at Round Mountain 500 kV bus occurs following the trip of PDCI under a scenario in which both PDCI and COI are highly dispatched. This scenario is more severe under spring off-peak load conditions and is expected to happen typically in the evenings when imports from northwest are high to manage the evening ramp and the higher flows in the non-solar hours. The study results show that following the PDCI contingency and after all the automatic switching of the existing reactive devices (post transient condition), the voltage drop at Round Mountain 500 kV bus is around 35 kV. To prevent voltage from dropping below low end of emergency operating voltage of 495 kV, system operators keep the pre-contingency voltage quite high to ensure acceptable post contingency voltage. Having high voltage on 500 kV system will result in high voltages on 230 kV and to some degree the 115 kV and 60/70 kV lower voltage networks. High voltages across the PG&E system have been observed in real-time and planning studies under light load conditions that poses ongoing challenges for system operations. A dynamic device that has both reactive and capacitive range at Round Mountain, will enable system operations to be able to set the pre-contingency system voltages at lower values so that the post-contingency reactive power injection at Round Mountain 500 kV bus will support the voltage within acceptable ranges for normal operations and after the contingency. Study results show that with 500 Mvar injection from Round Mountain dynamic reactive device, the voltage drop after PDCI outage will be only 18 kV. The results show that the voltage in the area ranged between 488 kV and 558 kV in the existing system which is outside the acceptable range, especially on the high voltage. After implementing the Round Mountain ±500 Mvar dynamic voltage support, the voltage in the area ranged between 503 kV and 548 kV which is within acceptable range.

Further review of the engineering detail for the termination of the Round Mountain 500 kV Reactive Project is required due to siting issues at Round Mountain for the project. Board of Governor approval is recommended, and the additional detail will be posted as an addendum to the transmission plan. The competitive procurement process for the project will commence after that has taken place. The reactive device is to be installed in a minimum of two equally-sized blocks independently connected to the 500 kV to accommodate maintenance and contingencies of the reactive device. The reactive power support is required to provide continuous dynamic reactive power support over the complete range of the capability (unless the facility experienced a planned or forced outage). It can be one of the following types of devices: SVC (Static VAR Compensator) with Thyristor Switched Capacitors (TSC), STATCOM (Static Synchronous Compensator), or Synchronous Condenser. An appropriately sized and configured inverter associated with a battery storage project could also provide the reactive support. Voltage support requirements would take precedence over any other operation of the battery storage facility. The estimated cost of the project is \$160 million to \$190 million with and expected in-service date of June 2024.

The DEIR further indicates that “The County anticipates that the CPUC would analyze the potential environmental impacts of any transmission reliability work proposed to take place in connection with the Round Mountain Substation once sufficient details about such a proposal are known. That project would be proposed many miles away from the Project Site and would have a different applicant, a different CEQA lead agency, and different objectives than the Project analyzed in this EIR. It is anticipated that any reliability upgrades that could be proposed in connection with the Round Mountain substation would be evaluated whether or not the Project proceeds. Although overall electrical system capacity and issues of grid reliability are beyond the scope of the County’s consideration under CEQA of impacts of the proposed wind project, the County further notes that a regional grid reliability project at or near the Round Mountain Substation appears to be proceeding (TransmissionHub, 2020).”

The County cannot stand-by and anticipate any action from the CPUC when the County is the responsible agency for the approval or denial of the Project. The conditions regarding the reliability, safety, and wildfire prone transmission grid sits at the feet of the County decision-makers since this Project is before the County, and not the CPUC, for approval. The County must be the first line of defense for the residents regarding safety matters that have been brought it to your attention, not as suggestions but facts, and the

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cont.

residents expect the County to take the action needed to obtain any and all of the facts regarding the safety status and do the necessary outreach across the governmental agencies.

If the County, as the responsible approving agency, does not do the outreach to the other governmental agencies to obtain the required answers regarding all the safety issues from the CPUC, PG&E, and CALISO you will be found negligent if the special use permit is approved. These transmission safety issues are not only being addressed by PG&E but CALISO also and cannot be ‘assumed’ to be resolved. The County is well aware of the insufficiency of the transmission grid, as has been witnessed in the Camp Fire 2018, Kincade Fire 2019, and potentially the Zogg Fire 2020, and on-going efforts by PG&E to harden and implement safety upgrades to their antiquated grid. In addition the CALISO reliability work is separate from the PG&E hardening and safety upgrades expected to take 12-14 years with on-going PSPS events continuing for the next 10 years at and near the Project site.

Also, for the County to indicate that this matter is in someone else’s swim lane is negligent and irresponsible. The statement “That project would be proposed many miles away from the Project Site and would have a different applicant, a different CEQA lead agency, and different objectives than the Project analyzed in this EIR” is irrelevant. The Project will still make their interconnection into the PG&E grid, via the 230 kV line, that will go to the Round Mountain substation. The safety and reliability of the communities and residents should be the primary objective in both Projects, for the Round Mountain substation and the Fountain Wind Project, so they cannot be independent as indicated in the DEIR. The Applicant and County indicate that the CPUC is responsible for safety of the transmission grid but they also state that the Fountain Wind project is not regulated by the CPUC since they are not a public utility. The County can’t have the residents caught between the decision-makers, from two different approving agencies, so who is responsible? Who in Shasta County has the authority to make the decision regarding the safety and reliability of the transmission grid without the required data, modeling, or coordination from the other governmental agencies? How will Shasta County obtain the required modeling and data analysis to make any informed decision regarding these areas without the required input from the CPUC, CALISO, or PG&E? Who within Shasta County will override the on-going statements from the CEO of PG&E regarding the instability of the transmission of the grid?

Without the required modeling, data analysis, and out-reach to the governmental agencies the decision-makers cannot make the necessary decisions regarding the safety, peace, morals, comfort, and general welfare of the residents within and working in the neighborhood. To do any less in requiring the additional data for your decision would be negligent.

3.1.5 Irreversible Impacts

The Applicants statement “Potential impacts relating to hazards and hazardous materials are analyzed in Section 3.11 which identifies no significant unavoidable adverse effect. For these reasons, the Project would not, if implemented, result in significant irreversible impacts.” Limits the consideration of defined “irreversible impacts”. The Projects environmental impacts must be viewed in their entirety and not just limited to Section 3.11 for hazards and hazardous materials. Where has an industrial wind development been restored to the pre-construction environmental anywhere in the World?

The impacts addressed in this section only address the pre-timber use for the land owner. It does not address the erasing of the cultural heritage of the Pit River Tribe that will never be regained or viewed in the same way every again. It does not address the biological impacts to the wildlife including the flora and fauna, it does not address the increased wildfire impacts, the continued destruction of our rural community, just to name a few. These irreversible impacts addressed in this section lacks the necessary importance as they relate to all the areas that will be impacted throughout the life-cycle of the Project. Also, where are the cumulative analysis in relation to the Hatchet Wind Project, the proposed Fountain Wind Project, and the on-going submissions of



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the landowner’s timber harvest plans outside of the direct Project site in relation to the overall biological impacts regarding the wildlife resources?

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3.2 Aesthetics

When the County held the NOP meeting in Jan 2019 the consultant indicated their objective was to provide an unbiased environmental impact report for the public to review. As a retired federal employee, with a degree in Computer Science, writing and reviewing technical documents for nearly 20 years, it is clear to see the bias from the consultant throughout the document to minimize the destructive environmental facts. If the Applicant and the consultant are so very proud of their proposal for these industrial wind turbines then why are they not overlaid the 72 industrial turbines on the cover of the DEIR? The picturesque cover shows our beautiful Intermountain area without one turbine and shows the reason many of the residents chose to live and vacation in the area. It is very apparent that the consultant had to incorporate the Hatchet Wind project in order to try and minimize the development of the tallest industrial wind turbines in the U.S. With the inclusion of the Hatchet Wind project the readers may believe it is just an “extension” of the existing turbines and not an introduction of yet another industrial blight, over 250 feet taller and nearly twice as many, into this beautiful scenic area. The Fountain Wind project cannot be viewed as just an “extension” of the Hatchet Ridge project. As a reminder to the County decision-makers the Hatchet Ridge Wind project had two appeals and over 600 signatures on a petition to stop that project in 2008 and it was approved anyway. The destruction and devastation to cultural and environmental resources must stop and the Shasta County administration must listen to the people who are most affected by these types of projects residing in these development site.

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The authors use of soft words such as: “potential, generally, extends slightly, would appear, may be visible, would not substantially damage, similar in height as Hatchet Ridge, creating an appearance of, barely visible, barely perceptible, blending in, an extension of Hatchet Ridge, would elongate the extent of turbines slightly, steep terrain can encourage the spread of fire, has the potential to expose these communities to wildfire risk, aerial firefighting efforts are likely” seems so much less threatening then just stating the facts for the reviewers and decision-makers.

3.2.2.1 Study Area

The DEIR indicates that the view shed is typically the area within 10- to 20-mile radius of the Project. As shown in Figure 3.2-1 the view shed extends well past the 30 mile radius used in the DEIR. From KOP 7, Redding, you will be able to view all 72 of the 679 foot tall turbines. If the DEIR extended the view shed outside of the 30 mile radius the view shed would be even further extended as shown in Figure 3.2-1. The limits to the view shed show how the Applicant wants to minimize just how intrusive these turbines will be against the eastern Shasta County landscape. The Hatchet Ridge turbines can now be seen and the addition of the Project turbines, which will be closer to Redding, will only degrade the view shed between Mt. Shasta and Mt. Lassen further. If these turbines will be seen over more than a 30-mile radius just imagine how intrusive they will be to tourist traveling to the Intermountain area and the local residents who will be dominated by these monstrosities.

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3.2.2.2 Environmental Setting

The DEIR only evaluates the views from publically accessible viewpoints and does not take into consideration the impacts to private views or the views from individual residences.

As a landowner I did not give up my rights to the scenic viewpoints from my property just because the DEIR does not take that into account the values we place on our scenic views and doesn’t make them any less significant. In addition for the DEIR to determine that our property values will not decrease due to the construction of the Project cannot be substantiated and in reality be argued against. The same arguments have been made that property values will be reduced including data to support the statements. So much research has

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been provided regarding the reduction regarding property values that other Big Wind Developers have paid financial incentives to nearby land owners just so they can get their support to build.

The DEIR indicates that the “visual preference of residents tend toward a desire to maintain the existing landscape as it is.” Of course this statement is true and that is why we moved to this region of the Country. It is not only our preference but one of the main reasons we choose to buy property within the eastern Shasta County forested and mountainous areas. The residents moved to this location for the serene, quiet, and no industrial developments found elsewhere in the Country. This statement not only is the preference for the residents but the recreational viewers, tourist, workers, and commuters as well.

Shasta County is known for the outdoor recreational areas and tourist industry as people travel to get away from the metropolitan areas. People travel to the Intermountain area to decompress and find a place to renew their spirits. The very areas they are attracted to are Burney Falls, Lassen Park, Mt. Shasta, Hat Creek, and Pit River recreational areas. If yet another industrial wind Project is constructed, crossing the scenic SR 299, the County will see a drop in outdoor recreational tourist industry, including landowners relocating, because they refuse to live and visit the area that continues to be industrialized.

As indicated in the DEIR the “substantial adverse effect on a scenic vista or substantially degrade the character or visual quality of views from publicly accessible vantage points (Significant and Unavoidable).”

This statement alone indicates the destruction to the views for the local landowners and impacts to the tourist industry. The DEIR indicates “The General Plan does not identify specific scenic vistas” therefore, the Project would have no impact on scenic vistas designated in planning documents.” The DEIR is inadequate because it fails to address the General Plan impacts regarding Rural Community Centers which by default are included in the residential and community scenic vistas. Just because the term “scenic vista” is not used it is clear that the “scenic values” of the area are just as important to the landowners, recreational tourist, workers, and commuters or they would be living, working, and vacationing in other regions of the World.

In addition, with the approval of the Project, within the Rural Community Centers as they are defined within the General Plan, are in direct conflict with the General Plan itself.

If potential home buyers review the Shasta County General Plan and target their search based on the Rural Community Centers description, as it is currently written, they would be deceived and misinformed. The General Plan also does not list Large Scale Wind Developments within their renewables section that would need to be taken under consideration.

In addition the current zoning codes do not adequately state that Large Scale Industrial Wind Turbines are being developed within the rural areas of Shasta County since they are not defined, nor have any regulations outlined, in the current SSC. Per the SSC Small Wind Energy Systems are clearly defined (max tower height/acreage, set-back distance, etc.) however Large Wind Energy Systems are not and are only referenced by default if they don’t meet the Small Wind Energy System. Per the memo by the Planning Department on August 15th it states, “In the absence of an established term for such systems, they are referred to as “large scale wind energy facilities” in this memorandum. Since Large Scale Wind Energy Systems verbiage have been around for decades this is a clear indication that more work needs to be done by the County to update the SSC to include the necessary regulations that are acceptable to the County and residents. As outlined in Attachment (3) request Shasta County needs to take the time for independent updated and scientifically reviewed studies regarding environmental and health impacts regarding Large Scale Industrial Wind developments. The Shasta County decision-makers cannot let the SSC remain ambiguous and open ended, only benefiting Big Wind developers, who target weak and inefficient zoning codes leaving the residents and communities of the Rural Community Centers vulnerable.



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Rural Community Centers

The Rural Community Center provides opportunities for persons desiring to live in an environment characterized by few, if any, urban services, a much lower population density than that found in Urban and Town Centers, and close proximity to the surrounding natural environment. Rural Community Centers are characterized by a strong sense of identity, which in many instances, has its origins in the early settlement of Shasta County. There are 25 Rural Community Centers in Shasta County. In future revisions, the General Plan may recognize additional centers.

Shasta County is divided into ten planning areas and, with the exception of the Northwestern Forest area, each contains at least one Rural Community Center, as shown in Table C-1.

TABLE C-1 PLANNING AREAS AND RURAL COMMUNITY CENTERS

<u>PLANNING AREA</u>	<u>RURAL COMMUNITY CENTER</u>
Sacramento Canyon	Lakeshore, Lakehead, Castella/Sweetbriar, South Dunsmuir
South Central Region	Mountain Gate, Jones Valley, Bella Vista, Happy Valley Centerville Shasta/Keswick
Northwest Forest	None
Big Bend	Round Mountain, Big Bend, Montgomery Creek
Eastern Upland	Millville, Oak Run, Whitmore
Eastern Forest	Viola, Shingletown
Lassen	Old Station (North and South)
North East Shasta	Cassel Hat, Creek
Western Upland	Igo, Ono, Platina
French Gulch	French Gulch

In most Rural Community Centers, water is typically provided by small public water systems and/or on-site wells or surface diversions and wastewater treatment features use of individual septic tanks. An important exception to this general rule are those Rural Community Centers located in the South Central Region, all or part of which are served by a community water system. The availability of this service permits development at higher residential densities than would otherwise be possible in other Rural Community Centers since it eliminates dependence on uncertain groundwater supplies and the potential for contamination of groundwater by septic systems. This distinction according to the availability of community water service plays a major role in the concept of countywide distribution of growth.

Other services available within Rural Community Centers include schools, sheriff, and volunteer fire protection. Rural Centers typically provide commercial services to area residents with some centers also providing services to tourists. Commercial uses are frequently mixed with residential and light industrial uses, in contrast to the tendency for physical segregation of different land uses in Town and Urban Centers. Given the size of the communities they serve, Rural Community Centers offer limited employment opportunities.



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The natural, as opposed to the man-made environment, is the dominant theme in Rural Community Centers and physical access to the natural environment for living and recreational purposes is an important element of daily life. The surrounding natural environment also provides the resource base for agriculture, timber, and tourism industries which are extremely important to Shasta County's economy. The proximity of private access to these natural resources, some of which also provide the basis for industry, can sometimes result in unavoidable land use conflicts. Increasing the concentration of persons near these resources enhances the potential for such conflicts. Therefore, a major planning objective of the Rural Community Center is to minimize the potential for such conflicts by providing options for relatively small lot, rural residential development within a designated area adjacent to the Rural Community Center. Lower residential densities located on larger parcels are oriented to areas outside the rural communities as part of the effort to reduce rural residential and resource-based land use conflicts.

Residential development is either conventional or manufactured single-family detached housing. Multifamily housing may also be permitted in Rural Community Centers, if compatible with surrounding land uses and consistent with County development standards. As provided by Community Development Element policies, residential lot sizes can range from one acre in centralized mixed use designations to two acres or larger elsewhere. Actual lot sizes will be dependent on the potential use of either on-site water supply, and/or on-site wastewater treatment, or both, and the community's desire to maintain lower population densities. In some Rural Community Centers, developed lots may be less than one acre in size. Rural Community Center development standards recognize the existence of smaller developed lots, but also require the creation of new residential lots to be larger to comply with County development regulations, particularly wastewater treatment standards and to satisfy specific community lifestyle objectives.

Physical design standards can be less demanding than those applicable to Urban and Town Centers. These standards are influenced to a great extent by factors not present in Urban and Town Centers, such as dependence on-site water supply and wastewater treatment, wildland fire protection, and resource and wildlife habitat protection.

Rural Home site

The rural home site concept is based on a manner of residential development which features relatively large parcels. Density is often expressed in terms of acres per unit, rather than a minimum lot size as often found in an urban setting and responds to these factors by restricting the density of rural residential development outside of Rural Community Centers to relatively large lots. Density regulation should not be confused with lot size. The rural home site concept is predicated on allowing density averaging of the number of dwelling units so that smaller building sites can be achieved while still maintaining a desired overall density. Illustrations of variable lot sizes achieved by density averaging is shown in Figure PRE-2.

Rural home site alternatives are generally characterized by either conventional or manufactured single-family detached housing. Physical design standards would permit experimentation with alternative technologies in wastewater treatment but, at a minimum, must satisfy County development standards as well as public health and safety objectives.

Rural home sites generally feature public services limited to schools, sheriff, and volunteer fire protection. Commercial services may often not exist or are in limited supply and duration. The influence of the surrounding natural environment is pervasive, and frequently the presence of the man-made environment is often limited to the residence, the electric power lines which serve it, and an access road. Reliance on motor vehicles for basic transportation is very high in these rural areas. In many cases, the rural home site is bordered by agricultural or timber lands, and/or critical wildlife habitat, thus



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raising the potential for land use conflicts. Rural home sites are typically located in areas where groundwater supplies are limited, soils constrain the use of septic tanks, and fire hazards are extreme. Some rural home sites are located in areas which can pose serious soil erosion problems upon further development resulting in off-site water quality impacts extending far from the development site.

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Figures 3.27 (KOP-1) – 3.13.7b (KOP-7), of the DEIR are inadequate and misleading to the reviewers and decision-makers since they are too small to be properly analyzed. I have printed out a hard copy of the DEIR and had to use a magnifying glass to even get some type of perspective of the potential impacts to the view shed. Having all four focus areas (a-d) on one page does not adequately reflect the true visual impacts of the Project and they intentionally limit the scope from a visual perspective. In addition the angle of the KOP-1 view direction was taken to minimize the number of turbines that will be visible, particularly to the Moose Camp residents and those on SR 299 near that area. Why wasn't the view direction taken to show the turbines from the South Southeast which appear to more in number at or near the same location?

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Page 3.2-41 of the DEIR, Impact 3.2-2: The Project could damage scenic resources within a state scenic highway (Less-than-Significant Impact).

The DEIR indicates this is less than significant but also shows that they will be visible from SR 89 which is designated as a scenic hwy. In addition the scenic values presented on SR 299, not designated as a scenic Hwy, cannot be minimized since they are also referenced as corridors in which the natural environment is dominant and the gateway to the beautiful Intermountain area. The residents do not believe that the impact will be less-than-significant and will further to take the steps to work to get approval from the Shasta County Board of Supervisors to get SR 299 eastern section designated as a scenic hwy. Even though eastern SR 299 is not designated as a scenic Hwy some of the most beautiful views are seen coming from Burney and looking out over the Western mountain range of Shasta County which will then be obstructed by 679 foot turbines.

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The DEIR tries to minimize Impact 3.2-1 so that the visual quality continues to provide support with the turbines from the Hatchet Wind Project. They indicate that the Project turbines will “blend in” with the current turbines from Hatchet Ridge. Again, the Hatchet Ridge turbines were opposed by members of the Intermountain area in 2008 due to the aesthetic impacts and contrast to the environment outlined in the General Plan from the Rural Community Centers. The DEIR cannot simply infer that the Project turbines will continue to blend in since they will be over 250 feet taller and near twice as many. The continued development of industrial wind turbines in the Rural Community Center doesn't make them any less intrusive visually or otherwise and it should not be inferred in the DEIR to mislead the reviewers or decision-makers. How did the DEIR make the determination that the “additional turbines would barley be visible along the ridgeline” and by whose standards?”

The turbines for the Project will be the tallest in the Nation, within the forested rural community centers, and the DEIR simply attempts to minimize their overall mass and destruction to the local residents and communities just because SR 299 is not designated as a scenic hwy. For the DEIR to indicate that the mitigation is none required is an absurd assessment since they are narrowly focused on the scenic Hwy and not the overall scenic values of the communities within and around the Project site. This narrow focus allows the DEIR to focus on the scenic Hwy and then imply that they will be inclusive of the existing Hatchet Ridge turbines as if they will create a natural flow with the addition of the Project with is the furthest from the truth.

Impact 3.2-3 The Project could create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area (Less-than-Significant Impact)

P27-44

Why doesn't this Impact read – The Project will create a new source.....? Why is the DEIR misleading the reviewers and decision-makers to minimize the impacts that we know will happen and prove to be false?

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Page 3.2-43 of the DEIR states that each turbine is planned to have at least two safety lightening features with are required pursuant to FAA standards and Advisory Circular 70/7460-1L to reduce potential hazards to aircraft from the proposed turbines and METs. The designated turbines (potentially including all turbines) and METs would have flashing red lights. Currently within the Project site there are no sources of light like the ones that the Project will inject into the area.

Page 3.2-44 of the DEIR indicates that the “nighttime view from KOP-1 would be highly visible from this location and would introduce such lighting where none currently exists.” “Turbine lighting in views from KOP-1 would be highly visible and unavoidable in nighttime views from this location; however, due to the limited number of nighttime viewers at this location and viewing locations along this section of SR-299, the impact of lightening would not be substantial.” How was this conclusion determined and based on what data? This statement is also included in other KOP areas and still without the proper data to support the stated conclusion. The residents and community members who moved to the area to eliminate intrusive lights within the night skies will see nothing by red flashing lights imposed on the turbines for tens of miles and not just in the immediate areas along SR 299.

The facts are that the turbine lightening will be highly visible from all of the KOP areas, which many of the local residents can view from their homes supporting (the reason that they purchased their properties is for the views) in which the impacts from the DEIR state they would not be substantial. By default the homeowner views are degraded due to the turbines via all the KOP views which will be also be degraded due to the aesthetic impacts of the Project. Since many of the residents near the Project site have chosen this location to make their homes, and where we frequent the nighttime views, and now will only find flashing red lights sitting on top of 679 foot turbines in order to meet the FAA regulations. The Hatchet Ridge turbines can now be seen as far as Mt. Lassen and Mt. Shasta and well outside the 30 mile radius across the Redding Valley. Adding 72 turbines closer to residents and communities, which will 250 feet taller than the existing turbines, into the Intermountain nighttime setting will only exacerbate the already existing nighttime lightening glare. This is not about a “could” impact but a “will” impact.

Since the DEIR fails to state Impact 3.2-3 correctly “could create” as opposed to “will create” then the same can be stated regarding the (Less-than-Significant Impact) evaluation as a result. The DEIR is inadequate in determining the true impacts regarding the nighttime views in the area and as a result have made an inaccurate assessment of the impacts. This not only applies to KOP-1 but all of the KOP nighttime views surrounding the Project site including the local resident views and communities.

3.2.5 Cumulative Analysis

This portion of the DEIR is simply stated regarding the over 30-mile radius impacts. What the cumulative analysis throughout the DEIR failed to address is potential increase of special use permits that may be proposed by the Applicant in the near future.

As stated in Appendix C, Biological Resources, page 11, the original Fountain Site Characterization Study, has a much larger footprint and was pursued in 2011 (just after the Hatchet Ridge Project went into operation).

In 2011, prior to the release of the WEG, an initial Site Characterization Study (SCS), which identified potential environmental risks and considerations in the early siting of the Project (previously referred to as the McCloud Wind Resource Area), was prepared but never released. Since that time, Pacific Wind has refined the Project boundary and layout in an effort to avoid potential impacts to environmentally sensitive resources. The original 2011 project boundary in relation to the current (2017) Project boundary is illustrated in Figure 1.



P27-44
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Is the intent of the Applicant to expand the Fountain Wind Project site to the original 2011 footprint outlined in Figure 1 of the Appendix C? Since the approval of the Hatchet Ridge Project the County is witnessing Big Wind Developers targeting Shasta County due to the lack of proper SSC zoning and General Plan guidance which is supposed to protect the citizens and communities. As shown in Appendix C the original layout of additional industrial turbines began just after Hatchet Ridge became operational in 2010.



P27-45
cont.

This section of the DEIR accurately indicates that “The Hatchet Ridge Wind Project has ongoing significant adverse effect on visual character and quality of the region by creating contrast between the natural environment and man-made features or interruptions to the landscape. The Project would appear scattered and distinct from Hatchet Ridge, and would significantly increase the amount of contrast with the natural environment. The Project would result in an increasing dominance of wind turbines within the region. With these statements within the DEIR it is clear this Project is in direct conflict with the General Plan regarding the living preferences of Rural Community Center residents. These developments are the complete opposite of why people move to the Rural Community Centers to begin with and will force them to move elsewhere.

3.2.5.2 Scenic Resources within a State Scenic Highway

This portion of the DEIR leads the reviewer and works to keep their focus on State Scenic Highways all the while ignoring the fact that the primary view shed will be the residents who reside closest to the Project site.



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The DEIR indicates that “Along SR 151, near the intersection with SR 299, the Hatchet Ridge Wind Project turbines are barely visible along the distant ridgeline. The proposed Project would elongate the extent of turbines slightly, but this change would be barely perceptible due to the distance between SR 151 and the Project site and intermittent buildings.” For the residents who live over 35 miles from the Project site this may seem fine however for the residents who live and work near the Project site it will be impossible. How can the conclusion be made that “elongate the extent of the turbines slightly, but this change would be barely perceptible” when they will be located closer to Redding, will be elevated over 250 feet taller (and even taller if they are located on an increased slope), with nearly twice as many, than the existing turbines from Hatchet Ridge?

3.3 Air Quality

The DEIR indicates that the Levels of Significant impacts are potentially significant with some less being mitigated to less than significant.



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Shasta County has an applicable air quality plan in place that the Project clearly exceeds and cannot be mitigated to less than significant with the mitigation measures outlined. With the Northern California air quality reductions over the last several years due to wildfires alone adding additional contaminated air quality contaminants only add to the significance of the current conditions.

Many of the contaminants introduced through every phase of the Project increases the possibility of increased health risks and lung infections that may not be realized for years in the immediate area and down in the Redding Valley due to the low elevation and the contaminant layer staying stagnate for days and even weeks as the Project construction progresses.



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The impacts listed throughout this section of the DEIR will result in cumulative impacts with the generation of pollutant and contaminated emissions outside of the already proposed applicable air quality plan which will not be realized by the local residents unnecessarily and will be impossible to track for cause and effect at a later time when the physical symptoms begin to show within the community members. These increased pollutants are unacceptable as is being realized in several cases involving herbicides causing lung and other cancers which would also include the wildfire contaminants. This must be a No Project decision.



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3.4 Biological Resources

This section of the DEIR appears to be a direct conflict of interest regarding the Appendix C information provided.

In addition to this section having a conflict and/or perception of a conflict of interest other areas in the DEIR make the same appearance. Chapter 5 of the DEIR list the consultants (ESA) and the Sub consultants (Estep Environmental Consulting, Evans Engineering Solutions, LLC, and Hamer Environmental) whom we assume have been coordinated and paid directly through the County Lead. However where are the following consultants listed (Stantec Consulting Services, WEST, and others) who have provided data and analysis with the DEIR and Appendices, and not listed within Chapter 5 or have they been directly paid by the Applicant?

Executive Summary information

Pacific Wind Development, LLC (Pacific Wind) is considering development of a wind energy facility in northern California, referred to as the Fountain Wind Project (Project). The proposed Project encompasses approximately 32,600 acres (50.9 square miles [mi²]) of private land in central Shasta County. An initial Site Characterization Study (SCS), which identified potential environmental risks and considerations in the siting of the Project (previously referred to as the McCloud Wind Resource Area), was conducted in 2011 but never released. Since that time, Pacific Wind has refined the project boundary and layout in an effort to avoid potential impacts to environmentally sensitive resources. The objective of this revised SCS is to provide information needed to address questions posed under Tier 1 (Preliminary Site Evaluation) and Tier 2 (Site Characterization) of the United States Fish and Wildlife Service (USFWS) Land-Based Wind Energy Guidelines. The information contained herein reflects a desktop analysis of publicly available information that pertains to plants, animals, and habitat features, within the refined 2017 Project boundary, that may be important considerations during the initial stages of Project planning and development. Environmental resources within the Project boundary (Project Area) and the surrounding 2-mile (3.2-kilometer [km]) buffer (Evaluation Area) were examined through a search of existing data. In addition, an initial reconnaissance-level site visit was conducted in October, 2016, to provide additional cursory, baseline information on landscape and habitat features potentially important during Project development.

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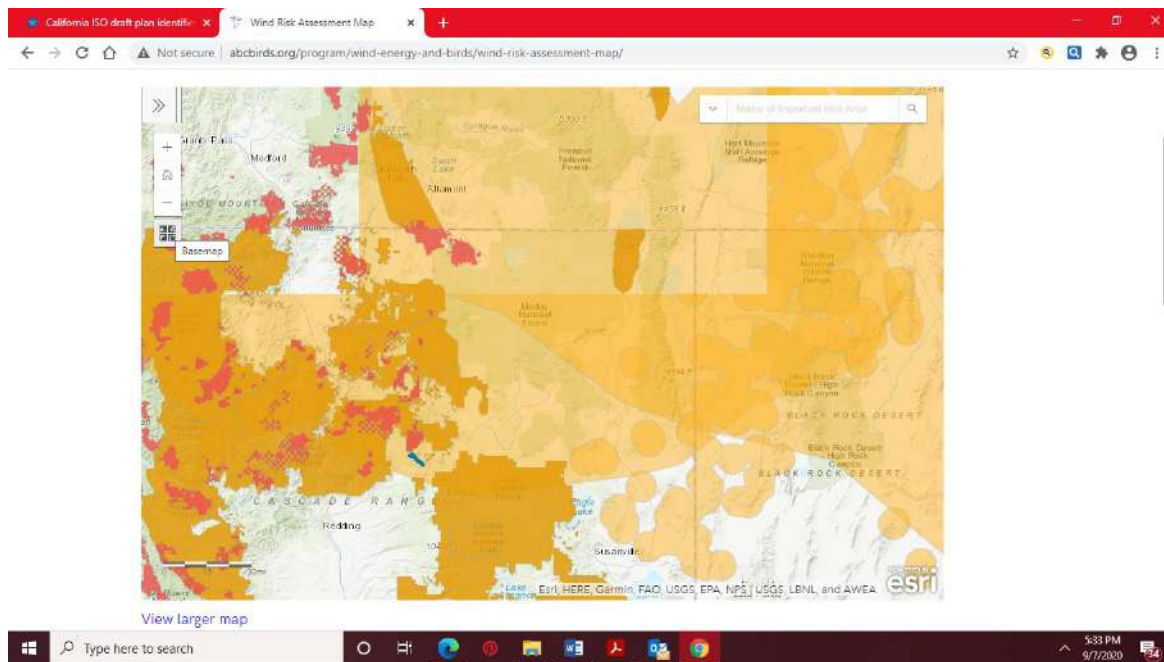
When residents attended the NOP meeting in January 2018 at the Montgomery Creek School we were presented with the overview of the Project by the County CEQA lead and an overview by the Consultant ESA. When we meet with the CEQA lead we were told that the County would take the lead in getting ESA on contract as the consultant, without any coordination from the Applicant, except to fund the work so they could avoid a conflict of interest (or even the perception).

In review of Appendix C, Biological Resources, the Site Characterization Study Report was completed and submitted to Pacific Wind in January 2017, by Western Ecosystems Technology, Inc. based on desktop analysis from 2011. The report was funded directly by Pacific Wind, LLC. The original request for the special use permit was submitted and signed by Shasta County on 7 November 2016, and the Biological Site Characterization Report is completed January 2017, just 8 weeks after the special use permit by Pacific Wind LLC, later to be changed to Fountain Wind LLC. The information from the initial report is from 2011 for another Project site specific to the McCloud Wind Resource Wind which was pointed out during the scoping comments regarding resource material for the wrong Project. The conflict of interest, or even the appearance of one, is apparent. The remainder of the Biological study, outside of the initial study completed in 2011, is merely addendums based on feedback from the CDFW and others during the scoping review period. The continual updates by the preparers of the biological studies further implies the conflict of interest is an attempt to play catch-up to include areas that would have been covered more effectively and with independent analysis had the Applicant taken the time and recommendations to include the Technical Advisory Committee(TAC) prior to announcing the Project. The TAC had been recommended during the scoping comments received in 2018 and 2019 which were never followed and as a result insufficient studies or analysis is seen in Appendix C.

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Had the Applicant taken the necessary steps to ensure unbiased and up-to-date studies were completed they would have accessed at least the latest information from the American Bird Conservancy Wind Assessment Map as a minimal.

According to the American Bird Conservancy Wind Assessment Map, (updated 2020) the entire Project area encompasses a Globally Important Bird area (Orange). The Wind Risk Assessment Map promotes Bird-Smart Wind Energy development by highlighting areas of importance to birds that should be avoided or approached with caution by wind energy developers. These areas are key migration corridors where bird risk will differ from season to season and may also differ from year to year among specific locations within the corridor. They are key habitat areas for birds on the Red Watchlist plus both widespread eagle species and Ferruginous Hawk, where the species may not be present year round. They are also Marine Important Bird areas where bird usage is also seasonal. Wind energy development may be possible within some of these areas if key habitat and bird use areas are avoided, and/or appropriate minimization and mitigation measures are incorporated.



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The entire Project is proposed well within the Globally Important Bird area and the results of that type of development are reflected in the impacts to the wildlife and will continue the destruction imposed by the Hatchet Ridge Development. The cumulative effects, in conjunction with the Hatchet Ridge project, and on-going timber harvest plans for the massive acreage by the land owner will further decimate the bird population in the area and possibly to extinction of some of the bat and bird species and is unacceptable.

Numerous comments were received during the scoping timeframe for the Applicant to reach out to the local environmental groups, Sierra Club, Wintu Audubon, and CDFW to establish a Technical Advisory Committee (TAC) which would enable the various experts to collaborate with moving forward in the best approach to minimize the biological impacts. Where in the DEIR does it indicate that the TAC was established

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and the Applicant used local expertise and resources to evaluate the best assessment/practices to protect and evaluate the local biological resources including maintaining any perception of a conflict of interest to obtain the studies? Without the establishment of the TAC resources the DEIR biological assessments appear to lack independent oversight and evaluation to determine proper oversight and evaluation of mitigation impacts and measures. The appearance, and perception of the conflict of interest, is that the Applicant paid for their own biological site characterization during 2011 which includes the completion of the study in Jan 2017, to include updates based on scoping comments in 2018 and 2019, independent of the County experts and resources to obtain the outcome they desired to get their Project approved.

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3.6 CULTURAL AND TRIBAL CULTURAL RESOURCES

As outlined in the Scoping comments the Pit River Tribe has signed a Resolution in opposition to the Project. The Pit River Tribe has not waived from their opposition to the Project. The Pit River Tribe has indicated that the entire Project site is an area that is sacred and encompasses their traditional values. In addition, the area has been recognized within the DEIR as having burial sites that are sacred. The DEIR recognizes the importance of these traditional, cultural, and sacred areas of the Pit River Tribe yet they minimize the importance with the mitigation measures throughout the cultural areas of the DEIR. The DEIR implies that the removal of the sacred artifacts and picture taking will ease the unrest the proposed measure of the Project will bring.

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Many of the areas within the Project area are used for ceremony, healing, prayer, fasting, hunting, gathering, and other sacred traditional uses that cannot be capture expect through the experiences of the Tribal members themselves. Traditionally and for cultural reasons, graves were not fenced as in a cemetery plot which increases the likelihood that unmarked graves might be disturbed by the Project’s ground disturbing activities. The highlands and ridges in the project areas are locations where only very specially trained people would go for traditional purposes. However, these places may ultimately become the final resting place for those traditional people. The Tribe attributes great significance to such places, and accordingly, requests that they be avoided for all development purposes.

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The significance criteria, identified in the CEQA guidelines, is unable to capture the entirety of the impacts this Project will bring to the Pit River Tribe and the Tribe’s deep cultural beliefs. The DEIR implies that the disturbance and destruction of the Tribal lands, artifacts, and sacred resources can be mitigated merely by stopping work on the Project for 24 hours and/or taking pictures of the disturbed, displaced, and removed Tribal Cultural Resources. These actions cannot be further from the truth and the special use permit must be denied. These types of Projects cannot be allowed to continue since the Tribal Cultural Resources and sacred history of the Tribal traditions will be erased forever for the sake of unnecessary and artificial green energy goals.

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Numerous people provided comments to the 2019 Scoping Report indicating the Project overall will destroy and continue to erase the Cultural history of the Pit River Tribe infringing on the freedom of religion and the cultural practices of the Pit River Tribe and other Indian tribes in the region, and that the Project would adversely affect sacred sites, traditional plants, and the view shed of mountains held sacred by the Tribe. In addition, the numerous water sources in the entire area of potential effect are known places of great cultural significance. These waters are also among the cleanest of waters, in which the Tribe and community can currently use with no filtration. The County recognizes and designation of the Project Site as a Tribal Cultural Resource and, due to the fact that there is no way to mitigate these adverse impacts, and therefore the County has an obligation to protect these Tribal Cultural Resources and determine a “No project alternative.”

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Under CEQA, “no public agency shall approve or carry out a project for which an environmental impact report has been certified which identifies one or more significant effects on the environment that would occur if the project is approved or carried out unless . . . (1) [c]hanges or alterations have been required in, or incorporated into, the project which *mitigate or avoid* the significant effects on the environment; (2) [t]hose changes or alterations are within the responsibility and jurisdiction of another public agency and have been, or can and should be, adopted by that other agency; [or] (3) Specific economic, legal, social, technological, or other considerations,

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including considerations for the provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or alternatives identified in the environmental impact report . . . [and these considerations] outweigh the significant effects on the environment.”

The DEIR identified the following significant impacts that the Project would have on cultural resources:

1. (Impact 3.6-1, Cultural Resource FW 11) Project-related disturbance of a historical resource would be a significant impact and could occur, for example, during grading and excavation associated with construction of turbine foundations, pads, or domestic water wells; trenching for the underground electrical collector lines or other below-ground facilities and infrastructure; or the soil borings that would be collected to an approximately 50-foot depth to ensure that the proposed turbine foundations would be stable.
2. (Impact 3.6-2 Tribal Cultural Resources) Project-related disturbance of human remains would be a significant impact and could occur if, for example, grading, excavation, or soil borings associated with construction of facilities and infrastructure.
3. (Impact 3.6-3 Tribal Cultural Resources) In the event that construction activities disturb tribal cultural resources, damage would be considered a significant impact and is unavoidable under all proposed mitigation measures.
4. The proposed PG&E interconnection would cause significant and unavoidable impact to tribal cultural resources.

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Since it is noted that FW11 “qualifies for listing in the California Register under Criterion 4, for its ability to yield additional information in prehistory. The prehistoric component of F11 is therefore considered a historical resource for the purposes of CEQA.

The area designated as FW 11 contains several ancestral artifacts making it a historic and tribal cultural resource under CEQA. For such resources, the preferred method for mitigating impacts is avoidance and or preservation in place. It is the Tribe’s stance that the County has not adequately mitigated the significant impacts the Project would impose upon the historical and tribal cultural resource located at FW 11. FW 11 is located directly on a proposed road between turbines B05 and C10. Despite this knowledge the County has not proposed an alternative that would avoid or preserve this historical and tribal cultural resource. All proposed alternatives include this road despite there being a second proposed road that would run parallel to it.

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Where several mitigation measures are available, CEQA requires the County to identify the basis for its selection of each mitigation measure. Formulation of mitigation measures “shall not be deferred until some future time.” The DEIR provides that the Developer will “relocate project components unless infeasible” but does not address specific details as to how it will relocate nor does it commit to relocation as a mitigation measure as required under CEQA. In addition how is “unless infeasible” defined within the DEIR and how does the members of the Pit River Tribe know if the implied definition is acceptable or completely unacceptable to meet and support this mitigation effort? The specific details of a mitigation measure may be developed after a project is approved but only “provided that the agency (1) commits itself to the mitigation, (2) adopts specific performance standards the mitigation will achieve, and (3) identifies the type(s) of potential action(s) that can feasibly achieve that performance standard and that will [be] considered, analyzed, and potentially incorporated in the mitigation measure.” The County must contact the Pit River Tribe to address the specific details of how the Developer intends to relocate the project components to avoid and preserve this historical and tribal cultural resource FW 11.

Madera Oversight Coalition, Inc. v. County of Madera (2011) notes “Guidelines section 15126.4, subdivision (b) addresses mitigation measure related to impacts on historical resources. When the particular historical resource is archaeological in nature, the discussion contained in the DEIR is governed by subdivision (b) (3) of the guideline”.

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(3) Public agencies should, whenever feasible, seek to avoid damaging effects on any historical resource of an archaeological nature. The following factors shall be considered and discussed in the DEIR for a project involving such an archaeological site:

(A) Preservation in place is the preferred manner of mitigating impacts to archaeological sites. Preservation in place maintains the relationship between artifacts and the archaeological context. Preservation may also avoid conflict with religious or cultural values of groups associated with the site.

(B) Preservation in place may be accomplished by, but is not limited to, the following:

- a. Planning construction to avoid archaeological sites;
- b. Incorporation of sites within parks, greenspace, or other open space;
- c. Covering the archaeological sites with a layer of chemically stable soil before building tennis courts, parking lots, or similar facilities on the site;
- d. Deeding the site into a permanent conservation easement.

Madera Oversight Coalition, Inc. v. County of Madera (2011) in its introductory sentence to subparagraphs (A) through (D), Guidelines section 15126.4 subdivision (b) (3) states that “[t]he following factors shall be ... discussed in an EIR...” Subparagraph (A) mentions preservation in place, which is described as “the preferred manner of mitigating impacts to archaeological sites.” Subparagraph (B) lists four methods of accomplishing preservation in place. Because the introductory sentence uses the word “shall,” the discussion of the factors set forth in subparagraphs (A) through (D) is mandatory. (Guidelines, § 15005, subd. (a) [“shall” and “must” are mandatory.] Also, we interpret the word “factors” to include preservation in place generally as well as the four methods listed in Guidelines section 15126.4, subdivision (b)(3)(B). Therefore, the EIR’s decision of mitigation measures for impacts to historical resources of an archaeological nature must include preservation in place, and the discussion of preservation in place must include, but is not limited to, the four methods of preservation in place listed in subparagraph (B).

What must be included in an EIR’s discussion of the factors referenced in Guidelines section 15126.4, subdivision (b)(3) because the regulation requires the factors to be discussed without regard to whether or not they are feasible, the discussion must state whether the factor is a feasible mitigation measure and the reasons for the determination. This interpretation is derived in part from the general requirement that EIR’s describe feasible mitigation measures that could minimize significant adverse impacts. (Guidelines, § 15126.4, subd. (a)(1))

Furthermore, when more than one of the factors referenced in Guidelines section 15126.4, subdivision (b) (3) is available to mitigate an impact, the EIR’s discussion should include “the basis for selecting a particular measure.” (Id., subd. (a)(1)(B).) Also, the discussion must distinguish between those measures that are proposed by the project’s proponents and those proposed by other persons. (Id., subd. (a)(1)(A).)

Stated otherwise, the interpretation “preferred manner” to mean that feasible preservation in place must be adopted to mitigate impacts to historical resources of an archaeological nature unless the lead agency determines that another form of mitigation is available and provides superior mitigation of the impacts. Furthermore, the interpretation of the regulatory language that includes preservation in place among the factors that “shall be considered and discussed in an EIR” (Guidelines, § 15126.4, subd. (b)(3)) to mean that, when the preference is not followed, the EIR shall state why another type of mitigation serves the interests protected by CEQA better than preservation in place. The use of the broad concept of “interests protected by CEQA” here because a particular historical resource of an archaeological nature may be of interest to the public in general and to particular groups for different reasons, and different types of mitigation may protect certain aspects of that resource better than other aspects. For example, the interests protected by capping or covering an archaeological site before building (§ 21083.2, subd.



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(b)(3)) are different from the interests protected by relocating the resource to another location. (Madera Oversight Coalition, Inc. v. County of Madera (2011).)

“Preservation in place is the preferred manner for mitigating impacts on historical or archaeological sites, but data recovery is also permitted, especially where the interest is in the information to be obtained regarding history and prehistory. (Madera Oversight Coalition, Inc. v. County of Madera (2011).) For significant sites that cannot be avoided through redesign, additional excavations may be appropriate mitigation. This type of mitigation is often referred to as data recovery. While information is obtained from a data recovery project, the excavated portion of the site, as well as the entire area impacted by the project, is destroyed. The purpose of Phase 3 is to recover, analyze, interpret, report, curate, and preserve archaeological data that would otherwise be lost due to unavoidable impacts to a significant resource. The method usually involves an archaeologist excavating in a controlled manner part of the site that will be impacted using a Lead Agency-approved data recovery plan that is informed by the results of the Phase 2 test excavations. The recovered materials are analyzed pursuant to specific research issues or questions and the results are included in an analytical report. If Phase 3 data recovery excavations are proposed, the Initial Study question on archaeological sites should indicate that there is a less than significant impact after mitigation and would be identified a Class II impact in the CEQA document for the project, or that there is a Guidelines for Determining Significance 14 Cultural Resources: Archaeological, Historic, and Tribal Cultural Resources potentially significant impact resulting in a Class I impact. Conducting Phase 3 data recovery excavations may not reduce the impact to the resource to less than significant. The Conducting Phase 3 data recovery excavations may not reduce the impact to the resource to less than significant. The determination whether the impact is Class II or remains Class I after data recovery depends on the nature of the site and the amount that is being destroyed. This determination should be based on careful consideration by professional archaeologists and consultation with the Native American community. (https://scahome.org/wp-content/uploads/2020/04/CEQA-Guidelines-for-Cultural-Resources_21APR2020.pdf)

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“[P]ublic agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects.” An alternative or mitigation measure is “feasible” if it’s “capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors.” The DEIR admits that the Project would cause a substantial adverse and unavoidable change in the significance of the tribal cultural resources regardless of any mitigation measures adopted.

The DEIR outlines the following mitigation measures:

1. Relocate project components unless infeasible, in which case develop an Archaeological Research Design and Treatment Plan (ARDTP), which would address the establishment of Environmentally Sensitive Areas; treatment and recovery of important data contained within the portions of the historical resource located within and adjacent to the Project Site; construction worker cultural resources sensitivity training; archaeological and Native American monitoring; inadvertent discovery protocols; and provisions for curation or reburial of recovered materials. The results of the report would include recommendations for archaeological and Native American monitoring in Environmentally Sensitive Areas and the protocol to follow should additional cultural materials be identified during construction activities. After mitigation, the County concludes that the impact would be less than significant.

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The proposed impact is significant and unavoidable. There is no location where this project would be feasible. Therefore, the only acceptable alternative is “No project alternative”.

2. In the event human remains are uncovered during ground-disturbing activities work would immediately cease, the Shasta County Coroner would be contacted to evaluate the remains, and the procedures and protocols under Section 15064.5(e)(1) of the CEQA Guidelines would be followed. Pursuant to Health and Safety Code Section 7050.5, no further disturbance would occur until the County Coroner made the necessary findings as to origin and disposition. If the remains were determined to be of Native American descent, the coroner would have 48 hours to notify the Native American Heritage Commission which would then identify the person thought to be the most likely descendent of the deceased Native American. The most likely descendent would make recommendations for means of treating the human remains and any associated grave items. After mitigation, the County concludes that the impact would be less than significant.

Where the DEIR is the data that would support the County’s conclusion indicating that following the Most Likely Descendant (MLD) process when a Pit River burial is impacted and will bring the impact to a level of less than significant? If the County consults the Tribe then they would immediately know that to consider moving burials or cultural resources from such significant areas is a direct violation of their traditional ways and the law. This proposed impact is significant and unavoidable and cannot be mitigated. Therefore, “No project alternative”.

3. In consultation with the affiliated Native American tribal representatives, the proposed Project shall be redesigned to avoid any adverse effect on the significant tribal cultural resource, if feasible (as defined in 14 Cal. Code Regs. §15364). If preservation in place of the tribal cultural resource is documented to the satisfaction of the County not to be a feasible option, the Project proponent shall implement a use and interpretive program in consultation with affiliated Native American tribal representatives. The interpretive program may include artist installations, preferably by local Native American artists, oral histories with local Native Americans, artifacts displays and interpretation, and educational panels or other informational displays. After mitigation, the County concludes that the impact would remain significant and unavoidable.

The desecration and destruction of a tribal cultural site cannot be replaced with an interpretive program and art installations. The suggestion that a significant tribal cultural resource can be destroyed for this project and then take that those culturally sensitive artifacts and create an art display is absolutely offensive and unacceptable. The only option is the “No project alternative”



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Section 3.16 Wildfires

Facts: The entire Fountain Wind project area is assigned as a “Very High Fire Hazard Severity Zone (CAL FIRE) and Tier 2 and Tier 3 by the CPUC.....The highest Fire Hazard Severity Zones in the state.

How can Shasta County add yet another wildfire risk to an area that is assigned as a “Very High Fire Hazard Severity Zone (CAL FIRE) and Tier 2 and 3 by the CPUC?”

Why doesn’t Shasta County update their General Plan and Zoning Code that would prohibit any further development within all “Very High Fire Hazard Severity Zone” and “Tier 2 & 3” assigned areas to protect their communities and residents?

The summary of the Wildfire impacts, with mitigation, goes from ‘Potentially Significant’ to ‘Less than Significant’ is an absurd statement. If Shasta County did nothing regarding the Fountain Wind project we would still be assigned a “Very High Fire Hazard Severity Zone and the Tier 2 & 3 classification. There is nothing that can be proposed and/or implemented that could mitigate the introduction of even more wildfire risk to



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“Less than Significant”. These classifications are identified by CAL FIRE and the CPUC and the Applicant can’t change these assignments nor reduce the current assignment.

The DEIR itself states on page 3.16-17, Therefore, due to the increase of surrounding communities, exposure to pollutant concentrations from wildfire and the uncontrolled spread of wildfire to a level that is substantially higher than existing then baseline conditions, which would result in a potentially significant impact.

What does ‘increase the wildfire to level that is substantially higher than existing baseline conditions’ even mean? Does the verbiage “increase the wildfire to level that is substantially higher than existing baseline conditions” indicate we are now in imminent danger (as indicated by County Counsel) as in on fire? Who makes the assignment of a higher baseline than “Very High Fire Hazard Severity Zone or Tier 2 & 3”? You can’t be assigned a higher wildfire risk so how much substantially higher than existing baseline conditions can we go?

The facts that are simply minimized by the consultant is our baseline condition is “Very High Fire Hazard Severity Zone (CAL FIRE) and Tier 2 & Tier 3” (CPUC). The bias is clear that the consultant uses the verbiage “baseline” to make everything sound less threatening and not as severe. Numerous homeowners in the area cannot get, or are being cancelled, from homeowners insurance due to the wildfire severity ratings now. Several residents have had to apply for the Cal Fair plan for home insurance which is the last resort for wildfire coverage.

As identified in the DEIR they discuss the Wildfire Protection Plan and the Shasta County General Plan identifying Battalion 2 as covering the project area. However in August of 2020 California had over 14,000 lightning strikes which fueled over 22 major fires, burning over 4 million acres, requiring over 17,000 firefighters which has proven to stretch with CALFIRE and firefighting resources beyond measure to contain these massive fires. Identifying what Battalion the project would be managed under, and as we are witnessing, still does not indicate that they have enough manpower or dollars to continue to fight these wildfires. The work and dollars needed to harden the wildfire areas has continued to be diverted to fight these fires throughout the longer fire season as opposed to working to harden the needed areas.

In addition, this project goes against Governor Newsom’s Executive Order N-05-19 and should not be built in this forested area with the highest wildfire hazard risk in the state. In response to Executive Order N-05-19 the California Department of Forestry and Fire Protection, with assistance from: Governor’s Office of Emergency Services, California National Guard, California Government Operations Agency, Governor’s Office of Planning and Research, Department of Finance, and California Natural Resources Agency, developed the Community Wildfire Prevention and Mitigation Report, dtd, 22 February 2019.

Executive Summary:

California experienced the deadliest and most destructive wildfires in its history in 2017 and 2018. Fueled by drought, an unprecedented buildup of dry vegetation and extreme winds, the size and intensity of these wildfires caused the loss of more than 100 lives, destroyed thousands of homes and exposed millions of urban and rural Californians to unhealthy air.

Climate change, an epidemic of dead and dying trees, and the proliferation of new homes in the wildland urban interface (WUI) magnify the threat and place substantially more people and property at risk than in preceding decades. More than 25 million acres of California wildlands are classified as under very high or extreme fire threat, extending that risk over half the state.

Certain populations in our state are particularly vulnerable to wildfire threats. These Californians live in communities that face near-term public safety threats given their location. Certain residents are further



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vulnerable given factors such as age and lack of mobility. The tragic loss of life and property in the town of Paradise during the recent Camp Fire demonstrates such vulnerability.

Recognizing the need for urgent action, Governor Gavin Newsom issued Executive Order N-05-19 on January 9, 2019. The Executive Order directs the California Department of Forestry and Fire Protection (CAL FIRE), in consultation with other state agencies and departments, to recommend immediate, medium and long-term actions to help prevent destructive wildfires.

With an emphasis on taking necessary actions to protect vulnerable populations, and recognizing a backlog in fuels management work combined with finite resources, the Governor placed an emphasis on pursuing a strategic approach where necessary actions are focused on California's most vulnerable communities as a prescriptive and deliberative endeavor to realize the greatest returns on reducing risk to life and property.

Using locally developed and vetted fire plans prepared by CAL FIRE Units as a starting point, CAL FIRE identified priority fuel reduction projects that can be implemented almost immediately to protect communities vulnerable to wildfire. It then considered socioeconomic characteristics of the communities that would be protected, including data on poverty levels, residents with disabilities, language barriers, residents over 65 or under five years of age, and households without a car.

In total, CAL FIRE identified 35 priority projects that can be implemented immediately to help reduce public safety risk for over 200 communities. Project examples include removal of hazardous dead trees, vegetation clearing, 2 creation of fuel breaks and community defensible spaces, and creation of ingress and egress corridors. These projects can be implemented immediately if recommendations in this report are taken to enable the work. Details on the projects and CAL FIRE's analysis can be found online at http://calfire.ca.gov/fire_prevention/downloads/FuelReductionProjectList.pdf, which will remain updated in the coming months. The list of projects is attached to this report as Appendix C.

CAL FIRE has also worked with over 40 entities including government and nongovernment stakeholders to identify administrative, regulatory and policy actions that can be taken in the next 12 months to begin systematically addressing community vulnerability and wildfire fuel buildup through rapid deployment of resources. Implementing several of these recommended actions is necessary to execute the priority fuel reduction projects referenced above. Other recommendations are intended to put the state on a path toward long term community protection, wildfire prevention, and forest health.

The recommendations in this report, while significant, are only part of the solution. Additional efforts around protecting lives and property through home hardening and other measures must be vigorously pursued by government and stakeholders at all levels concurrently with the pursuit of the recommendations in this report. California must adopt an "all of the above" approach to protecting public safety and maintaining the health of our forest ecosystems.

It is important to note that California faces a massive backlog of forest management work. Millions of acres are in need of treatment, and this work—once completed—must be repeated over the years. Also, while fuels treatment such as forest thinning and creation of fire breaks can help reduce fire severity, wind-driven wildfire events that destroy lives and property will very likely still occur.

This report's recommendations on priority fuel reduction projects and administrative, regulatory, and policy changes can protect our most vulnerable communities in the short term and place California on a trajectory away from increasingly destructive fires and toward more a moderate and manageable fire regime.

The area proposed for the Fountain Wind Project is reflective of the same demographics and topography within Shasta County as the number one priority area identified in the CAL FIRE Priority Fuel Reduction Project list from the 45 day plan. The local communities may be smaller but are just as important and also just



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as vulnerable with limited ingress and egress in the event of a wildfire. Measures are in progress to help reduce the fuel reductions but as been witnessed by the Carr and Delta fire still just as vulnerable.



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The 45-day report listed “the proliferation of new homes in the wildland interface magnifying the threat” however the introduction of yet another complex of industrial wind turbines, standing at 679 feet, not only magnifies but welcomes unwanted lightning strikes just to name one of the many major additional wildfire concerns.



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The topography identifies the rugged and steep terrain in the Project site. Why does the DEIR minimize the strong influence over the fire behavior indicating that it “can encourage the spread of fire when other factors such as fuels also are present”? It is very clear that the topography identifies the Project site as a Class III (most susceptible to critical fire weather) due to the assignment of the development area by CALFIRE and the CPUC. The Shasta County General plan also lays out the different findings regarding wildland fires and the Project area is listed in the Heavy Fuel load area (which is the hardest to start burning but due to the heavy fuel load but will be the hardest to control once burning). This is not about the encouragement of the spread of the fire but the fact that it will spread due to the rugged and steep terrain alone. This situation, as we have witnessed over the last several years, will result in another perfect storm where there will be limited wildfire fighting resources, limited firefighting access, limited ingress and egress to escape, no aerial support due to the turbines, and more lives lost due to the introduction of an unnecessary wildfire risk in rugged and steep terrain in eastern Shasta County.



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In addition SB 901, approved in 2019 has been updated to prohibit industrial developments alone ridgelines. Even though the special permit has been applied for via Shasta County, and the estimated approval will not be until Spring of 2021, the intent of the Senate Bill 901 is clear.....to add additional wildfire protections to lands classified and designated as very high fire hazard severity zones as assigned to the Project site are for the additional protections of the residents and community members. Why has the DEIR failed to mention SB 901 regarding the updates to restrict industrial developments along ridgelines to enhance wildfire protections efforts for the communities? If Shasta County does not deny the special use permit they will be in violation of SB 901 to stop the continued industrial developments on ridgeline in the assigned wildfire hazard severity zone further threatening the lives of the residents who reside in the area.



4290.

(a) The board shall adopt regulations implementing minimum fire safety standards related to defensible space that are applicable to state responsibility area lands under the authority of the department, and to lands classified and designated as very high fire hazard severity zones, as defined in subdivision (i) of Section 51177 of the Government Code. These regulations apply to the perimeters and access to all residential, commercial, and industrial building construction within state responsibility areas approved after January 1, 1991, and within lands classified and designated as very high fire hazard severity zones, as defined in subdivision (i) of Section 51177 of the Government Code after July 1, 2021. The board may not adopt building standards, as defined in Section 18909 of the Health and Safety Code, under the authority of this section. As an integral part of fire safety standards, the State Fire Marshal has the authority to adopt regulations for roof coverings and openings into the attic areas of buildings specified in Section 13108.5 of the Health and Safety Code. The regulations apply to the placement of mobile homes as defined by National Fire Protection Association standards. These regulations do not apply where an application for a building permit was filed prior to January 1, 1991, or to parcel or tentative maps or other developments approved prior to January 1, 1991, if the final map for the tentative map is approved within the time prescribed by the local ordinance. The regulations shall include all of the following:

(1) Road standards for fire equipment access.

- (2) Standards for signs identifying streets, roads, and buildings.
- (3) Minimum private water supply reserves for emergency fire use.
- (4) Fuel breaks and greenbelts.

(b) The board shall, on and after July 1, 2021, periodically update regulations for fuel breaks and greenbelts near communities to provide greater fire safety for the perimeters to all residential, commercial, and industrial building construction within state responsibility areas and lands classified and designated as very high fire hazard severity zones, as defined in subdivision (i) of Section 51177 of the Government Code, after July 1, 2021. *These regulations shall include measures to preserve undeveloped ridgelines to reduce fire risk and improve fire protection. The board shall, by regulation, define "ridgeline" for purposes of this subdivision.*

(c) *These regulations do not supersede local regulations which equal or exceed minimum regulations adopted by the state.*

(d) *The board may enter into contracts with technical experts to meet the requirements of this section.*

(Amended by Stats. 2018, Ch. 626, Sec. 9. (SB 901) Effective January 1, 2019.)

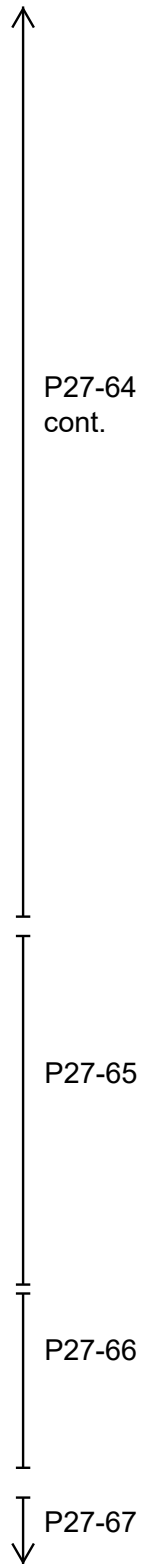
The fuels listed covers various trees and brush. The Fountain Fire proved just how fast and furious a fire in this area can spread nearly reaching the town of Burney. Many homes were lost and it has taken years for some of those residents to recover if they even returned to the area. The project area has been replanted creating an artificial forest to enable the landowners to harvest their timber at a later date. Again, this is the same fuels in this project area as identified in the Fountain Fire and the more recent Camp, Carr, Delta, and Hirtz fires. It would be irresponsible for Shasta County to approve the special use permit for the Project to introduce yet another wildfire risk that is unnecessary and will only add more life threatening risk to the area.

On page 3.16-4 the DEIR identify the CPUC Wildfire Hazard Zones with the Project in the Tier 2 & 3 zone. Tier 2 is defined as "where there is an elevated risk (including likelihood and potential impacts on people and property) from wildfires associated with overhead utility lines. Tier 3 is defined as "where there is an extreme risk (including likelihood and potential impacts on people and property) from utility associated wildfires. As identified by the PG&E bankruptcy over 7,100 miles of PG&E territories need to be hardened and upgraded to minimize wildfire risks. PG&E has also indicated that they need 12-14 years and \$40 billion dollars to complete the required upgrades. How will the Project add to the wildfire risk already identified and how will the Project propose to inspect and upgrade the estimated 51 miles of underground transmission lines and 12 miles of additional overhead lines? How much more of an elevated risk can the transmission lines handle and at what cost to the safety of the residents since we cannot get our power back on during the on-going PSPS events until PG&E completes their aerial flyover?

How is it even possible that Shasta County would consider adding at least 12 more miles of overhead collector lines for this project knowing their current hazard zone rating and upgrades to the Round Mountain substation in the construction area? Also how can Shasta County separate the required safety and maintenance issues outlined by PG&E in relation to the CPUC wildfire hazard zone without putting the residents and communities at further risk? Why isn't Shasta County following their own General Plan objectives FS-1?

FS-1 Protect development from wildland and non-wildland fires by requiring new development projects to incorporate effective site and building design measure commensurate with level of potential risk presented by such a hazard and by discouraging and/or preventing developments from locating in high risk fire hazard areas.

As being witnessed throughout the state you can have all the plans and safety standards in place but the wildfires are still raging. So much has been learned since the Hatchet Ridge project was approved and we



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cannot keep adding increased and unnecessary risk without expecting more destruction and devastation as the natural result. This is the wrong Project for this area and Shasta County needs to stand by their own wildfire objectives by preventing these types of developments to continue in the highest fire hazard severity zones in the state.

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P27-67
cont.

Why doesn't Shasta County take the necessary action to update their zoning code to provide guidance and outline where these types of projects can be built or restricted in the future to provide safety and protection to their residents? Why did Shasta County take the time to update the General Plan FS-1 to reflect preventing development from locating in high risk fire hazard zones but will not take the time to reflect the required updates regarding Large Scale Industrial Wind Energy Developments within the General Plan and SSC? These updates are urgently needed so that future developers will know their applications will not be considered in such high fire wildfire hazard severity zones.

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P27-68

On page 3.16-10 the Applicant identifies the PG&E's Company Emergency Response Plan but conveniently leaves out that the PG&E bankruptcy and why the plan has been updated due to the bankruptcy itself. The transmission lines safety issues alone has caused numerous wildfires over the last several years causing the loss of 100 people. They further reference the PG&E Fire Prevention Plan (dated 2017) before their bankruptcy in Jan 2019. The ratepayers have come to realize that the PG&E Fire Prevention Plan is merely one of their required documents that really do not matter nor were they being executed as outline in the Butte County DA report, Attachment (1). The maintenance funds were being redirected to enhance aggressive green energy goals while the maintenance of their antiquated transmission lines went into further disrepair to further enhance profits to the shareholders.

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P27-69

Again PG&E has reported they have over 7,100 miles of territories to upgrade and harden which will take over 12-14 years, and \$40 billion dollars. Where in the DEIR has the PG&E antiquated transmission lines even mentioned let alone addressed and why not? The residents near the project site are already experiencing PSPS events due to the inability of PG&E to provide safe electrical service. As directed by the CPUC these PSPS events are the last resort by the utility and are being closely monitored by the Governor with Senate bills in place to hold PG&E accountable for what lines introduce the most risk to the communities. The residents surrounding the Project site are getting ready to experience the third PSPS event for 2020 alone. The same reasons that brought the Applicant to the area for the proposed project is the same issues that put the communities at risk and only add to the highest wildfire hazard zone in the state. How much more risk does Shasta County deem acceptable, in additional to the risk that has already been identified, over the last two years by CAL FIRE, the CPUC, PG&E, and the Governor himself?

The Applicant continues to list all of the safety and fire emergency plans however these references do nothing to lessen the Wildfire Hazard Severity Zone already identified by CAL FIRE and the CPUC. As outlined in the Community Wildfire Prevention & Mitigation Report 45-day these issues will take years to resolve and the state needs to move from 'reacting to wildfires' to 'prevention of wildfires'. The Fountain Wind project will only add another risk where CAL FIRE and the residents will be only 'reacting to the introduction of another wildfire risk' without the proper due diligence in taking the necessary steps for proven 'prevention of wildfires' measures.

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P27-70

Page 3.16-14 Significance of Criteria

A project proposed to be located in or near state responsibility areas or lands classified as very high fire hazard severity zones would result in a significant impact related to wildfire if it would:

- a) Substantially impair an adopted emergency response plan or emergency evacuation plan;*
- b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations or a significant risk of loss, injury or death from a wildfire or the uncontrolled spread of a wildfire;*

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P27-71
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c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment; or

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

Items (a), (b), and (c) are clear that they cannot be mitigated however the DEIR indicates that some will be less-than-significant. For the Applicant to indicate that they could mitigate through common sense practices is clearly not true and will not be good enough when a wildfire erupts. How were these impacts determined to be less-than-significant and what benchmark or thresholds were used to make that determination including how were they measured?

If Shasta County did nothing within the project area it will still be assigned a Very High Wildfire Hazard Severity Zone and Tier 2 & 3.

For the Applicant to introduce the following will only guarantees another wildfire in the area...it will be just a matter of when! As I have stated before these will introduce tens-of-thousands, if not hundreds-of-thousands of additional wildfire ignition sources that are not currently in or near the Project area.

- Erection of 72 – 679 foot tall turbines
- 51 miles of underground electrical
- 12 miles of overhead electrical – in addition to the antiquated PG&E overhead transmission lines
- 1 substation
- Switching Station
- 24 miles of new access roads
- 33 miles of existing roads to be widened
- 1 O&M facility
- 10 acres of construction area
- 28 acres of laydown area
- 3 concrete batch plants
- 4 MET towers
- 12,070 material delivery trucks
- 1,080 Heavy or oversized loads for turbines
- 68,000 commuter trips

The levels of significance in the wildfire section of this document not only remains ‘potentially significant’ but increases to ‘critical’. **The wildfire impacts alone must be a No Project vote!**

Item 3.16.3 Direct and Indirect Effects

- a) Weather the Project would substantially impair an adopted emergency response plan or emergency evaluation plan.
 - a. Impact: 3.16-1: The project would, unless mitigated, substantially impair an adopted emergency response plan or emergency evaluation plan.

The response to this statement says it all – There are no specifically designated evacuation routes described in the Community Wildfire Protection plan or the Shasta County General Plan. Of course it doesn’t impact something that doesn’t exist it so by default it can’t mitigate it either! These types of statements only prove that Shasta County has work to do regarding evacuation routes and Community Wildfire Protection plan updates, distribution, communication, and practice events for their communities.



P27-71 cont.

P27-72

P27-73

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The communities recognize, and have so stated the limited ingress and egress routes, but the Project will only add thousands of ignition points within the area which are unacceptable. The ingress and egress is so limited that Big Bend Road has failed to be maintained and repaired to a collapse about three years ago. Big Bend Road is still down to one lane exist route if a wildfire breaks out and residents need to use the route to head North to get to McCloud. The additional wildfire ignition points cannot be mitigated thru mere traffic management efforts through coordination with emergency service providers, CALTRANS, and coordination with residents within the communities. When a wildfire erupts, if the residents can even get to SR 299, we do not want any of the roads blocked by oversized and super loads from the Project in additional to the increase in commuting traffic due to the Project.

P27-73
cont.

The Project also indicates they will provide additional access roads for firefighting purposes and serve as man-made, maintained firebreaks. With the work that is proposed by the Project, in the supposed man-made and maintained firebreaks areas, in reality could be the cause of a wildfire itself. Without the excess widening of the 33 miles of roads and the addition of 24 miles of new roads the area would be left as it is and used for timber harvesting without the years of unnecessary construction and destruction of the area. So what the Applicant deems as helping with fire prevention is also the very same areas that will introduce the thousands of potential ignition sources to start the fires.

Why doesn't Shasta County have specially designated evaluation routes described in the Wildfire Protection Plan and who is responsible for the updates, distribution, and coordination within the Shasta County communities?

Mitigation Measure 3.16-1b Pre-Construction Coordination with CAL FIRE

For the Applicant to indicate that providing CAL FIRE the GIS files after a fire has started is not a mitigation measure at all. Providing a file once the fire has started and have CAL FIRE to make the determination that they cannot provide any aerial support does nothing to protect the community or the residents from the destruction and even death.

Why hasn't the GIS files already been provided to CALFIRE so an accurate determination can be made now so the decision-makers make any accurate determinations to indicate if this mitigation measure would be successful or not? If the DEIR/FEIR does not present modeling and data analysis to support the conclusion then it only presents speculation regarding the results of the threat and firefighting efforts.

The DEIR has presented the project lay down of the turbines, topography of the area, height of the turbines, and number of turbines so why doesn't the mitigation measures reflect CAL FIRES report and analysis of what efforts can be provided for aerial firefighting measures with the turbines in place?

P27-74

The DEIR indicates that the implementation of Mitigation Measure 3.16-1b that CAL FIRE would have the information necessary to plan for an aerial firefight when the residents need to know now if an aerial attack is even possible. If the implementation is even possible where is the data that proves it? Will the aerial support be with helicopters or fixed wing aircraft? Where is the data, within the DEIR from aerial firefighters, to substantiate this supposed mitigation measure? For the DEIR implies that remote wildland fires, with industrial turbines in heavily forested high wildfire severity zones, are fought without effective aerial support it would be negligent to assess the topography and the threat to the residents. Many of the residents near the Project site have witnessed wildfire fighting efforts only proven to be successful due to the efforts of the fixed wing aircraft and dropping of the retardants at near tree top levels.

Shasta County needs to submit this proposed mitigation measure, with all the turbine lay-down data, to CAL FIRE and have them provide a determination, with sufficient data analysis, to indicate that this mitigation measure is even feasible.

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The bias in the writing is only to confuse the reader with propoganda and to lessen the life threatening impacts of the Project.

- The use of “could be obstacles” for aerial firefighting when we know the turbines “would be obstacles”.
- The use of aerial firefighting operations “are likely to have enough space” when we know they will not have enough space.
- Due to the increase in potential sources of ignition, Project construction and decommissioning “could increase the risk” when we know it “would increases the risk”?
- Uncontrolled spread of wildfire “to a level that is substantially higher than existing baseline conditions” which would result in a potentially significant impact when we know there is nothing in the state that is “substantially higher since we have the highest assignment in the state. Should Shasta County now request a “Critical” wildfire hazard zone assignment and/or Tier 4 from the CPUC?

P27-74
cont.

Impact 3.16-2: The project would, unless mitigated, exacerbate wildfire risks and expose people to pollutant concentration or a significant risk of loss, injury or death from a wildfire or the uncontrolled spread of a wildfire.

Why does the DEIR use such an absurd statement or is this just another bias statement to minimize the wildfire threats? - “The Project is not intended for and would not be used for human occupation; therefore, no occupants would be exposed to increased risk associated with wildfire.” We know that the Project is not to be used for human occupation however it does not reduce the risk associated with wildfire on or near the surrounding communities. We are well aware that the Project is near communities and that the increase in the wildfire risk is beyond acceptable levels.

The project lists tens-of-thousands of increased ignition sources, throughout the project, that are simply not acceptable and trying to mitigation these ignition sources through common sense fire safety measures and already established plans will prove to be inadequate. California is going through the most destruction fire season in its history with over 4 million acres burned to date. Even with the best of the successful implementation measures in place the risk is much too high! We have lost millions of acres of carbon sequestering resources in the last few years due to the wildfires and cannot continue down this path. These turbines in the forested areas of Shasta County is the wrong project in the wrong area.

P27-75

The ignition points identified by the Applicant: (use of vehicles, equipment, heat or sparks from vehicles, blasting welding, grinding, hammering, widening roads, adding roads, oversize loads, concrete plants, material deliveries, tree removals, on-site turbine construction, assembly and deconstruction, mechanical failures, turbine overloads, overheating of moving parts, collector line failure, structure fires involving the substation, sparks igniting surrounding flammable materials, lightning strikes to the turbines, introduction of new energy facilities, etc.).

The Applicant indicates that the fire safety mitigation would reduce potential sources of ignition but it doesn't indicate that they would eliminate those potential sources. The Applicant also indicates that during a National Weather Service Red Flag Warning (an alert that high winds and dry conditions could lead to rapid or dramatic increases in wildfire activity) that the Applicant and its contractor must cease all non-emergency work to respond to changes in fire risk. The DEIR does not indicate how many Red Flag Warning days have been implemented over the last two years which would help make a determination of the viability of the Project if that is possible. Also the DEIR indicates that all non-emergency work would cease. Where in the DEIR does it define emergency and non-emergency work for the decision-makers to evaluate if, or not, these measures would be acceptable or would need to be increased or decreased?

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How is “all non-emergency work” classified by the DEIR and will it apply to all of its contractors and/or support personnel? When the residents near the Project site are in the same Red Flag Warning PG&E has shut off the power for a PSPS event so their equipment does not ignite a wildfire. Why would the DEIR imply that the Applicant will be able to continue to work in such a wildfire prone driven event when the residents can’t even have electrical service?

The DEIR indicates the incorporation of a Project-specific Fire Prevention Plan would reduce the risk of the spread of wildfire from Project construction and decommissioning to near baseline conditions. This would also reduce the Project impacts to less than-significant level. How does simply having a Fire Prevention Plan in place reduce the ‘baseline conditions’ to less than-significant? The County, in support of CALFIRE currently has wildfire plans in place and they have not reduced the wildfire impact to less-than-significant so how can adding yet another plan accomplish what CALFIRE has not? The fire hazards rating assigned is based on several factors, including fuel load, climate, topography, and other factors not the fire prevention plan that is put into place. The wildfire hazard severity zone will not be decreased due the proposed plan as the DEIR would have the reviewers and the decision-makers believe. Why would the DEIR indicate that having the plan in place goes from High Fire Hazard zone and Tier 2 & 3 is reduced to less than-significant because of the plan? Where is the evidence to substantiate this conclusion and based on what benchmarks and measures? Does this plan execute any of the Community Wildfire Prevention & Mitigation measures outlined in the CAL FIRE 45 day report protecting vulnerable communities? Is this plan in any coordination with CAL FIRE to reduce millions of dead trees in the area?

The DEIR also indicates the “operation of the Project would introduce new energy facilities and activities that could result in sparks or flames that could result in a wildfire that could spread beyond the Project site. They also indicate “this risk would create a potentially significant impact with the spread of wildland fire”. The terms ‘could’ and ‘potentially significant’ indicate that the increased wildfire threat is not acceptable considering the current assignments in the area. Why doesn’t the DEIR indicate the real facts regarding the Project, “activities that will result in sparks or flames and will result in a wildfire”? This Project is proposed in the wrong area and will only add destruction, further destroy sacred cultural resources and add unacceptable wildfire risks!

The DEIR indicates that the implementation of Mitigation Measure 3.16-2a (Fire Safety, Mitigation Measure 3.16-2b (Nacelle Fire Risk Reduction), and Mitigation Measure 3.16-2c (Emergency Response Plan) provides all the safety measures to prevent and response to a wildfire event. The only measure that would reduce the current wildfire assignments is a No Project. You can’t reduce the current High wildfire threat to less- than-significant by adding thousands of Project ignition points that are not present today and then think adding additional mitigation measures can reduce the threat to less-than-significant. The mitigation measure implies that it is only the Nacelle Fire Risk that will need to be assessed however that is not the truth. Many turbine fires are started at the nacelle and then the blades that catch fire are flung off of the turbine stating the wildfire below and can be thrown long distances from the original turbine. This mitigation measure is limited in scope and the measures proposed do not encompass the extent of the risk with regards to how expansive the turbine fires can travel and how difficult they are to extinguish. Since many turbine fires cannot be extinguished they are left to burn out.

Impact 3.16-4: The Project would, unless mitigated, expose people or structures to significant risks, including adverse water quality effects or downslope or down-stream flooding or landslides as a result of runoff, post-fire slope instability, or drainage changes.

Why does the DEIR provide propaganda regarding the following statement to address this impact?

The Project does not propose and would not require the construction of any housing; therefore, it would



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P27-76

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not expose people to increased risk associated with flooding, landslides, or post-fire slope instability as a result of locating housing near such existing risk.

The DEIR does this impact even discuss housing since we know that the Project is not about housing so why confuse the reviewer with these discussion points? The DEIR does not reflect the results of the Clean water act, and the 404 permit information from the Army Corps of Engineers, so what is the assessment “baseline assessment” prior to construction” We are well aware of the downslope or downstream flooding or landslides post-fire instability and drainage issues as have been witnessed after the Fountain Fire in 1992. More recent examples of the same issues where witnessed during the Camp, Carr, Delta, and Hirtz fires within Shasta County. The mitigation measures proposed in the DEIR will do nothing to stop the contamination of our wells and water supplies as it is taking millions of dollars to rebuild and get residents safe water after the Camp Fire with some who do not have drinkable water supplies after two years post Camp Fire.

The Mitigation Measures for 3.16-4 will do nothing when the fires break out and these measures will not be able to reduce the impacts to less-than-significant.

3.16.3.2 PG&E Interconnection Infrastructure

I am appalled by the lack of acknowledgement in the DEIR regarding the PG&E transmission grid safety issues. The DEIR does not even mention the PG&E bankruptcy as if it’s an everyday event not affecting the ratepayers and putting additional lives at risk due to equipment failures.

The DEIR and the County indicates that the CPUC, through the regulatory setting, regulates services and utilities and assures California’s access to safe and reliable utility infrastructure and services. We know that this statement is not true and only shifts the increased wildfire risks over to another authority and ‘out of the Applicant and County’s swim lane’.

The DEIR indicates that the reconfiguration of a transmission line circuit and addition of transmission circuits and poles could result in an increase in fire associated with the construction of the modifications and associated transmission line failures resulting in sparks such as downed lines, bird strikes, vegetation contact, arc flashes, and equipment failure. Therefore, the modifications to the PG&E interconnection facilities could increase the risk of wildfire due to the increased risk of ignition sources during construction, operation, and maintenance of the infrastructure.

They also state that “Given the inherent potential for ignition risk associated with power lines, it is anticipated that PG&E Fire Prevention Plan would be applied to the PG&E Interconnection facilities, as required by CPUC GO 166.” Where is the any data within the DEIR that supports this statement and that it has even been effective in preventing additional wildfires within the PG&E territories? Since PG&E existed bankruptcy in mid-2019 they are again under investigation for the Kincadee fire 2019 after completing bankruptcy and potentially in the Zogg fire 2020, within Shasta County. PG&E has stated they will need 12-14 years, including 10 years of PSPS events, before they are able to hardened and upgrade their transmission line. The DEIR implies that the PG&E Fire Prevention Plan can stop any additional fires if they are applied to the PG&E Interconnection facilities which has been proven to be false. What is implied in the DEIR that would change the current position of the PG&E territories to indicate that the Fire Prevention Plan makes the transmission grid any safer?

The last 18 months of PG&E’s bankruptcy have shown just how many fires have been started due to PG&E’s transmission grid through the lack of needed hardening and safety upgrades. The bankruptcy proved that maintenance funds have been diverted to increase the state of the shareholders and now ratepayers have to deal with PSPS events on a regular basis in order to avoid additional wildfire due to equipment failures.



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The CPUC, PG&E, State Officials and the Governor are still determining if PG&E will be taken over by the state.

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I find it very disappointing that Shasta County would release the DEIR, for the second largest industrial project in Shasta County outside the Shasta Dam, during a worldwide COVID-19 pandemic when residents have little recourse for due process for the reviews. The COVID-19 worldwide pandemic has eliminated opportunities for the community meetings due to all the local meeting facilities shut down with stay-at home orders for months and closing down the local economy, schools, county administration meeting, etc. All of the objections were outlined as we outlined in our second moratorium, Attachment (7) request which will be enclosed with our response and the County has not taken any action regarding the request.

P27-78

The County expects the community to review the over 2,000 document (beginning 4 Aug – 21 Oct) and provide comment yet the County has taken over 17 months to put the 2,000 pages of the DEIR together for review. The County has implemented the “State of Emergency” from March – December 2020 with the very likelihood that it will continue throughout 2021 for some time. This “state of emergency” has severely limited the access to the document and review cycle with the closure of County offices with appointment access only. The additional limitations with the County libraries and constraints due to the COVID-19 crisis and potential exposure has limited residents from the review due to the fact many are just working to save their livelihoods, jobs, and finding ways to pay rent.

Attachments:

- Attachment (1) The Camp Fire Public Report dtd June 2020
- Attachment (2) PG&E Sept 7-10, 2020 PSPS Post Event Report
- Attachment (3) Board of Supervisors Moratorium Request District 3
- Attachment (4) Draft Wind Energy Ordinance Morgan County Illinois
- Attachment (5) Marin County Law Order 3548_wecs
- Attachment (6) 45-Day Report Final
- Attachment (7) CIO FWP COVID-19 Rickert Moratorium Request 4.2.2020
- Attachment (8) California Transmission Plan 2018-2019, dated March 29th, 2019.

Supplements: Shasta County Board of Supervisors Public Comments
Planning Commissioners Public Comments

Letter P27: Margaret Osa

P27-1 The County acknowledges the stated opposition to the Project. More detailed responses are provided below where the comments are presented with greater specificity.

P27-2 Comments about the current state of the electric grid are beyond the scope of the CEQA process for this Project. See Final EIR Section 2.1.1, *Input Received*. CEQA requires the EIR to analyze, disclose, and mitigate where feasible the potential significant adverse impacts of the Project and alternatives. It does not task the EIR with analyzing the sufficiency, reliability, or safety of the grid as a whole.

The CPUC's authority over investor owned utilities derives from the California State Constitution (see, e.g., Article XII, Section 3). Legal proceedings involving PG&E, including regarding its declaration of and emergence from bankruptcy, and administrative proceedings involving the CPUC are separate from and independent of the CEQA process for this Project. The County acknowledges these excerpts from the Camp Fire Report, and has included them in the record where they may be considered by decision-makers.

P27-3 See Response P26-13, which clarifies that the Project would not interconnect at the Round Mountain Substation.

P27-4 See Response P27-2, which explains that comments about grid reliability are beyond the scope of the CEQA analysis for this Project.

P27-5 Comments regarding the prevention or minimization of potential significant impacts of the Project are addressed below.

P27-6 Comments about the current state of the electric grid are beyond the scope of the CEQA process for this Project. See Final EIR Section 2.1.1, *Input Received*. CEQA requires the EIR to analyze, disclose, and mitigate where feasible the potential significant adverse impacts of the Project and alternatives. It does not task the EIR with analyzing the sufficiency, reliability, or safety of the grid as a whole.

P27-7 Agency and public outreach efforts for the Project occurred during the pre-scoping and scoping phases of the CEQA process for the Project as well as following issuance of the Draft EIR. See, e.g., Draft EIR Section 1.4, *CEQA Process Overview* (at page 1-4 et seq.) and Final EIR Section 1.3.1, *Agency and Public Review of the Draft EIR*. The County has sought input via web-postings, the posting of notices at the Office of the County Clerk and the State Clearinghouse, direct mailings, newspaper notifications, and the County's Project-specific email listserv. Agency input received during scoping is documented in the Scoping Report (Draft EIR Appendix J). Agency input received in response to the Draft EIR is documented in this Final EIR – see Final EIR Table 2-1, *Commenting Parties*, and citations to correspondence received from agency representatives in footnotes included in the Final EIR. Other agencies have had opportunities and invitations to participate in the CEQA process for this Project. The

County is not able to compel them to participate should they choose not to. No comments were received from the CPUC, PG&E or CAISO. The County disagrees with the suggestion that the absence of input from these entities reflects “intentional exclusion.”

The County acknowledges the commenter’s disagreement with conclusions reached in the wildfire analysis. This disagreement, however, does not undermine the validity of the data or analysis in the EIR, or the conclusions reached. The wildfire analysis was performed in reliance on professional and environmental standards. It considers input received during scoping (Draft EIR at page 3.16-1, Appendix J, *Scoping Report*), reference materials cited in Section 3.16.5 (at page 3.16-28 et seq.), and the professional technical resource expertise of the preparers of the EIR (Draft EIR Chapter 5). Conclusions are based on facts and analysis, rather than opinions. Acknowledging the commenter’s disagreement, the County chooses to rely on the data, other information and relevant facts and analysis as the basis for the conclusions documented in the Draft EIR.

See Draft EIR Section 3.1.2.2 (at page 3.1-1 et seq.) and Appendix J (Scoping Report), which identify the environmental criteria considered in the Draft EIR, and Section 3.1.2.3 (at page 3.1-2 et seq.), which explains how significance conclusions are reached. Significance criteria are identified on a resource-by-resource basis throughout Draft EIR Chapter 3, *Environmental Analysis*.

See Response P21-12 regarding the mitigation monitoring and reporting program (MMRP) to be developed for the Project.

- P27-8 See Response P27-7, which provides information about the agency and public outreach that was conducted as part of the CEQA review for this Project. That the commenter has contributed input to the Planning Commission and the Board of Supervisors is acknowledged. (See Responses P27-79 through P27-139).

Contrary to the suggestion in this comment, a determination about the adequacy of the EIR would not hinge on whether it justifies or proves that the grid is sufficient, reliable, or safe. Comments about the current state of the electric grid are beyond the scope of the CEQA process for this Project. See Final EIR Section 2.1.1, *Input Received*. CEQA requires the EIR to analyze, disclose, and mitigate where feasible the potential significant adverse impacts of the Project and alternatives. It does not task the EIR with analyzing the sufficiency, reliability, or safety of the grid as a whole.

- P27-9 In considering whether or not the potential benefits of the Project outweigh the environmental harm that could result, decision-makers will exercise their discretionary authority to weigh Project benefits and consequences. See Draft EIR Section 1.4.6, *Findings of Fact* (at page 1-7 et seq.) for more information. See Response P27-7, which provides information about the agency and public outreach that was conducted as part of the CEQA review for this Project.

See Response P26-13, which clarifies that the Project would not interconnect at the Round Mountain Substation.

- P27-10 CEQA does not task the EIR with the identification of potential benefits of a proposal; to the contrary, it evaluates the potential significant adverse impacts of the Project on the physical environment. Although potential benefits may be reflected in the statement of project objectives (see Response T2-3), formal consideration of Project benefits is made by decision-makers as part of the decision-making process.

Cumulative effects involving the Hatchet Ridge Wind Project are considered in the Draft EIR in the context of Cultural and Tribal Cultural Resources. See, e.g., Responses T2-1, T4-1, and T5-5.

The County acknowledges receipt of the petition in opposition to the Fountain Wind Project. The statement of opposition and list of signatures has been included in the record, where the County may consider it as part of the decision-making process.

See Response P17-5 regarding the Project's consistency with the Shasta County General Plan and Zoning Plan. Nonetheless, the commenter's opinion about whether the necessary findings to approve a use permit could be made are acknowledged. These issues will be evaluated by County decision-makers in the context of their deliberations about whether or not to approve the requested use permit rather than as part of the CEQA process documented in this EIR.

Regarding the County's consideration of alternative renewable energy alternatives and why they were not carried forward for more detailed review, see Draft EIR Section 2.5.2.3, *Alternative Technologies* (at page 2-30 et seq.). Draft EIR Section 2.5.2.1 (at page 2-29) explains why potential off-site alternatives initially were considered, but not carried forward for more detailed review. See also Response T2-4, which further explains why off-site alternatives were not considered in detail in this EIR.

The stated opposition to the Project in part based on wildfire risk is noted. As indicated in Final EIR Section 2.1.1., *Input Received*, requests that the County undertake a Countywide planning effort specific to the siting of wind energy generation projects are beyond the scope of this Project.

- P27-11 The commenters observation about the image shown on the cover of the Draft EIR is acknowledged, but does not bear on the sufficiency of the EIR. The Draft EIR analyzes the potential impacts of the Project, including the options for which turbine type would be used. See Response P20-15, which explains the relationship between the numbers, heights and locations of the proposed turbines. How the height of the proposed turbines may compare to other objects throughout the United States is beyond the scope of CEQA process for this Project. The impacts of the Project to visual resources are analyzed in Section 3.2, *Aesthetics*. The visual resources technical report included in

Draft EIR Appendix A has been updated to remove the words “administrative draft.” See Final EIR Appendix A4.

- P27-12 Clarification of the application filing date does not bear on the sufficiency of the EIR. For purposes of the environmental analysis, the baseline relative to which Project-caused changes are analyzed to determine whether the change is significant for purposes of CEQA reflected conditions as they existed in January 2019 when the Notice of Preparation (NOP) was published unless as otherwise noted. See Draft EIR Section 3.1.2.1, *Environmental Baseline* (at page 3.1-1). The comment provides no evidence that investigations and reports that predate January 2019 would be insufficiently informative of actual physical conditions so as to preclude an informed baseline.

The County and its consultant team have independently reviewed the Applicant-prepared studies provided in appendices to the Draft EIR and have concluded that, together with other information in the record, they are suitable for reliance in the EIR. This methodology is consistent with County practice for the preparation of past and current environmental impact reports. The Applicant’s consultants, e.g., WEST and Stantec, are not identified in Draft EIR Chapter 5, *Report Preparation* (at page 5-1 et seq.) because they did not prepare the EIR. The County and its consultant team did prepare the report and are identified in Draft EIR Section 5.1, *Lead Agency*, Section 5.2, *Consultant*, and Section 5.3, *Subconsultants*.

- P27-13 The County acknowledges that the commenter might prefer to see additional or different figures included in the Draft EIR; however, the figures provided, in combination with in-text descriptions of relevant features, are sufficient to inform decision-makers and members of the public about the regional and local location of the Project Site. See Response P20-15 for additional discussion of the project description and related figures.
- P27-14 See Response T2-3 regarding project objectives as one of the four threshold criteria for identifying suitable alternatives as part of the CEQA process and explaining that, while the public’s objectives may be considered by decision-makers, they are not among the enumerated CEQA considerations. The County acknowledges that the commenter may prefer to see different project objectives; however, this preference does not affect the sufficiency of the EIR. Draft EIR Section 2.5.2.1 (at page 2-29) explains why potential off-site alternatives initially were considered, but not carried forward for more detailed review. See also Response T2-4, which further explains why off-site alternatives were not considered in detail in this EIR. See Response P27-2 regarding the current state of the electric grid, which is beyond the scope of the CEQA process for this Project.
- P27-15 As indicated in Response P27-2, comments about grid reliability, CAISO, and legal proceedings involving PG&E are beyond the scope of this EIR. Because the Project would not interconnect at the Round Mountain Substation (Response P26-13),

comments about the Round Mountain Substation and the CPUC's proceedings in that regard also are beyond the scope of this EIR.

P27-16 See Response P27-14.

P27-17 "Entitlements" in this context means permits and other authorizations and approvals granted for the Project. See Response P27-14.

P27-18 See Response P27-14.

As noted in Response T1-1, Draft EIR Section 3.6 (at pages 3.6-1 and 3.6-3), Section 3.6.3 (at page 3.6-24) and the Scoping Report included as Appendix J identify the Project Site as located within the ancestral lands of the Madesi, Itsatawi and Atsugewi Bands of the Pit River Tribe. The Project Site's proximity to the Montgomery Creek Rancheria and the Roaring Creek Rancheria is acknowledged. The Montgomery Creek Rancheria is located in the unincorporated community of Montgomery Creek, and the Roaring Creek Rancheria is located nearby – approximately 5 miles northwest of Montgomery Creek. See Draft EIR Figure 3.6-1, which shows the Pit River tribe's ancestral boundary relative to Montgomery Creek, and Draft EIR Figure ES-1 and Figure 2-1, Project Location, which show the Project Site relative to Montgomery Creek. The Big Bend Rancheria is located slightly farther away: north of Big Bend and approximately 50 miles northeast of Redding. See also Response T2-2 acknowledging receipt of that commenter's input regarding PG&E's proposed transfer of lands within the Tribe's ethnographic territory. As noted there, whether the private owner of land included within the Project Site boundary would entertain a transfer of stewardship is beyond the scope of the EIR, which is focused on the potential impacts of the Project and alternatives to the physical environment.

As discussed in Final EIR Section 2.1.1, *Input Received*, comments expressing concern about potential effects on community feeling, disruptions to a way of life, and property values are beyond the scope of this EIR.

P27-19 See Response P20-15, which describes the adequacy of the project description and explains the relationship between the numbers, heights, and locations of the proposed turbines, addressing many of the questions posed in this comment. Because the project description is sufficient, the County disagrees with the suggestion that Mitigation Measure 3.2-1 is deficient. As explained on Draft EIR page 3.2-40, the siting component of Mitigation Measure 3.2-1 applies to two proposed turbines that would be visible from KOP 1: D02 and D03. This is because KOP 1 is the only KOP from which the Project would result in a substantial reduction of visual character (see Draft EIR Table 3.2-2 at page 3.2-39). The mitigation measure would require the turbines at these two locations, if to be built, to be slightly relocated (i.e., "microsited") to avoid or reduce visual impacts from KOP 1. It is feasible that a shorter turbine model (e.g., one that is 500 feet tall rather than 679 feet tall) also could address this requirement, or could be used in tandem with micrositing. However, the feasibility of relocating these turbines or choosing a shorter model is unknown, leading to a conclusion that impacts

could remain significant and unavoidable from KOP 1. The measure also would require that all turbines be free of commercial messages and symbols. As described in Response P20-15, there is no potential that the Applicant could “make changes to the entire project site;” rather, through micrositing and the selection of the most appropriate turbine model(s), the Project could reduce or avoid certain impacts identified in the Draft EIR, including the visual impact from KOP 1.

- P27-20 See Response P20-15 regarding the adequacy of the project description and the relationship between the numbers, heights and locations of the proposed turbines. The statement in the Draft EIR is correct: a Project-specific geotechnical investigation will be completed once final turbine locations have been identified.
- P27-21 See Response P20-15 regarding the adequacy of the project description. See Response P21-12 regarding the MMRP that would inform the County’s oversight and enforcement of mitigation measures. See Response P21-5 regarding the County’s coordination with, and permitting authority of, the US Army Corps of Engineers in the context of this Project.
- P27-22 See Response P20-15 regarding the adequacy of the project description. Information and input was requested from agencies (including Caltrans) during the pre-scoping and scoping phases, and with issuance of the Draft EIR. See Draft EIR Section 1.4, *CEQA Process Overview* (at page 1-3 et seq.); see also, Final EIR Section 1.3.1, *Agency and Public Review of the Draft EIR*. Caltrans provided input during the scoping process. (see, e.g., Draft EIR Appendix J, Scoping Report). The February 12, 2019, scoping letter received from Caltrans is provided in Appendix H of the Scoping Report, which is provided as Appendix J of the Draft EIR. In its scoping letter, Caltrans summarized its understanding of the Project, its location, and proposed access routes. It mentions earlier input provided as part of the Initial Study process, and identifies any historic resource determination recordation area that would include SR 299 as of significant importance. It also notes the potential for the Project to require oversized loads permits and escorts, but does not go into detail in this regard.

The commenter’s opposition to the addition of any potential new ignition source is acknowledged. Financial assurances would be required to ensure reclamation and site restoration of the Project Site (see Response T5-4).

See Response P35-4 regarding the mitigation of potential damage to County roads.

CEQA requires a lead agency to initiate its environmental analysis as early in the process as possible, so as to afford the greatest potential to modify the proposal (through project refinements, mitigation measures, or alternatives) to avoid or reduce potential effects. Final design is not required. If a substantial change to the Project design were to be proposed by the Applicant, supplemental CEQA review would be required to evaluate the change prior to approval. With respect to the transportation evaluation, the type of change that could cause supplemental CEQA review would

include (for example) an increase in the number of proposed wind turbines or changes in access to the Project Site from public roadways.

The commenter asserts that the Draft EIR underestimates the amount of traffic that would be generated by the Project because not all the detail provided in the Traffic Study (Draft EIR Appendix H) is provided in Draft EIR Section 3.14, *Transportation*. This is not the case. The Draft EIR relies upon the technical analysis provided in the Traffic Study to the extent that it relates to the four significance criteria stated on Draft EIR page 3.14-6. With respect to vehicle trips that would be generated by the Project, this includes peak hour operational analyses (level of service) of SR 299 between I-5 and Burney, and the three proposed Project access road intersections. The 93,088 daily trips estimated to be generated by Project construction are broken down by trip type on page 3.14-6, and include trips made by survey crews, construction trades, project management staff, equipment operators, and equipment/ material deliveries. The analysis presented in the Traffic Study is appropriately summarized in Section 3.14 in that it provides adequate detail to support the impact analysis conclusions.

P27-23 The Draft EIR considers the origination location of Project workers in order to evaluate the potential environmental effects associated with their transportation to the Project Site. Jobs numbers and allocations may be considered by decision-makers pursuant to their decision-making process, but are beyond the scope of this EIR. See Final EIR Section 2.1.1, *Input Received*, regarding economic effects.

P27-24 The fire prevention plan required by Mitigation Measure 3.16-2a, Fire Safety (Draft EIR at page 3.16-19) would be prepared prior to construction, and so the mitigation it includes would be in place in advance of any potential Project-caused impact. The minimum substantive requirements of the plan are set forth in the measure itself and include vehicle and equipment fire safety inspections and maintenance, emergency firefighting water supplies and fire suppression equipment, fire patrols, reporting requirements, vegetation clearance, worker training, emergency stop-work conditions, and coordination with CAL FIRE. The stated opposition to the introduction of any additional fire risk is acknowledged.

P27-25 Required permits and approvals must be in place before the Project may be developed. As the CEQA lead agency, the County's consideration of the EIR and requested use permit application will be the first opportunity for an agency to consider whether to approve, approve with modifications, or deny a requested approval for the Project. See Draft EIR Section 1.3 (at page 1-2), which describes use of the EIR by the County and other permitting agencies.

Regarding the decommissioning, including approval requirements, and financial assurances, see Response T5-4. See Response P4-2 regarding the Draft EIR's assumptions about turbine component disposal upon decommissioning.

P27-26 The Applicant provided a water supply assessment for the Project that is described in Draft EIR Section 2.4.8.1 (at page 2-24) and included in Appendix I. The County and

its consultant team (identified in Draft EIR Chapter 5, *Report Preparers*) independently reviewed the assessment on the County's behalf and relied on it, together with other materials in the record in Section 3.9, *Geology and Soils* (acknowledged at page 3.9-8), Section 3.12, *Hydrology and Water Quality* (acknowledged at pages 3.12-4 and 3.12-18), and in Section 3.15, *Utilities and Service Systems* (acknowledged at page 3.15-1). See Response P4-7 regarding potential impacts to surface waters and groundwater, including from blasting, if it occurs. See Response T3-4 regarding water rights. See Response P21-5 regarding the County's coordination with, and permitting authority of, the US Army Corps of Engineers in the context of this Project. See Response P27- regarding Agency and public outreach efforts for the Project.

- P27-27 The commenter's calculations do not account for recycling, sales for scrap or the weight of material left at a depth of 3 feet or below ground surface. See Draft EIR Section 2.4.7 (at page 2-23), which explains that reclamation and site restoration would include excavation of foundations to a depth of approximately 3 feet below grade. See Response P4-2 regarding the Draft EIR's assumptions about turbine component disposal upon decommissioning.
- P27-28 The commenter's opposition to the addition of any potential new ignition source is acknowledged.
- P27-29 See Response P20-15 regarding the adequacy of project description and related figures. See Response T2-3 regarding project objectives, including the ones among them considered "basic" for purposes of screening potential alternatives. Response T2-3 also explains that, while the public's objectives for a proposed project may be considered by decision-makers, they are not among the enumerated CEQA considerations. Further, potential alternatives only need to meet "most of" the basic project objectives to pass the relevant screening criterion.

See Response P27-2, which explains that comments about grid reliability are beyond the scope of the CEQA analysis for this Project. See Response P26-13, which clarifies that the Project would not interconnect at the Round Mountain Substation.

- P27-30 See Response P27-25 regarding permit requirements and timing. See Response 21-5 regarding the County's coordination with, and permitting authority of, the US Army Corps of Engineers in the context of this Project. The Draft EIR identifies the USFWS as a federal agency whose regulatory authority may intersect with the Project. See, e.g., Table ES1, *Summary of Permits and Approvals*, Section 2.6, *Permits and Approvals*. CDF (now CAL FIRE) and the Shasta County Fire Department were consulted during the pre-scoping and scoping phases of CEQA process for this Project (see Draft EIR Appendix J, *Scoping Report*). As one of the responsible agencies identified in Draft Section 1.3, *Use of this Document by Agencies* (at page 1-3), each agency received a copy of the Draft EIR for review. See Draft EIR Section 5.4, *Entities Consulted and Recipients of the Draft EIR and/or the Notice of Availability* (at page 5-3).

P27-31 CEQA analyzes the incremental change in baseline conditions that would be caused by a proposed project. In the context of this Project, the baseline risk level (e.g., CPUC's and CALFIRE's fire risk designations for the area) is considered as part of the cumulative scenario, but is not attributable to the Project. The commenter's opposition to the addition of any incremental additional fire risk is acknowledged; however, CEQA does not require the impacts of a project to be mitigated to baseline levels. Instead, CEQA requires potential significant impacts to be mitigated to a level below a threshold of significance.

P27-32 As explained in CEQA Guidelines §15064.7(a), A threshold of significance is an identifiable quantitative, qualitative or performance level of a particular environmental effect, noncompliance with which means the effect will normally be determined to be significant by the agency and compliance with which means the effect normally will be determined to be less than significant. Public agencies are encouraged to develop and publish thresholds of significance for use in determining the significance of environmental effects. Thresholds may be established on a case-by-case basis as provided in CEQA Guidelines §15064(b)(2).

This EIR relies on significance thresholds established by the County or other agencies (see, e.g., USEPA's ambient thresholds for criteria pollutants, as discussed on page 3.3-7; see also AQMD thresholds on page 3.3-10 and 3.3-11), established in CEQA (see, e.g., population-level significance thresholds applied in Section 3.4), and/or as developed in the context of this analysis (see, e.g., footnote 6 on page 3.4-42 for eagles and page 3.11-12 and 3.11-13 for setbacks from property lines). See Response P21-28 regarding the Project-specific fire prevention plan (FPP). For purposes of the analysis of Impact 3.16-2, an impact would be significant if the risk introduced by the Project would be significantly greater than the risk posed by other existing land uses such as timber harvesting. As described on Draft EIR page 3.16-19, the implementation of Mitigation Measures 3.16-2a, 3.16-2b, and 3.16-2c would reduce the risk of ignition resulting from operation of the Project to near baseline levels. Thus, after mitigation, the Project would not introduce a risk that is significantly greater than that posed by existing land uses. This is the basis for the County's conclusion that the impact would be less than significant with mitigation.

P27-33 Comments about grid safety and the Round Mountain Substation are beyond the scope of the CEQA process for this Project. See Response P26-13; see also, Final EIR Section 2.1.1, *Input Received*.

P27-34 The specific existing sources of energy that could be replaced by the Project are unknown because the Project would interconnect to an existing transmission line adjacent to the Project Site, allowing it to transmit the power it generates directly to PG&E's Northern California grid, which is managed by CAISO. CAISO makes the day to day decisions for the operation of California's power grid, including the generation and transmission of electricity by PG&E and the CAISO's other member utilities. As

previously mentioned, power generated by the Project would be provided to the Northern California electrical grid (see Draft EIR Project objective No. 2; at page 2-6).

The County found that the energy consumed by the Project would not constitute a wasteful, inefficient, or unnecessary use of energy, and the associated impact would be less than significant. See Impact 3.7-1 (Draft EIR at pages 3.7-9 through 3.7-13) for the information used to support that impact conclusion. The Applicant's CPUC application materials are between the Applicant and the CPUC. They are beyond the scope of CEQA. It is recommended that the commenter contact the CPUC for the location of any application materials submitted to the CPUC for the Project.

A power purchase agreement would likely not be finalized until after Project approval. Whether PG&E has or will agree to purchase the power generated by the Project, or whether that power will be purchased by another entity, is beyond the scope of CEQA.

Comments about grid safety are beyond the scope of the CEQA process for this Project. See Final EIR Section 2.1.1, *Input Received*.

P27-35 See Response P17-5 regarding the Project's consistency with the Shasta County General Plan and Zoning Plan. The commenter's request for a moratorium bares no impact on the evaluation and conclusion of the EIR. As explained in Final EIR Section 2.1.1, *Input Received*, requests that the County undertake a Countywide planning effort specific to the siting of wind energy generation projects are beyond the scope of the CEQA analysis for this Project.

P27-36 CEQA focuses on potential significant impacts of agency decision-making. With regard to the Draft EIR's consideration of public services, which is based on the Environmental Checklist included in CEQA Guidelines Appendix G, the CEQA concern is whether new facilities would be required, the construction of which could cause impacts on the physical environment, and whether alternations of existing facilities would be required, the construction of which could cause impacts on the physical environment. The question is not whether a proposed project could affect services, but rather that it could affect services in a way that results in an impact on the physical environment. This EIR analyzes wildfire impacts and impacts on services consistent with CEQA and the CEQA Guidelines (see, e.g. Draft EIR Section 3.16 [wildfire], 3.1.4.14 [public services], and Final EIR Section 1.2.3.2., *Analysis of Project Changes* [both]).

Comments about grid safety, the Round Mountain Substation, and the CAISO Transmission Plan as it relates to the Round Mountain Substation are beyond the scope of the CEQA process for this Project. See Response P26-13; see also, Final EIR Section 2.1.1, *Input Received*. The CPUC's role as a responsible agency is discussed in Draft EIR Section 1.3, Use of this Document by Agencies (at pages 1-2 and 1-3). See Response P27-7 regarding agency outreach efforts for the Project.

P27-37 The Project's impacts to Tribal Cultural Resources are disclosed in the Draft EIR (see, e.g., Draft EIR Section ES.6.2 at page ES-7, Table ES-2 at page ES-22, and Section 3.6 at page 3.6-1 et seq.). The comment provides no evidentiary support for a conclusion that the cultural heritage of the Pit River Tribe would be "erased" or that impacts to biological resources would be irreversible for purposes of CEQA. The County acknowledges that wildfire can be devastating. However, CEQA tasks the EIR with analyzing the impacts of the Project, not analyzing the impacts of wildfire. Perceived impacts to community character are outside the scope of CEQA.

The commenter is correct that some Project-specific infrastructure would remain following decommissioning and site reclamation, and that this should be recognized in the EIR's consideration of irreversible impacts. Accordingly, Draft EIR Section 3.1.5 (at page 3.1-29) has been revised as follows:

For the Fountain Wind Project, the use permit period ultimately would be established by County decision-makers; a 40-year permit duration has been requested. Upon the expiration of the use permit period, the Project would be decommissioned and the Project Site restored to a condition suitable for commercial timber land use (see Section 2.4.7, *Decommissioning and Site Restoration*). The removal of turbine components and related infrastructure would be restricted to a depth of approximately 3 feet below grade. Infrastructure below that depth would remain in place. Internal roads that would not be needed to serve the future timber land use of the site would be removed and the area restored, including by natural recruitment. Therefore, the Project-specific commitment of non-renewable resources (e.g., oil, gas, and other fossil fuels) would not preclude the removal of Project infrastructure or the site's future use in a way that is comparable to its current use. Irreversible impacts also can result from damage caused by environmental accidents caused by a proposed project (CEQA Guidelines §15126.2[d]). Potential impacts relating to hazards and hazardous materials are analyzed in Section 3.11, which identifies no significant unavoidable adverse effect. For these reasons, the Project would not, if implemented, result in significant irreversible impacts.

P27-38 This comment about the image shown on the cover of the Draft EIR is acknowledged, but does not bear on the sufficiency of the EIR. The cover photo is generally representative of baseline conditions in the area against which the analysis and conclusion in the Draft EIR have been determined. The description of a Project-caused change in baseline conditions is analyzed in detail and significance conclusions are reached, in Draft EIR Section 3.2, *Aesthetics*.

The County acknowledges the commenter's disagreement with conclusions reached. This disagreement, however, does not undermine the validity of the data or analysis in the EIR, or the conclusions reached. The aesthetics analysis was performed using the methodology described in Draft EIR Section 3.2.4.1 (at page 3.2-17 et seq.) and environmental standards. It considers input received during scoping (Draft EIR at page 3.2-1, Appendix J, *Scoping Report*), technical input prepared by resource experts (Appendix A) that was independently reviewed by the County and its consultant team,

reference materials cited in Section 3.2.6 (at page 3.2-50), and the professional technical resource expertise of the preparers of the EIR (Draft EIR Chapter 5). Conclusions are based on facts and analysis, rather than opinions. Acknowledging the commenter's disagreement, the County chooses to rely on the data, other information and analysis documented in the Draft EIR.

- P27-39 The Draft EIR identifies a significant unavoidable impact both at the Project-specific level and cumulatively, with regard to its effect on a scenic vista and the existing visual character or quality of public views of the site and its surroundings from publicly accessible vantage points, which for the purpose of the analysis are typically within 10 to 20 miles, or less in some cases. While it is acknowledged that views of the Project may be experienced from distances greater than 30 miles away in some locations, as indicated on Figure 3.2-1, and as noted by the commenter, the visual prominence of the Project would be less than experienced and analyzed in the Draft EIR. The addition of viewpoints at greater distances than analyzed would not result in different or greater impacts than disclosed in the Draft EIR. The commenter's apparent agreement with this conclusion is acknowledged.
- P27-40 See Response P4-1, which explains why the Draft EIR focuses on views from publicly-accessible vantage points. California law does not recognize any private right to views. See Final EIR Section 2.1.1, *Input Received*, which identifies the types of concerns that are beyond the scope of CEQA, but which may be considered by County decision-makers as part of their deliberations on the requested use permit application. Further, impacts to the tourist industry are speculative in nature and the comment provides no factual basis to support the statement.
- P27-41 See Response P17-5 regarding the Project's consistency with the Shasta County General Plan and Zoning Plan.
- P27-42 As discussed on Draft EIR page 3.2-17, paragraph 3, visual simulations were created by placing a photo-realistic model of the Project into existing photographs. The simulations serve as the basis for evaluating the contrast between existing conditions and the conditions introduced by the Project. The simulations presented in the EIR were included in the Visual Resources Technical Report prepared for the Project (see Draft EIR page 3.2-17, paragraph 2 and Appendix A). Photographs taken by the visual resources specialists that prepared the report utilized a high-resolution, full-frame, 35mm Digital Single-Lens-Reflex camera with a fixed 50mm lens. A 50mm focal length is widely accepted as an industry standard for approximating the field of vision of the human eye. The Draft EIR analysis presents the existing condition photo and simulation on the same figure to allow readers to compare the two conditions side by side, and at a scale that approximates the field of vision of the human eye. See also Final EIR Appendix A4, which includes the visual resources technical report from Draft EIR Appendix A as updated to delete the word "draft" to avoid confusion, and to include larger-format simulations for greater ease in review.

The angle of KOP-1 reflected in the visual simulation was selected in order to represent views from the Fountain Fire Overlook, with the photography specification noted above. The overlook is positioned on the southern side of SR 299. The interpretive materials at the overlook encourage viewers to look to the southwest. Therefore, the KOP angle was chosen in order to evaluate changes to visual character and quality at this overlook.

- P27-43 The comment seems to suggest that Impact 3.2-2 should identify SR 299 in the area of the Project as a scenic highway based on the visual character of the area. However, the intent of Impact 3.2-2, which is based on the Environmental Checklist in CEQA Guidelines Appendix G, is focused on potential damage to scenic resources within a state scenic highway. SR 299 in the vicinity of the Project Site is not a state scenic highway; therefore, it is not discussed in Impact 3.2-2. However, the fact that SR 299 exists in the vicinity of the Project is discussed in Impact 3.2-1, and was considered in assessing the potential for the Project to have a substantial adverse effect on a scenic vista or substantially degrade the existing visual character or quality of public views of the site and surroundings from publicly accessible vantage points and conclusion that these impacts would be significant and unavoidable.

See Response P34-15 which discusses the consideration of the Hatchet Ridge Project as a part of baseline conditions. The commenter's disagreement with the conclusion reached in Impact 3.2-2 is acknowledged and will be included in the record for consideration by County decision makers.

- P27-44 See Response P34-1, which discusses impacts to nighttime views. See also Response P4-1, which explains the analysis's focus on evaluating impacts from publicly accessible viewpoints. See Response P26-56 regarding the rationale for choosing terms such as would and could. The County's intentions in preparing the EIR are to inform and disclose, not to mislead.

- P27-45 The Project as described in EIR Chapter 2, *Description of the Project and Alternatives*, does not propose expansion of the Project at the scale considered in 2011. Any potential expansion or new project by a different applicant is speculative and thus, not considered in the cumulative impact analysis.

See Response P34-15 which discusses the consideration of the Hatchet Ridge Project as a part of baseline conditions.

- P27-46 See Response P4-1, which explains the analysis's focus on evaluating impacts from publicly accessible viewpoints; and Response P27-43, discussing the intent and focus of Impact 3.2-2 (effects on scenic resources within a state scenic highway) relative to Impact 3.2-1 (effects on existing visual character or quality on public views of the site and surroundings).

- P27-47 The Draft EIR identified an air quality impact that would be significant and unavoidable, impacts that would be less than significant with mitigation incorporated,

and impacts that would be less than significant requiring no mitigation. Regarding the applicable air quality plan, as described in Impact 3.3-1, the Project would not directly conflict with implementation of the 2018 ozone attainment plan measures or grant programs, but could result in a violation of an ozone air quality standard, which would not be consistent with the intent of the 2018 Plan. The County disagrees with the opinion that Impact 3.3-1 cannot be mitigated to a less-than-significant level. As described in the air quality impact discussion for criterion b), with implementation of Mitigation Measures 3.3-1a (Tier 4 Final Emission Standards for Off-road Construction Equipment) and 3.3-1b (Idling Restrictions and Fuel Use), short-term construction emissions of nitrogen oxides (NO_x) would be reduced to levels that would not have a substantial effect on the regional and localized air quality in the Air Basin (Draft EIR at pages 3.3-14 through 3.3-20), and it would not conflict or obstruct implementation of the 2018 Plan.

It is acknowledged that the wildfires that have occurred over the last several years have negatively affected ambient air quality, as evidenced by the relatively high 2018 PM₁₀ and PM_{2.5} measurements for the area. The high PM₁₀ and PM_{2.5} measurements for 2018 are likely attributed to the Camp Fire that occurred in Paradise, approximately 75 miles south-southeast of Shasta Lake (see Draft EIR, at pages 3.3-5 and 3.3-6).

- P27-48 For discussion of the effects of Project-generated emissions of toxic air contaminants (TACs) on nearby sensitive receptors, see Draft EIR Impact 3.3-4 (at pages 3.3-26 and 3.3-27). Consistent with Shasta County Air Quality Management District (AQMD)'s permit approval process, which requires certain evaluations and notification requirements for facilities that would have the potential to emit hazardous air pollutants that would be located within 1,000 feet of a school, this distance was used in the Draft EIR analysis as a screening threshold for nearby residences as to whether a quantitative health risk assessment should be prepared for the Project. The closest residence to any of the work areas on the Project Site are off Sycamore Road, approximately 1,900 feet to a Project Site construction staging area. Therefore, the health risk from the short-term diesel particulate matter emissions that would be associated with the Project would be expected to result in a maximum cancer risk at the nearest residences that would not exceed the maximum individual cancer risk threshold of 10 in one million. Similarly, the Project-related health risk in Redding Valley, located several miles from the Project Site, would result in a less-than-significant impact.
- P27-49 For the air quality cumulative impact analysis, see Draft EIR Section 3.3-29 (at pages 3.3-29 through 3.3-30). The commenter's preference that the County approve the No Project Alternative is acknowledged and has been included in the record, where the County may consider it as part of the decision-making process.
- P27-50 The studies provided in Draft EIR Appendix C were prepared on behalf of the Applicant. The County and its consultant team have independently reviewed the studies and concluded that, together with other information in the record, they are suitable for reliance in the EIR. The Applicant's consultants, e.g., WEST and Stantec, are not

identified in Draft EIR Chapter 5, *Report Preparation* (at page 5-1 et seq.) because they did not prepare the EIR. The County and its consultant team did prepare the report and are identified in Draft EIR Section 5.1, Lead Agency, Section 5.2, *Consultant*, and Section 5.3, *Subconsultants*. See Response A3-7 for information about why convening a TAC is not being recommended for this Project.

- P27-51 The comment states that “the entire Project is proposed well within a Globally Important Bird Area,” as identified by the American Bird Conservancy’s online Wind Assessment Map.⁷⁴ This designation was given by the American Bird Conservancy to national forest lands throughout the west, some of which occur in the Project vicinity. The Project is proposed on private lands and therefore is not mapped or characterized by the American Bird Conservancy as a globally important bird area. The consideration of federal lands near the Project Site as important to birds does not alter the baseline for avian species, or affect the impact analysis in the Draft EIR. The Draft EIR fully acknowledged the Project Site location within the Pacific Flyway at page 3.4-23. Bird migration is also discussed in Appendix C1 (at page 33, et seq.); including the seasonality of avian activity. Potential cumulative effects on avian species and other biological resources are fully analyzed in Section 3.4.4 (at page 3.4-74 et seq.).
- P27-52 See Response A3-7, which explains why the County has opted not to convene a TAC for this Project.
- P27-53 The Draft EIR acknowledges that the Project would have a significant and unavoidable impact on tribal cultural resources, including as the commenter notes, places that are sacred and that encompass traditional values. See Response T5-8 for additional details. As noted in Response T5-8, implementation of the identified mitigation measures would not reduce impacts to tribal cultural resources to a less-than-significant level and the impact would remain significant and unavoidable.
- P27-54 The commenter’s perspective on the significance criteria identified in the Environmental Checklist in CEQA Guidelines Appendix G and Draft EIR Section 3.6.2 (at page 3.6-18 et seq.) is acknowledged and has been included in the record, where the County may consider it as part of the decision-making process. The stated preference for the No Project Alternative also is noted.
- P27-55 The County acknowledges this summary of CEQA’s requirements and the Project’s impacts to cultural resources. See Draft EIR Table ES-2 (at pages ES-21 though ES-23) and Section 3.6 (at page 3.6-19 et seq.).
- P27-56 See Final EIR Section 1.2.3, *Changes to the Project Since Issuance of the Draft EIR*, which explains that the Applicant has modified the Project to avoid impacts to FW 11.

⁷⁴ Mapping tool is available online at: <https://abcbirds.org/program/wind-energy-and-birds/wind-risk-assessment-map/>

- P27-57 See Response P45-117 regarding the court’s decision in *Madera Oversight Coalition Inc. v. County of Madera*.
- P27-58 The County acknowledges this summary of CEQA’s requirements and the Project’s cultural resources-related mitigation measures. See Draft EIR Table ES-2 (at pages ES-21 through ES-23) and Section 3.6 (at page 3.6-19 et seq.). The stated preference for the No Project Alternative also is noted.
- P27-59 Wildfire impacts are analyzed in Section 3.16, *Wildfire*. The first sentences of this section acknowledge that the California Department of Forestry and Fire Protection (CAL FIRE) has assigned a “Very High Fire Hazard Severity Zone” rating throughout Shasta County, and that Round Mountain, Montgomery Creek, and Burney all are listed as communities at risk by CAL FIRE’s Office of the State Fire Marshal (Draft EIR at page 3.16-1). See also the discussion of Impact 3.16-2 (Draft EIR at page 3.16-16 et seq.), which concludes that the Project would, unless mitigated, exacerbate wildfire risks, and which recommends mitigation measures to reduce the potential impact to a less-than-significant level. Mitigation identified to reduce the severity of the risk to less than significant for purposes of CEQA include Mitigation Measure 3.16-2a, Fire Safety; Mitigation Measure 3.16-2b, Nacelle Fire Risk Reduction; and Mitigation Measure 3.16-2c, Emergency Response Plan. (at pages 3.16-19 through 3.16-22). Collectively, these measures would require the Applicant and its contractors to implement fire safety measures to prevent fire and be prepared to respond immediately if a fire should ignite, and would require collaboration with area fire protection agencies to reduce the risk of wildfire ignition and spread. The County agrees with the commenter’s statement that the area would remain at high risk of fire with or without the Project (i.e., that high fire risk is a baseline condition). The commenter’s preference that no incremental risk be added to existing conditions is acknowledged.
- P27-60 While questions of manpower and funding are beyond the scope of CEQA, they may be considered as part of the decision-making process on the requested use permit application.
- P27-61 The County acknowledges the stated opinion regarding Governor Newsom’s Executive Order N-05-19. However, this concern is beyond the scope of this EIR, which considers potential impacts of the Project and alternatives on the physical environment.
- P27-62 See Response P26-64 regarding the Project’s potential impacts relating to ingress and egress. See Response P26-56 regarding lightning strikes.
- P27-63 The County agrees with the commenter’s statement that the terrain within the Project Site is rugged and steep, and this is acknowledged in the Draft EIR (see “Topography” at page 3.16-3) and not intended to be minimized; the partial sentence quoted in the comment begins, “Terrain type has a strong influence over fire behavior.” Contrary to the suggestion in the comment, the Draft EIR discloses potential significant impacts related to wildfire and identifies mitigation measures to reduce their severity.

- P27-64 See Response P26-48 regarding Senate Bill 901.
- P27-65 Legal proceedings involving PG&E, including its bankruptcy, are beyond the scope of the CEQA process for this Project. Draft EIR Section 3.16.4 (at page 3.16-27 et seq.) analyzes the significance of the Project’s incremental contributions to cumulative wildfire conditions. See Response P21-12 regarding the MMRP and the County’s oversight and enforcement of compliance with the requirements of mitigation measures. The commenter’s preference that no incremental risk be added to existing conditions is acknowledged.
- P27-66 See Response P17-5 regarding the Project’s consistency with the Shasta County General Plan and Zoning Plan.
- P27-67 The commenter’s opposition to siting the Project in the proposed location is acknowledged.
- P27-68 As indicated in Final EIR Section 2.1.1., *Input Received*, requests that the County undertake a Countywide planning effort specific to the siting of wind energy generation projects are beyond the scope of this Project.
- P27-69 As indicated in Response P27-2, comments about grid reliability and legal proceedings involving PG&E are beyond the scope of this EIR.
- P27-70 The Project would cause no change in CAL FIRE’s assignment to Shasta County a “Very High Fire Hazard Severity Zone” rating or CAL FIRE’s Office of the State Fire Marshal’s listing of Round Mountain, Montgomery Creek, and Burney as communities at risk (Draft EIR at page 3.16-1). Acknowledging the need to shift from reaction to prevention, such considerations are beyond the scope of the CEQA process, which evaluates the significance of Project-caused changes in the physical environment. CEQA does not require potential significant impacts to be reduced to baseline or below baseline conditions, but rather than they be reduced to a less than significant level.
- P27-71 The County acknowledges this summary of the significance criteria identified in Draft EIR Section 3.16.2, which are based on the criteria (questions) provided in the Environmental Checklist provided in CEQA Guidelines Appendix G. See Response P12-8 for more information about the checklist in the context of this EIR.

CEQA requires a lead agency to determine the significance of potential impacts to the physical environment – lead agencies use thresholds of significance to do so. As CEQA Guidelines Section 15064.7(a) explains, “A threshold of significance is an identifiable quantitative, qualitative or performance level of a particular environmental effect, noncompliance with which means the effect will normally be determined to be significant by the agency and compliance with which means the effect normally will be determined to be less than significant.” Thresholds of significance may be adopted by an agency for general use, or may be used on a case-by-case basis (CEQA Guidelines 15064.7(b)). The use of environmental standards as thresholds of

significance is recommended because it promotes consistency in significance determinations (CEQA Guidelines 15064.7(c)). “The determination of whether a project may have a significant effect on the environment calls for careful judgment on the part of the public agency involved, based to the extent possible on scientific and factual data. An ironclad definition of significant effect is not always possible because the significance of an activity may vary with the setting. For example, an activity which may not be significant in an urban area may be significant in a rural area” (CEQA Guidelines §15064(b)(1)).

The County acknowledges the commenter’s disagreement with conclusions reached in the wildfire analysis. This disagreement, however, does not undermine the validity of the data or analysis in the EIR, or the conclusions reached. The wildfire analysis was performed in reliance on professional and environmental standards. It considers input received during scoping (Draft EIR at page 3.16-1, Appendix J, *Scoping Report*), reference materials cited in Section 3.16.5 (at page 3.16-28 et seq.), and the professional technical resource expertise of the preparers of the EIR (Draft EIR Chapter 5). Conclusions are based on facts and analysis, rather than opinions. Acknowledging the commenter’s disagreement, the County chooses to rely on the data, other information and analysis documented in the Draft EIR.

- P27-72 This summary of project components is generally consistent with information provided in the project description. See, e.g., Draft EIR Table 2-1, *Project Components and Disturbance Areas* (at page 2-7). However, for clarification of proposed turbines, see Response P20-15, which explains the relationship between the numbers, heights and locations of the proposed turbines. The commenter’s opposition to the addition of any potential new ignition source is acknowledged.
- P27-73 The commenter’s preference for the No Project Alternative is acknowledged. See Response P27-71 regarding the use of criteria provided in CEQA Guidelines Appendix G and the data, analysis, and conclusions in the EIR. The comment correctly states that there are no adopted evacuation plans in the area where the Project is proposed. The County of Shasta and all cities within the County use the Emergency Operations Plan to respond to major emergencies and disasters. The Emergency Operations Plan identifies a broad range of potential hazards and a response plan for each. The Shasta County Sheriff’s Department, California Highway Patrol, and other cooperating law enforcement agencies have primary responsibility for evacuations. These agencies work with the County Office of Emergency Services, and with responding fire department personnel who assess fire behavior and spread, which ultimately influence evacuation decisions. As of this time Cal Fire, Shasta County Fire Department, Shasta County Office of Emergency Services, Shasta County Sheriff’s Department, and others have not adopted a comprehensive emergency evacuation plan applicable to this area. See Final EIR Section 2.1.1, *Input Received*, which explains that planning efforts, potentially including the development and adoption of such a plan, are beyond the scope of this EIR. See Draft EIR Section 3.16 and Impact 3.16-1 regarding emergency access.

P27-74 See Responses T3-3 and P26-56 regarding Mitigation Measure 3.16-1a and how the timing of its implementation would ensure that CAL FIRE has accurate information with which to be aware of the location of obstacles within the Project Site and plan for aerial firefighting within the leasehold area and vicinity prior to the start of construction and initiation of operations, and regarding the FPP. The Draft EIR’s approach to mitigating impacts of the project on aerial firefighting was confirmed by a memorandum to the County received in January 2021 from the Chief of the Shasta County Fire Department.⁷⁵ Based on consultations with CAL FIRE Tactical Air Operations Unit, the Fire Chief acknowledges that “aerial hazards do pose a safety concern for aerial firefighters; however, they are something we must work around on a daily basis... Whether its power lines, antenna towers, windmills, cell towers or cable/wires spanning a drainage, *the key to working in this environment is knowledge of their existence.*” (Emphasis added.)

The suggested revisions from “could” (which recognizes CEQA’s consideration of potential significant impacts) to “would” are acknowledged, but have not been made because they would not affect the impact conclusions or mitigation measures identified in the Draft EIR.

P27-75 The Draft EIR’s analysis of potential impacts relating to wildfire rely on the significance criteria set forth Environmental Checklist in CEQA Guidelines Appendix G. All potential CEQA Guidelines Appendix G considerations have been addressed. The suggestion that commenter may prefer different language is acknowledged; however, the analysis documented in the EIR is consistent with CEQA and the CEQA Guidelines.

CEQA does not require avoidance or complete offset of potential significant impacts, but rather than they be reduced to a less-than-significant level i.e., to a significance level that is below established thresholds. That a residual impact would remain following the implementation of recommended mitigation measures is acknowledged. See Response P26-56, which explains how the proposed mitigation would reduce Project impacts to a less-than-significant level.

The Draft EIR considers non-emergency work to include routine or scheduled maintenance activities. Emergency work, by contrast, includes work needed to address an immediate hazard, as opposed to a mere loss in functionality.

See Response P26-56 regarding Mitigation Measure 3.16-1a and the FPP.

See Response P27-71 regarding the approach, analysis, and conclusions reached in Draft EIR Section 3.16, *Wildfire*.

P27-76 See Response P26-56, which explains why the Draft EIR considers “occupants” as well as communities *near* the Project Site. The commenter’s opinion of Mitigation Measure

⁷⁵ CAL FIRE, 2021a. Memorandum of Bret Gouvea, Chief CAL FIRE/Shasta County Fire to Paul [A. Hellman, Director, Shasta County Department of Resource Management, Planning Division]. January 2021.

3.16-4 is acknowledged. However, the comment provides insufficient detail to support a conclusion that the mitigation measure will not be effective.

P27-77 Comments about legal proceedings involving PG&E and about grid safety are beyond the scope of the CEQA process for this Project.

P27-78 Regarding COVID, see Response P6-2.

This letter includes lengthy exhibits. The exhibits themselves are provided in Final EIR Appendix D4, Exhibits to Letter P27, Margaret Osa. Responses addressing the exhibits are provided below.

P27-79 The County acknowledges receipt of comments made before the Board of Supervisors on July 17, 2019. The opposition to the Project stated here and in the comments below is noted. As indicated in Final EIR Section 2.1.1., *Input Received*, requests that the County undertake a Countywide planning effort (such as the proposed moratorium and General Plan or Zoning Plan regulations to govern the siting of wind energy generation projects) are beyond the scope of this Project.

P27-80 The County acknowledges receipt of comments made before the Board of Supervisors on October 6, 2020. As stated in CEQA Guidelines §15204, “CEQA does not require a lead agency to conduct every test or perform all research, study, and experimentation recommended or demanded by commentors. When responding to comments, lead agencies... do not need to provide all information requested by reviewers, as long as a good faith effort at full disclosure is made in the EIR.” Because a good faith effort at full disclosure has been made here, the requested additional studies have not been conducted. Further, without some indication the type of studies requested by the commenter, the County does not have enough information to provide a more detailed response.

Contrary to the suggestion in this comment, the County reached out to potential trustee agencies, responsible agencies, and potentially affected federal agencies during the pre-scoping and scoping phases of CEQA process for this Project (see Draft EIR Appendix J, *Scoping Report*). The CPUC, as one of the responsible agencies identified in Draft Section 1.3, *Use of this Document by Agencies* (at page 1-3), received a copy of the Draft EIR for review. See Draft EIR Section 5.4, *Entities Consulted and Recipients of the Draft EIR and/or the Notice of Availability* (at page 5-3).

See Response P26-13, which clarifies that the Project would not interconnect at the Round Mountain Substation. Accordingly, comments about the Round Mountain Substation and CAISO’s transmission plan are beyond the scope of this EIR.

The County disagrees with the commenter’s conclusion that the environmental setting is insufficient. Existing (pre-Project) environmental conditions are described on a resource-by-resource basis throughout Draft EIR Chapter 3, *Environmental Analysis*.

The County further disagrees with the commenter’s conclusion that mitigation measures proposed in the Draft EIR are insufficient. The Draft EIR identifies mitigation measures to avoid or reduce the significance of potential significant impacts

below threshold levels. See, e.g., Draft EIR Table ES-2, *Summary of Impacts and Mitigation Measures* (at page ES-8 et seq.). The mitigation measures identified in this table and as discussed in more detail in Chapter 3 are appropriately detailed, complete, and tested. The comment provides insufficient detail to support a conclusion that the mitigation measures will not be effective in this regard.

- P27-81 The County acknowledges receipt of comments made before the Board of Supervisors on September 15, 2020. The concerns expressed here regarding wildfire impacts and General Plan consistency have been addressed responses to earlier comments presented in this Letter P27.
- P27-82 The County acknowledges receipt of comments made before the Board of Supervisors on January 14, 2020, regarding progress made toward achievement of RPS goals, the weight of Project components, and the 2018 CEQA Guidelines update. Significance criteria evaluated in the Draft EIR are consistent with 2018 CEQA Guidelines update. See, e.g., Draft EIR Section 3.7, *Energy* (at page 3.7-1 et seq.) and Section 3.16, *Wildfire* (at page 3.16-1 et seq.).
- P27-83 The County acknowledges receipt of comments made before the Board of Supervisors on October 1, 2019 regarding the moratorium, size comparisons of project components relative to other objects, a lawsuit in Canada, and water supply. See Response P4-7 regarding potential impacts to surface waters and groundwater. See Response T3-4 regarding water rights.
- P27-84 The County acknowledges receipt of comments made before the Board of Supervisors on June 2, 2020, regarding legal proceedings involving PG&E and the commenter's preference that no incremental wildfire-related risk be added to existing conditions. The concerns expressed here regarding wildfire impacts have been addressed in responses to earlier comments presented in this Letter P27.
- P27-85 The County acknowledges receipt of comments made before the Board of Supervisors on March 3, 2020, regarding grid safety and legal proceedings involving PG&E. These concerns are acknowledged, but are outside the scope of this EIR. See Final EIR Section 2.1.1, *Input Received*.
- P27-86 The County acknowledges receipt of comments made before the Board of Supervisors on February 4, 2020, regarding CAISO, the Round Mountain Substation, and grid safety. These issues may be considered by decision-makers pursuant to their deliberations on the requested use permit, but are beyond the scope of this EIR.
- P27-87 The County acknowledges receipt of comments made before the Board of Supervisors on May 5, 2020, regarding supply delays, tax credits, and the requested moratorium. As addressed in earlier comments made in this Letter P27, these issues are beyond the scope of this EIR. The commenter's opposition to the Project in the proposed location also is acknowledged.
- P27-88 The County acknowledges receipt of comments made before the Board of Supervisors on November 5, 2019, regarding fire risk, the Round Mountain Substation, and

communications between the CPUC and PG&E. See Response P26-13, which clarifies that the Project would not interconnect at the Round Mountain Substation.

- P27-89 The County acknowledges receipt of comments made before the Board of Supervisors on April 7, 2020, regarding legal proceedings involving PG&E.
- P27-90 The County acknowledges receipt of comments made before the Board of Supervisors on January 7, 2020, regarding Humboldt County's denial of a proposed wind project, how the size of components proposed as part of the Fountain Wind Project compare to other objects, the Pit River Tribe's resolution in opposition to the Project. Regarding input received from the Tribe and its members, see Draft EIR Appendix J *Scoping Report*, and letters provided in Final EIR Section 2.3.2, *Responses to Comments from Tribal Entities and Members*. See Draft EIR Section 2.5, *Description of Alternatives* (at page 2-27 et seq.), regarding on-site alternatives, off-site alternatives, repowering, alternative technologies, and alternative approaches.
- P27-91 The County acknowledges receipt of comments made before the Board of Supervisors on June 9, 2020, regarding COVID-19, legal proceedings involving PG&E and the entities with oversight over the company. The County disagrees with the suggestion that any bribe has been offered in connection with the Project.
- P27-92 The County acknowledges receipt of comments made before the Board of Supervisors on December 10, 2019, regarding concerns that are beyond the scope of CEQA (i.e., property values, tourism, grid instability, electricity price increases, and the impacts of mining of the raw materials needed to manufacture turbine parts) and concerns about potential wind project-specific potential impacts. The Draft EIR analyzes potential impacts relating to shadow flicker, setbacks, ice throw, and accidents (addressed in Section 3.11, *Hazards and Hazardous Materials*), blinking lights and viewshed impacts (addressed, e.g., in Section 3.2, *Aesthetics*), low-frequency sounds and noise (addressed in Section 3.13, *Noise*), avian and other wildlife impacts (addressed in Section 3.4, *Biological Resources*), cultural and tribal cultural resources (Section 3.6), wind turbine syndrome (Section 3.1.4.17), recreational impacts (Section 3.1.4.15), aquifers (Section 3.12, *Hydrology and Water Quality*), and repowering (Section 2.5.2.2). Specifically regarding helicopter use, see Response P11-2, which addressed potential impacts on use of the Moose Camp helipad. See Response P17-5 regarding the Project's consistency with the Shasta County General Plan and Zoning Plan.
- P27-93 The County acknowledges receipt of comments made before the Board of Supervisors on April 9, 2020, regarding PG&E's operations, CAISO, and the Round Mountain Substation. As previously noted, these concerns are outside the scope of this EIR.
- P27-94 The County acknowledges receipt of comments made before the Board of Supervisors on September 9, 2019, regarding the proposed moratorium. As previously noted, this request for a Countywide planning action is beyond the scope of this EIR.
- P27-95 The County acknowledges receipt of comments made before the Board of Supervisors on August 19, 2019, regarding the proposed moratorium and requests for a Countywide

planning effort regarding the proposed siting of wind turbines. Each topic is beyond the scope of this EIR.

P27-96 The County acknowledges receipt of comments made before the Board of Supervisors on July 17, 2109, regarding the proposed moratorium and requests for a Countywide planning effort regarding the proposed siting of wind turbines. Each topic is beyond the scope of this EIR.

P27-97 The County acknowledges receipt of comments made before the Board of Supervisors on June 16, 2020, regarding PG&E and legal proceedings involving the company. As previously noted, these topics are beyond the scope of this EIR.

P27-98 The County acknowledges receipt of comments made before the Board of Supervisors on December 17, 2019, regarding the grid, legal proceedings involving PG&E, and the inclusion of Energy and Wildfire considerations in the 2018 CEQA Guidelines update. See Response P27-82.

P27-99 The County acknowledges receipt of comments made before the Board of Supervisors on August 13, 2019, regarding the size of Project components.

P27-100 The County acknowledges receipt of comments made before the Board of Supervisors on August 18, 2020, regarding the review period for the Draft EIR, COVID-19, and the requested moratorium. The initial 45-day review period identified in this comment was extended. See Response T5-1 for details about the adequacy of the review period. Specifically regarding COVID-19, see Response P6-2.

P27-101 The County acknowledges receipt of comments made before the Board of Supervisors on May 19, 2020, regarding PG&E, including legal proceedings involving the company, and COVID-19.

P27-102 The County acknowledges receipt of comments made before the Board of Supervisors on November 19, 2019, regarding repowering (see Draft EIR Section 2.5.2.2) and generally in opposition to the Project.

P27-103 The County acknowledges receipt of comments made before the Board of Supervisors on April 21, 2020, regarding the requested moratorium, COVID-19, and legal proceedings involving PG&E. Because these topics are beyond the scope of this EIR, the County disagrees with the suggestion that additional information about them must be developed and considered before County decision-makers may consider whether to approve, approve with modifications, or deny the requested use permit application.

P27-104 The County acknowledges receipt of comments made before the Board of Supervisors on July 21, 2020, regarding PG&E's role in the 2019 Kincade Fire and SB 1312 regarding investor-owned utilities such as PG&E and grid hardening, modernization, and vegetation management. The commenter's preference that any incremental increase in fire risk not be approved also is acknowledged.

P27-105 The County acknowledges receipt of comments made before the Board of Supervisors on March 24, 2020, regarding legal proceedings involving PG&E.

- P27-106 The County acknowledges receipt of comments made before the Board of Supervisors on August 25, 2020, regarding the size of Project components relative to other objects, legal proceedings involving PG&E, the CPUC's oversight over PG&E, and the Round Mountain Substation (see Response P26-13).
- P27-107 The County acknowledges receipt of comments made before the Board of Supervisors on January 28, 2020, regarding PG&E's safety record, CPUC oversight over PG&E, and the 2018 CEQA Guidelines update adding specific significance criteria for Wildfire.
- P27-108 The County acknowledges receipt of these undated comments made before the Board of Supervisors regarding COVID-19. See Response P6-2.
- P27-109 The County acknowledges receipt of comments made before the Board of Supervisors on June 30, 2020, regarding the Camp Fire Public Report issued by the Butte County District Attorney and PG&E's safety record.
- P27-110 The County acknowledges receipt of comments made before the Planning Commission on November 19, 2019, regarding the requested moratorium, the CPUC's communications with PG&E, grid reliability, and whether the Project meets the requirements for use permit approval.
- P27-111 The County acknowledges receipt of comments made before the Planning Commission on October 8, 2020, regarding information sought from other agencies (see Response P27-80) and legal proceeding involving PG&E.
- P27-112 The County acknowledges receipt of comments made before the Planning Commission on January 9, 2020, regarding Humboldt County's denial of a wind project, the number of turbines proposed as part of the Fountain Wind Project, and the Tribe's resolution in opposition to the Project. See Response P27-90, which addresses these points.
- P27-113 The County acknowledges receipt of comments made before the Planning Commission on September 10, 2020, regarding the commenter's preference that the Project not be approved in its proposed location and wildfire considerations.
- P27-114 The County acknowledges receipt of comments made before the Planning Commission on January 9, 2020, regarding Humboldt County's denial of a wind project, the Project's consistency with the General Plan and Zoning Plans, and a request for a Countywide planning effort regarding the proposed siting of wind turbines. References also are made to the CAISO transmission plan, Round Mountain Substation, legal proceedings involving PG&E, Governor Newsom's Executive Order N-05-19 (see Response P27-61), wildfire risk and visual impacts. The concerns expressed here have been addressed in responses to earlier comments presented in this Letter P27.
- P27-115 The County acknowledges receipt of comments made before the Planning Commission on January 7, 2020, regarding Humboldt County's denial of a wind project, the number of turbines proposed by the Fountain wind Project, and the Tribe's resolution in opposition to the Project.

- P27-116 The County acknowledges receipt of comments made before the Planning Commission on April 9, 2020, regarding PG&E and the CPUC's selection of a project proponent for the Round Mountain Substation work.
- P27-117 The County acknowledges receipt of comments made before the Planning Commission on July 9, 2020, regarding Butte County's Camp Fire Public Report.
- P27-118 The County acknowledges receipt of comments made before the Planning Commission on June 11, 2020, regarding the reorganization of PG&E, legal proceedings involving PG&E, a request for a Countywide planning effort regarding wind projects, and wildfire risks.
- P27-119 The County acknowledges receipt of this duplicate copy of comments made before the Planning Commission on June 11, 2020. See Response P27-118.
- P27-120 The County acknowledges receipt of comments made before the Planning Commission on March 12, 2020, regarding grid safety and legal proceedings involving PG&E.
- P27-121 The County acknowledges receipt of comments made before the Planning Commission on August 13, 2020, regarding legal proceedings involving PG&E and SB 1312 (see Response P27-104).
- P27-122 The County acknowledges receipt of this copy of the Butte County District Attorney's June 16, 2020, report entitled, *The Camp Fire Public Report: A Summary of the Camp Fire Investigation*. As noted in Response P20-33, the County is well-aware of the fire history within and near the Project Site. The report speaks for itself, and does not comment on the adequacy or accuracy of the EIR for the proposed Project.
- P27-123 The County acknowledges receipt of this September 24, 2020, letter from PG&E to the CPUC and associated reports regarding PG&E's activities. This exchange and the related reports are separate from and independent of the County's EIR for the Fountain Wind Project.
- P27-124 The County acknowledges receipt of this June 11, 2019, letter to Shasta County Supervisor Mary Rickert regarding the requested moratorium and, alternatively, denial of the proposed Project.
- P27-125 The County acknowledges receipt of this copy of a draft ordinance from Morgan County, Illinois.
- P27-126 The County acknowledges receipt of this copy of Marin County Ordinance No. 3548.
- P27-127 The County acknowledges receipt of this copy of the CAL FIRE's February 22, 2019, report entitled, *Community Wildfire Prevention and Mitigation Report*, which was prepared in response to Executive Order N05-19.
- P27-128 The County acknowledges receipt of this April 2, 2020, letter to Shasta County Supervisor Mary Rickert regarding the requested moratorium and, alternatively, denial of the proposed Project.

P27-129 The County acknowledges receipt of CAISO's transmission plan, which is beyond the scope of the CEQA process for this Project.

Comment Letter P28

Lio Salazar

From: Bailey Ostrom <bailey.a.ostrom@gmail.com>
Sent: Tuesday, October 20, 2020 8:35 PM
To: Fountain Wind Project
Subject: Fountain Wind Project's Environmental Impact Report

Shasta County Planning Commissioners,

This email is in regards to the Fountain Wind Project's Environmental Impact Report. As a resident of Montgomery Creek in Shasta County, I am concerned about several issues that I feel were not adequately addressed.

First and foremost, the EIR does not address how the 650 foot tall wind turbines will affect fire protection, should the need arise. Is it the understanding of the Planning Commissioners that these 33,000+ acres will not ever need helicopters or air tankers to help battle a future fire in the area? What is the alternative that the US Forest Service is able to put into place?

Secondly, the EIR does not address the potential pollution both to the land and air if the turbines were to burn in a wildfire. Did Shasta County require a bond upfront to make sure that in the case of a fire or when the turbines become obsolete the company is responsible for returning the land to how it was before the wind farm was created?

Third, the EIR did not include photo simulations of how the turbines will impact the residences of Moose Camp, of which I am one. It does not address the actual distance from the turbines to each of the homes in the region. Will noise be an issue? What decibel level will be perceived at each of the homes in the area? Will light flicker hinder the view? How much vibration will the turbines cause on the volcanic earth and to our homes?

Fourth, the EIR does not address our water wells and the existing water table in which we rely. Will construction and maintenance of the turbines cause any contamination or change in the level of the water?

Fifth, the EIR has not specifically said how many trips will be made through our neighborhood on Moose Camp Road. How large of vehicles will be traversing on Moose Camp Road? What fuel type will the vehicles use? Will they add pollution to the homes that line Moose Camp Road? Will they vibrate the area? What decibel level will the vehicles emit?

Finally, given our fragile ecosystem in the area, I do not believe the Fountain Wind Project needs the large number of turbines or even the enormous size of these turbines in order to produce energy.

I believe a more thorough EIR is necessary before our Shasta County Planning Division can make a decision on the next step in the process.

Bailey Ostrom
19615 Sycamore Road
Montgomery Creek, CA 96065

P28-1

Letter P28: Bailey Ostrom

P28-1 See Responses P23-1 through P23-5, which respond to these points.

Comments on the Fountain Wind Project Draft Environmental Impact Report

In these Fountain Wind comments are clear reasons why Shasta County must reject this DEIR, the wind industry's history of mortality impact research, and all the dismal studies relied upon for this DEIR. I will give plenty of scientific reasons why Shasta County should never rely on or condone the false analysis presented in this DEIR. Instead, **Shasta County should follow environmental law and demand new credible studies so the public will know what impacts to expect from this project and the hidden impacts actually occurring to special status species from the Hatchet wind project.** Only then will it be known what impacts can be reasonably expected from the Fountain Wind project.

P29-1

My comments are based upon nearly 5 decades of expert observations, being a raptor expert and research. These comments are both factual and based upon scientific principles. I will show time and again why the opinions given in the DEIR are not based upon facts, true research and any reasonable observations or expectations.

But as bad as the content of this DEIR is, it does serve one useful purpose for the residents of Shasta County. **This DEIR has put Shasta County on notice that credible studies have to be conducted.** Otherwise a massive industrial blight with horrendous negative impacts, that are far greater than what's being presented in this DEIR, will be headed to this county.

The many impacts hidden and the few that are disclosed will have a profound impact on Shasta County residents and its wildlife species. The decision to approve a massive project that will blight Shasta county for generations to come, really should have been put to a county wide vote. The decision to accept such blight, the hidden impacts, the rigged research and a mountain of wind industry lies by omission should be up to voters.

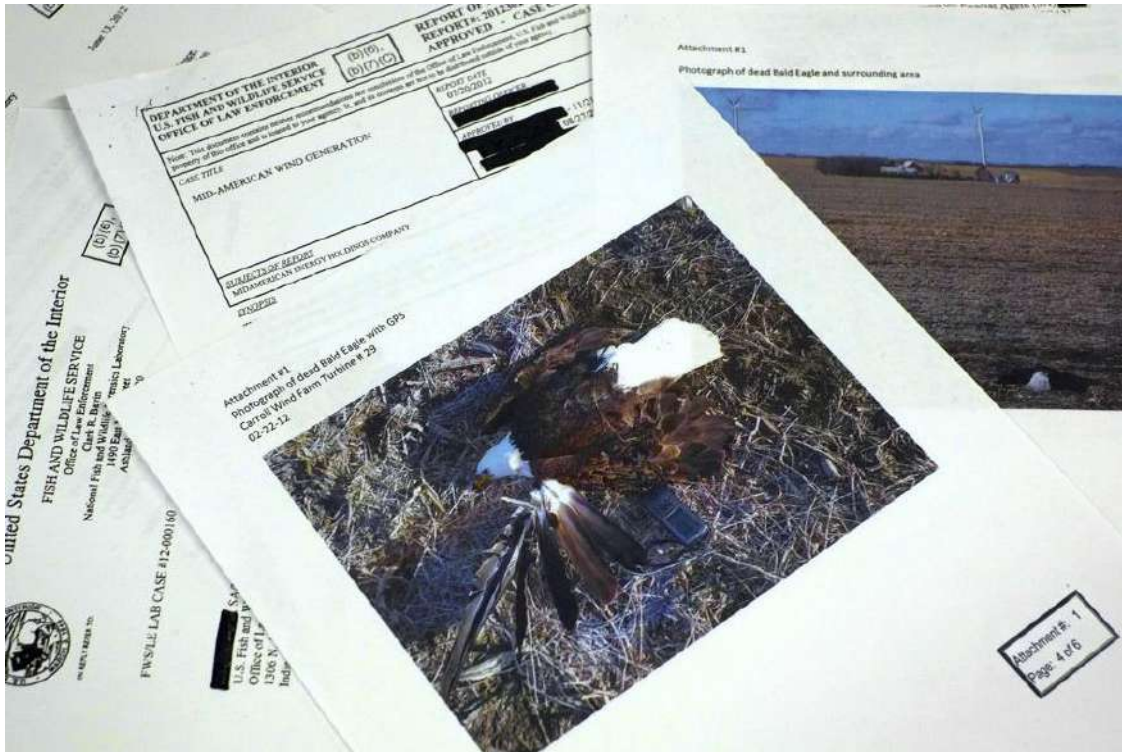
Comment Letter P29



P29-2

If not for independent eye witnesses, not bound by wind industry or government gag orders, these images of eagles killed by wind turbines would have never been disclosed to the public.

Comment Letter P29



Comment Letter P29



The Fountain Wind DEIR is both a research and disclosure disaster

This EIR has not been prepared in accordance with CEQA (Public Resources Code [Pub. Res. Code] §21000 et seq.) and its implementing regulations, the CEQA Guidelines (14 California Code of Regulations [Cal. Code Regs.] §15000 et seq.). CEQA requires state and local government agencies to consider the environmental consequences of projects over which they have discretionary authority before taking action on those projects. Shasta County, as lead agency, considered the potential impacts of the Project in an Initial Study before determining that an EIR would provide the appropriate level of CEQA

documentation for the Project. The Initial Study is included in Appendix A of the Scoping Report, which is provided as Appendix J of this Draft EIR.

The overall purposes of the CEQA process are:

1. **Does not disclose to decision-makers and the public** the potential significant environmental effects of a proposed discretionary project.
2. **Does not prevent or minimize potential damage to the physical environment through the development of project alternatives, mitigation measures, and mitigation monitoring.**
3. **Does Not Enhance public participation in the environmental review process through scoping meetings, public notice, public review, and hearings.**
4. **Involve other potentially affected governmental agencies through coordination, early consultations, the scoping process, and State Clearinghouse review.**

P29-3

As defined in CEQA Guidelines §15378, a “project” is any action that “has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment.” CEQA Guidelines §15093 requires the County, as the lead agency, to balance the benefits of a proposed project against any significant unavoidable environmental effects it may have. If the benefits of the Project outweigh the significant unavoidable adverse impacts, then the County may adopt a statement of overriding considerations that finds the environmental consequences to be acceptable in light of the Project’s benefits to the public. The environmental review process as set forth under CEQA is outlined below.

California Environmental law

Article 9. Contents of Environmental Impact Reports

(a) An EIR must include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, from both a local and regional perspective. This environmental setting will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant. The description of the environmental setting shall be no longer than is necessary to an understanding of the significant effects of the proposed project and its alternatives.

(c) Knowledge of the regional setting is critical to the assessment of environmental impacts. Special emphasis should be placed on environmental resources that are rare or unique to that region and would be affected by the project. **The EIR must demonstrate that the significant environmental impacts of the proposed project were adequately investigated and discussed and it must permit the significant effects of the project to be considered in the full environmental context.**

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Federal Environmental Law • Part 1502. ENVIRONMENTAL IMPACT STATEMENT

• **Section 1502.24. Methodology and scientific accuracy.**

.....“Agencies shall insure **the professional integrity, including scientific integrity, of the discussions and analyses in environmental impact statements.** They shall identify any methodologies used and shall make explicit reference by footnote to the **scientific** and other sources relied upon for conclusions in the statement. An agency may place discussion of methodology in an appendix.”

Shasta County Supervisors will be voting on this project and I want them to fully understand that the impact information supplied on behalf of the Fountain Wind Development is not true, scientific or even remotely accurate. **CEQA law has no provisions that allow for Shasta County to accept to any biased, unscientific and contrived research created to achieve predetermined nonfactual results. CEQA does not allow research to be rigged so significant effects can be hidden from decision makers and the public.** Yet this rigging is taking place and it is so easy to prove.

P29-4

While Draft EIR for the Fountain Wind Project does in a small way describe the applicant's proposed project; discuss potential significant direct, indirect, and cumulative impacts to the environment; and discuss ways to avoid or reduce potential significant impacts..... It does not discuss ways to avoid or reduce hidden impacts. What this DEIR refers to as **“significant”** really tells the public almost nothing of the devastation to species that will and have already taken place. The discussions and opinions are based upon fraudulent research designed to conceal facts. Reality has been deliberately hidden from the public and Shasta county planners.

Most importantly in this DEIR, **Shasta County has been asked to look or at the impact information supplied for the Hatchet Wind Project, to determine the possible impacts for this new and much larger project.**

While at some point in the future, Shasta County Supervisors should look to Hatchet Ridge when considering a new wind project, **now is not the time.** The primary reason, the 3-year mortality studies conducted for Hatchet Ridge have been an orchestrated coverup.

P29-5

Impact research provided from the Hatchet Ridge turbines **deliberately avoided scientific principles, good judgment, full disclosure and accurate observations.** Hatchet Research may have met the requirements of our colluding government agencies, but sadly Hatchet Ridge research was just one more example of the

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wind industry's version of research, specifically designed to hide their mortality to species.

↑ P29-5
cont.

In this DEIR there is a list of several hundred past wind industry mortality studies. **Shasta County Supervisors can choose any 5-10 of these studies they wish and I will show them the ways that the industry rigged them to conceal turbine mortality.** Some of these studies and their rigging will be discussed later in these comments.

Draft EIR

A Draft EIR is an informational document that provides a detailed analysis of the potential environmental consequences of approving a proposed project. The Draft EIR for the Fountain Wind Project will: describe the applicant's proposed project; evaluate potential significant direct, indirect, and cumulative impacts to the environment; and discuss ways to avoid or reduce potential significant impacts, including mitigation measures and alternatives to the project as proposed. As an environmental disclosure document, the Draft EIR will inform one factor among several to be considered as part of the County's overall decision-making process. Documents produced during the Draft EIR process include the Draft EIR and project-specific or site-specific technical studies that will be considered as part of the analysis. The County will release the Draft EIR for a 45-day comment period, during which agencies and members of the public will be invited to review the Draft EIR and provide comments.

I will start with an overview of the Hatchet Ridge post construction impact research. I will also prove that the opinions submitted for the approval of Fountain wind project are not true and the post construction mortality studies conducted at Hatchet Ridge were not even close to being scientifically credible.

↑ P29-6

For 10 years the public and Shasta County Supervisors have had no idea of the real impacts to species that have been taking place up on Hatchet Ridge. Contrived research and the deliberate avoidance of meaningful scientific studies have hidden the truth. **Nondisclosure agreements are also to blame and if one thinks about it, how could supervisors or the public ever know the truth when the people they have to rely on are being silenced?**

I will remind Shasta County officials that pretending to do research is not science, deliberately collecting false data is not science, failing to make reasonable observations is not science and just because public being exposed to this false information, does not make any of it true.

Important questions not answered in this DEIR

What has actually happened to the eagle population and nesting attempts around the Hatchet Ridge project since 2010?

Why did the DEIR not mention that adult and immature bald eagles routinely hunt the small creeks holding fish in and around the proposed Fountain wind turbine sites?

↑ P29-7
↓

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Why did the DEIR not mention that the Fountain wind turbines will have tip speeds approximately 50% faster than those at Hatchet Ridge turbines, with speeds approaching 300 mph?

Why did the DEIR not mention that the total deadly rotor sweep for the Fountain wind project will have over 4 times the deadly cubic rotor sweep of Hatchet Ridge?

Why did the DEIR fail to mention that some turbines will be placed so close to creeks that birds and bats hit by blades are likely to be launched into them?

Why did the Hatchet Ridge studies use carcass searches only out 63 meters from turbines, when **most carcasses** can be found past this limit around 400 ft. turbines?

What has happened to all the occupied raptor nests that were once reported in the Hatchet Wind EIR?

Today in 2020, how close is the nearest occupied nest of any raptor species to the Hatchet Ridge turbines?

Why did researchers avoid looking for Goshawks in **all the suitable habitat around the Fountain Wind project** and not disclose that other Goshawks migrate into this habitat annually?

Why did the DEIR fail to mention that Wind projects do not report fatalities except when conducting the industry's contrived research?

Why did this DEIR not mention that all turbine mortality reported by this industry to species is completely unreliable because USFWS secretly removes carcasses like eagles, spotted owls, falcons and goshawks from wind projects?

Why did this DEIR fail to mention that currently over 3000 eagle carcasses each year are being secretly shipped to the Denver Repository and their origin is protected by law because this industry's annihilation is considered a trade secret?

TRADE SECRET

The United States Patent and Trademark Office refers to a trade secret as a type of intellectual property. This **definition of trade secrets** is in reference to the business ownership of a formula, pattern, compilation, program, device, method, technique, or process that provides a competitive edge. As a member of the World Trade Organization, the U.S. government has a responsibility to protect trade secrets. The passage of the Defend Trade Secrets Act of 2016 (DTSA) also increased trade secret protection. Under the DTSA, an individual or organization may be found liable in a civil case for the misappropriation of trade secrets.



P29-7
cont.



P29-8

U.S. Fish & Wildlife Service

Fish & Wildlife News

November 1997

About 95 percent of orders received at the repository are for whole eagles, with an average of about 1,000 people applying for the 800 to 900 available birds each year. Requests are filled on a first-come, first-serve basis by date of application.

Eagles turned in to the repository typically have died of natural causes or fatal encounters with power lines, windmills, vehicles, or illegal shooters or trappers. The repository does not accept poisoned birds because of the hazard they pose to human health.

The typical dead eagle stays only three to five days at the repository before it is shipped out to the next applicant on the list.

P29-9

NATIONAL EAGLE REPOSITORY ANNUAL REPORT: 10/01/12-09/30/13						
REGION	WHOLE EAGLES & EAGLE PARTS RECEIVED			WHOLE EAGLE ORDERS FILLED	EAGLE FEATHER & PARTS ORDERS FILLED	COMBINED FILLED ORDERS BY REGION
	BALD	GOLDEN	REGION TOTALS	BALD/GOLDEN	BALD/GOLDEN	
1	● 186	60	246	143	384	527
2	30	30	60	527	1,222	1,749
3	● 547	10	557	164	446	610
4	● 281	10	291	26	119	145
5	● 206	3	209	36	166	202
6	● 256	246	502	197	558	755
7	● 273	4	277	3	13	16
8	16	136	152	74	260	334
TOTALS	● 1,795	499	2,294	1,170	3,168	4,338
NEW REQUESTS RECEIVED						
	BALD EAGLES		1,214			
	GOLDEN EAGLES		1,906			
	EITHER SPECIES		1,422			
	TOTAL		4,542			
NOTES:						
This is why the new Dec 2016 rule was created in DC, allowing up to 4200 bald eagles to be killed annually.						

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Why did the DEIR fail to mention the last time the Bald eagle nest located 1 mile away from Hatchet turbines at Lake Margaret, was actually occupied and successful?

P29-10

How many eagle, osprey, owl and goshawk carcasses have been secretly picked up around the Hatchet turbines by wind farm personnel and USFWS agents over the last 10 years?

Why did someone report to me that an abundance of feathers and remains can be found in the vegetation near the Hatchet Ridge turbines?

Why does the DEIR mention so few occupied nests and territories of other raptor species living in or near the Fountain Ridge project?

Why did the DEIR fail to mention the status of the Peregrine Falcon nest that had been occupied in the Pit River Canyon for decades, if not centuries before the Hatchet wind turbines were built?

P29-11

Why doesn't the DEIR mention that most of the bats and raptors located within in the project area will be killed off?

The Fountain Wind DEIR and the research conducted project do not answer any of these questions and I have many more.

Scientific research and credible facts are missing components from the Hatchet Ridge studies and Fountain wind DEIR

- (b) The determination of whether a project may have a significant effect on the environment calls for careful judgment on the part of the public agency involved, based to the extent possible on scientific and factual data. An ironclad definition of significant effect is not always possible because the significance of an activity may vary with the setting. For example, an activity which may not be significant in an urban area may be significant in a rural area.
- (c) In determining whether an effect will be adverse or beneficial, the Lead Agency shall consider the views held by members of the public in all areas affected as expressed in the whole record before the lead agency. Before requiring the preparation of an EIR, the Lead Agency must still determine whether environmental change itself might be substantial.

Shasta County must dismiss all the Hatchet Ridge Studies – The studies are not honest.

P29-12

A closer look at the research conducted at Hatchet Ridge

In the image below is a summary of the research methodology that was set up for the Hatchet Ridge mortality study.

“Twenty-two turbines searched biweekly with standardized searches with the remaining 22 searched on a monthly search interval”?

It did not happen. Linear transects may have been set up but they are meaningless when the bad weather hits or snow is piling up on the ground for

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months.

Post-Construction Mortality Monitoring Year One Annual Report

April 2012

Standardized Carcass Searches

In order to maximize coverage of the Project, standardized carcasses searches were completed at all turbines. Twenty-two turbines were searched on a biweekly (2 week) search interval with the remaining 22 searched on a monthly (4 week) search interval (Figure 1).

Biweekly Search Plots

Biweekly search interval turbines were selected to maximize the searchable area available beneath the turbines and sample evenly across the distribution of turbines along the ridge to capture various elevations and vegetation communities and turbine position along the string (Figure 1). Square search plots up to 50 percent of the maximum turbine blade height were established beneath these turbines. Centered on the turbine, search plot size was 127 meters x 127 meters, extending 63.5 meters (208 feet) from the turbines on each side. Linear transects spaced at 6 meter intervals were established within the search plot, with searchers scanning out to 3 meters on both sides of transects.

Despite what the 3 -year Mortality report from Hatchet Ridge states, standardized carcass searches were not performed around these turbines at all times of the year as the study suggests. Having lived in this Intermountain area for 18 years, I know that due to weather, deep snow, **it is impossible to complete this study methodology under these conditions.** On Hatchet Ridge these conditions can exist for months from Nov through April and even into May.

Table 1. Hatchet Ridge fatality survey dates.

Survey Season	Survey Period	Year 1 (2010 - 2011)	Year 2 (2011 - 2012)	Year 3 (2012 - 2013)
Winter				
	1	12/12-12/23	12/12-12/14	12/27-1/2
	2	12/27-12/31	12/26-12/29	1/7-1/10
	3	1/10-1/17	1/10-1/13	1/22-1/25
	4	1/25-1/27	1/25-1/27	2/4-2/9
	5	2/7-2/13	2/7-2/9	2/18-2/20
	6	2/22-2/28	2/21-2/23	3/4-3/8
	7	3/7-3/17	3/5-3/9	

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Spring				
	7			3/18-3/21
	8	3/22-3/31	3/19-3/22	4/2-4/5
	9	4/4-4/9	4/2-4/7	4/17-4/18
	10	4/19-4/21	4/17-4/18	4/29-5/4
	11	5/3-5/11	4/30-5/4	5/13-5/14
	12	5/19-5/21	5/15-5/16	5/28-5/31
	13	5/30-6/4	5/29-6/1	6/11-6/12
	14	6/13-6/15	6/11-6/14	

The Hatchet Ridge study was severely interrupted and altered by weather related conditions. But not a word is mentioned about bad weather, 3-4 feet of snow being on the ground or having to shut down or alter searches in any way. **A credible study would have mentioned this, especially since carcasses were being covered with snow.** Other studies do mention bad weather and having to curtail searches because of fog, rain, lightening, sleet high winds and snow but not according to the contrived Hatchet Ridge studies.

Below are a few quotes from several **mortality studies discussing search cancellations and from** areas of lower elevation than Hatchet Ridge...

We sampled the plots four times each through the study period, once every three to four weeks. We observed behaviors in various weather conditions, except when rain or fog reduced observer visibility to < 60%, which was too poor to track bird activity accurately.

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Searches are conducted when weather and other conditions permitted. Work was not done during lightning but was conducted during light rain.

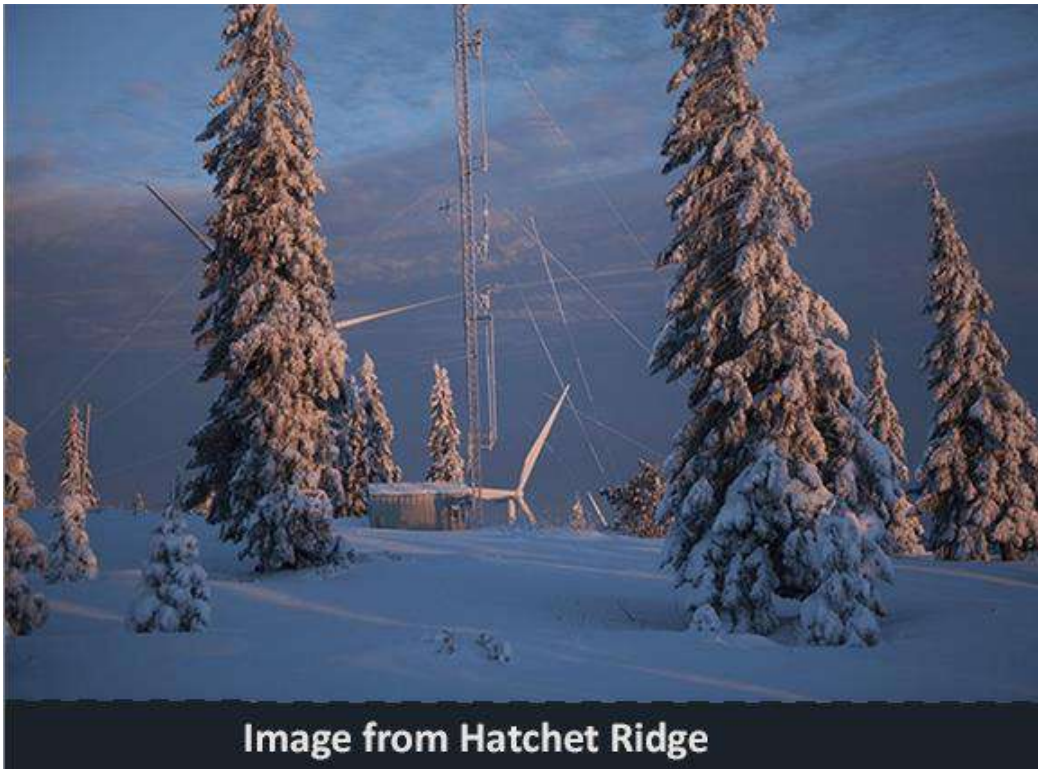
3.1.2 One-Day search sites (N = 10 turbines):

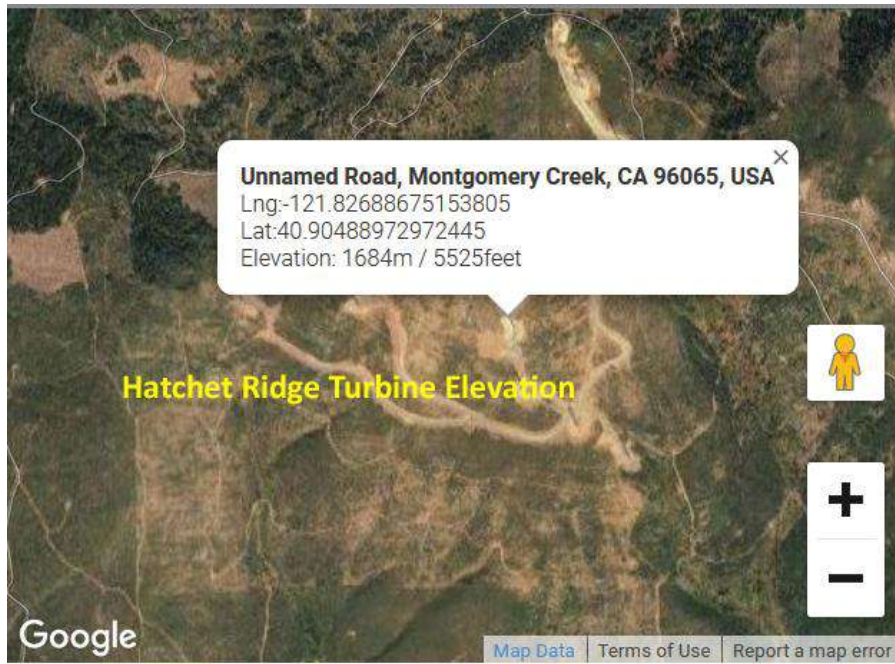
These wind turbines are at an elevation of 1,600 to 1,800 feet. Hatchet ridge turbines 4500-5500 ft

A total of 127 complete rounds of standardized searches were conducted between June 17, 2006 and November 15th, 2006 (Table 2), for a total of 1,270 turbine searches. The total search period was 152 days, out of which sites were not searched on 25 days due to inclement weather (heavy rain during the summer, inaccessible sites due to snow in the winter). The average number of days between successive searches for each tower was 1.16 days.

3.1.3 Three-Day search sites (N = 10 turbines):

A total of 45 complete rounds of standardized searches were conducted between June 29, 2006 and November 15th, 2006 (Table 2), for a total of 450 turbine searches. The total search period was 138 days. When sites could not be searched due to inclement weather (heavy rain during the summer, inaccessible sites due to snow in the winter), field technicians accessed the sites at the earliest available date before the next search round was due to occur. The average number of days between successive searches for each tower was 3.20 days.





2.1 Selection of Turbines

The turbines chosen for inclusion in the mortality monitoring were selected to cover the extent of the project area and for their varied habitats, vegetation types, and geographic characteristics. Site selection was completed with the approval of the PGC during a site meeting on March 30, 2010.

2.2 Dates of Surveys

In 2010, the post-construction bird and bat mortality studies were to be performed from March 1 through December 15 for a total of 290 potential search days. However, due to inclement weather (deep snow), surveys could not be conducted from March 1 through March 31, reducing the total potential search days to 259. Furthermore, no searches could be conducted from May 12 through May 16, 2010 and between May 22 and June 23, 2010 because of a site-wide safety stand-down authorized

2.9.5.1 Estimate of Mortality for the Entire Monitoring Season

² The 31 days that were missed in March 2010 due to inclement weather (deep snow) were excluded from the mortality estimates for the 2010 monitoring season.

Below are a few snowpack readings from Snow Mountain, located just 5.5 miles from the Hatchet Ridge wind project. Snowpack readings show several feet of

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snow being present for months at a time at nearly the same location and elevation as Hatchet Ridge.

 **Daily Snow Sensor Report**

April 08, 2011 **Snow Mt. survey 5950 ft. Hatchet Mt. 5580 ft.**

Provided by the California Cooperative Snow Surveys for selected automatic reporting snow gage sensors

Report generated: 05/10/2011 11:24

Snow Water Equivalents

Station	ID	Coop. Agency	Elev (FT)	Apr 1 Avg (IN)	Today (IN)	Percent Apr 1	24 Hrs Ago (IN)	1 Week Ago (IN)
SACRAMENTO RIVER								
Cedar Pass		CDP NRCS	7,100	18.1	25.0	138%	24.5	25.0
Blacks Mountain		BLA DWR	7,050	12.7	17.9	140%	17.8	18.4
Sand Flat		SDF DWR	6,750	42.4	59.3r	139%	59.3r	59.7r
Medicine Lake		MED DWR	6,700	32.6	42.7	130%	42.4	42.8
Adin Mountain		ADM NRCS	6,200	13.6	17.6r	129%	17.4r	18.1r
• Snow Mountain		SNM DWR	5,950	27.0	<u>51.6</u>	191%	51.8	53.5

 **Daily Snow Sensor Report**

April 08, 2012 **Snow Mt. survey 5950 ft. Hatchet Mt. 5580 ft.**

Provided by the California Cooperative Snow Surveys for selected automatic reporting snow gage sensors

Report generated: 02/05/2013 12:20

Snow Water Equivalents

Station	ID	Coop. Agency	Elev (FT)	Apr 1 Avg (IN)	Today (IN)	Percent Apr 1	24 Hrs Ago (IN)	1 Week Ago (IN)
SACRAMENTO RIVER								
Cedar Pass		CDP NRCS	7,100	18.1	13.3	73%	13.4	11.6
Blacks Mountain		BLA DWR	7,050	12.7	9.8	77%	9.7	9.2
Sand Flat		SDF DWR	6,750	42.4	---	---	---	---
Medicine Lake		MED DWR	6,700	32.6	25.2	77%	25.2	23.2
Adin Mountain		ADM NRCS	6,200	13.6	---	---	---	---
• Snow Mountain		SNM DWR	5,950	27.0	<u>23.5</u>	87%	23.4	21.6

March 08, 2013

Provided by the California Cooperative Snow Surveys for selected automatic reporting snow gage sensors

Report generated: 05/28/2013 08:29

Snow Water Equivalents

Station	ID	Coop. Agency	Elev (FT)	Apr 1 Avg (IN)	Today (IN)	Percent Apr 1	24 Hrs Ago (IN)	1 Week Ago (IN)
SACRAMENTO RIVER								
Cedar Pass		CDP NRCS	7,100	18.1	---	---	---	---
Blacks Mountain		BLA DWR	7,050	12.7	10.7	84%	10.2	8.0
Sand Flat		SDF DWR	6,750	42.4	23.6r	55%	23.4r	20.8r
Medicine Lake		MED DWR	6,700	32.6	28.8r	88%	28.8r	26.6r
Adin Mountain		ADM NRCS	6,200	13.6	8.5	62%	8.4	8.1
• Snow Mountain		SNM DWR	5,950	27.0	<u>18.8</u>	69%	18.2	17.6

The mortality surveys and search protocol claimed to have taken place at Hatchet Ridge, never did. But even if every survey had been conducted, the methodology used for the Hatchet Ridge studies was still designed to hide most of the mortality taking place.

The Hatchet Ridge Studies used Rigged study methodologies that hid mortality

The information below about Ice shedding from blades was mentioned in the Fountain DEIR. Information like this can give Shasta County an idea of how far carcasses can be launched from hundreds of feet up on a windy ridge by a turbine blade. Keep in mind the huge turbine being proposed for the Fountain project will be spinning with tip speeds approaching 300 MPH (not disclosed in DEIR), and **at least 50% faster than the turbines studied in the Swiss Alps**. Blades will also be nearly 700 feet in the air.

P29-13

Impact 3.11-4: During normal operation, weather conditions could lead to ice shed from turbine blades, resulting in a potential hazard. (Less-than-Significant Impact)

Ice shed can occur as air temperatures rise, causing ice on turbine blade to thaw and for ice fragments to drop from the rotors to the ground near the base of the turbine (Morgan et al., 1998). Ice also can be thrown from an operating turbine due to aerodynamic and centrifugal forces. A Swiss report entitled *Wind Turbine Ice Throw Studies in the Swiss Alps* (Cattin et al., 2014) confirms that underneath the turbine is the most dangerous place for ice-related wind turbine hazards, and cautions that in arctic conditions, approximately 5 percent of ice fragments can land more than 80 meters (approximately 262.5 feet) from the turbine. GE, a wind turbine manufacturer, reported in 2006 that "rotating turbine blades may propel ice fragments some distance from the turbine— up to several hundred meters if conditions are right" (Wahl and Giguere, 2006). The actual distance that ice could be expected to travel would depend on several factors, including turbine dimensions, rotational speed, weather and especially the wind conditions, the instrumentation of the wind turbine's control system, and on the strategy of the control system itself (see, e.g., Seifert et al., 2003).

Statement taken from Fountain Wind DEIR. They do not provide additional information as to the ice throw distance to expect from their 672 ft turbines. Using the formula from the Swiss study, ice throw could be 430 meters from the Fountain Wind turbine towers. But with faster tip speeds ice throw distances will increase. The DEIR discusses none of this.

These numbers from the Swiss Alps study illustrate the power of these huge turbine blades. This power also sends carcasses flying great distances. A small bird hit by a spinning turbine blade in high winds can travel hundreds of meters. For those that do not believe this, drop a 2-3 ounce bird carcass off the I-5/Pit River bridge during high winds and then propel another out into the wind in

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several directions. You will be amazed. The industry has known all this for decades, and they have deliberately avoided research to show this and have designed studies to use tiny search areas that will miss most carcasses. Hatchet Ridge pulled this same trick with their 400 ft turbines.

The USFWS is also aware of this but will also say nothing nor will this agency conduct or require any credible turbine mortality research.

As scripted, the research conducted at Hatchet Ridge showed no significant mortality impacts. Hopefully, Shasta County officials will not use this industry's contrived research, and then proceed with a fraudulent mitigation process for the Fountain Project. After all, **how can Shasta County officials or anyone for that matter, fairly mitigate turbine impacts with so many lies on sitting the table?** The 400 ft. turbines installed at Hatchet Ridge really can send carcasses over 200 meters from towers. Yet for Hatchet Ridge research, most fatality searches were limited to clear areas that reached out to about **63 meters**.

Unlike wind turbine research, past communication tower research, reached out 1 ½ times the maximum tower height from bases and carcasses searches were daily. **Not with the 400-foot turbines Hatchet Ridge.** Carcasses searches were restricted to small areas with searches extended out every two weeks and in some cases a month. This massive flaw allowed extended periods of time for turbine carcasses to disappear from tiny search areas by industry insiders or by beast. Currently wind industry research allows carcasses to be picked up by industry insiders.

Speaking of beasts, the Hatchet ridge location is somewhat unique because of the abundance of ground predators that exist in this habitat. The Hatchet Ridge location is inhabited by bears, foxes, martins, coyotes, bobcats, and Mt lions along with many other flying scavengers. Under these search conditions, if not first found by an employee, a special status species or an endangered species that happened to be killed by turbines, would probably never be found.

None of these ground predators and a multitude of others factors are even mentioned in the Hatchet Ridge mortality reports. Just their contrived and meaningless scavenger removal studies, But I know the foot prints of all these animals were there to seen because the smell of a bloody turbine carcass, will bring them in from miles away. But typical of wind energy research, many important things like this are not even mentioned because **this industry's so-called research, is actually a fabricated stage performance.** For them the less they say the better while ignorant readers are dragged into their rigged world of

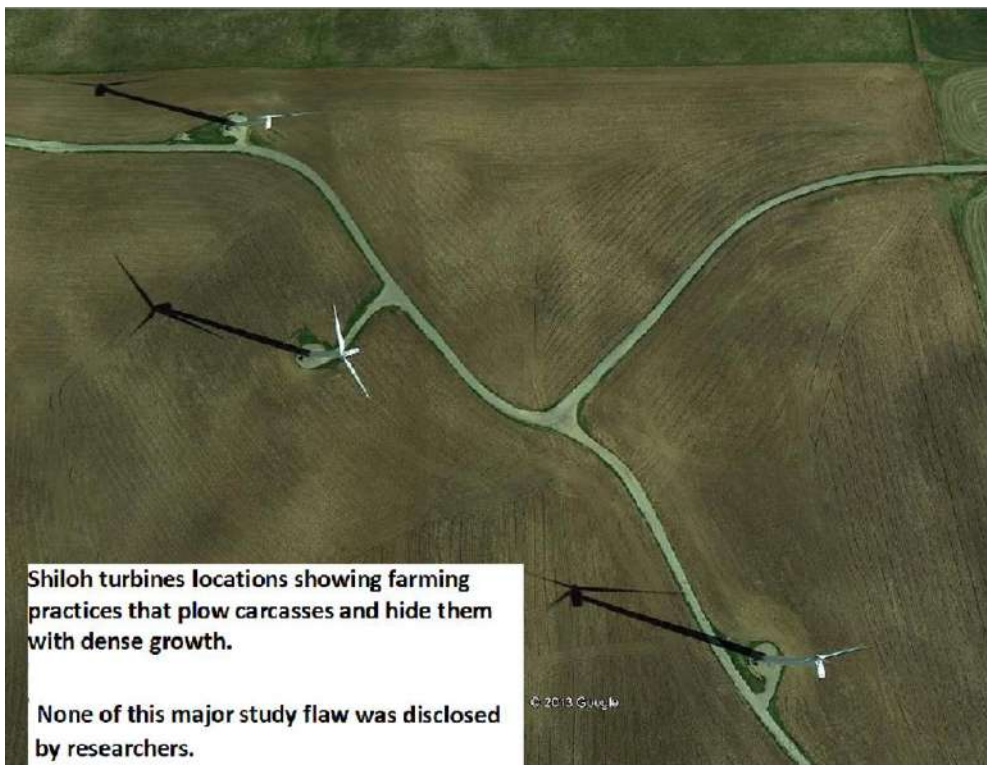
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hundreds of meaningless pages, fake, data meaningless calculations and unethical conclusions.

Below is a little more factual information about wind turbine carcass dispersal. It illustrates the absurdity of the mortality research that was allowed to be conducted at Hatchet Ridge. It was taken from 3-year study in Solano county. While this study was far better than most conducted by the wind industry, it still had a number of very serious flaws.

When compared to the Hatchet Ridge turbines, the Solano County turbines were not only shorter in height, they sat on relatively flat ground, and had blades 17 meters shorter than the Hatchet turbines. This study, like at Hatchet Ridge, had infrequent searches but did have search areas **completely searched** in all directions that extended out 105 meters from towers. This methodology of 105 meters was still not adequate because fatalities were still being found much further out and farming practices were plowing them carcasses into the ground.

P29-14



Two of the reported fatalities were carcasses that could not be plowed under. A golden eagle found at 200 and another 155 meters away from these turbines.

Now look close at this search methodology taken from the study conducted at Hatchet Ridge..... With the search methodology used for Hatchet Ridge,

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they set it up so that at least 2/3 of the carcasses would be missed or if found, would be classified as incidental. Of course, not looking beyond 63 meters and by not searching the entire 63-meter area out from turbine bases allowed searchers to conveniently miss the majority of carcasses.

2.1.2 Incidental Fatalities

When a bird or bat carcass was found outside of the designated search plot and/or outside of the standardized search period, it was recorded as an incidental fatality. Incidental fatalities were documented with the same level of detail as survey finds; however, they were excluded from statistical analyses. All fatalities documented during the initial sweep survey and during the monthly searches were considered incidental.

covered. Non-searchable area varied between search plots. Four plots were fully searchable, 12 had non-searchable area between 0.5 and 10 percent, and 6 had non-searchable area between 10 and 19 percent, for a total of 7.8 percent of search plots designated as non-searchable. Non-searchable areas were generally located in the outer most third of the established search plot.

But most importantly **the total area beyond 63 meters, the area where the most carcasses from these turbines would be found, was dismissed from the biweekly searches.** Now imagine the multitude of wind turbine carcasses and scattered remains, that were there to be found, but were never reported from the Hatchet ridge turbines. Then there are all the carcasses carted off by the USFWS that can't be reported.

The word "incidental" is important here because it is a trump card for data exclusion, being used in wind industry studies. It also allows wind industry personnel to handle, move and even hide carcasses when studies are being conducted. When studies have a week, two weeks or even month intervals, wind personnel have reams of time to locate carcasses ahead of searchers.

These research activities produce fraudulent research data. For example, at Altamont Pass during years of formal studies, dozens of golden eagles killed by turbines were excluded from mortality estimates because they have been placed in the incidental category. How do these dead eagles get placed in the incidental category? Wind personnel went around and picked them up ahead of the people doing standardized surveys.

The Wolfe Island studies conducted by Stantec reported hundreds of carcasses being found in their tiny little search areas shown in green below, with just a few others reported beyond 50 meters. I believe the furthest carcass distance reported was 59 meters. For 400 ft tall turbines, with 50 meter blades, like at Hatchet ridge it's simply not possible.

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Yet the wind industry with all their trade secret protections, are selling this research fraud to the public.



- Study declared a 50 meter search area to determine turbine mortality but only reported carcasses found from a fraction of this 50 meter area.
- Research from Altamont disclosed that 95% of carcasses could be found within 125 meters from small 100 kW turbines approximately 100 feet tall.
- Proper search area size for 2.3 MW 400 ft tall turbines used on Wolfe Island.

The truth is that wind industry's mortality research across America has changed from bad to worse over the years. Now carcass or mortality searches used in the industry's fake studies, are generally completed about once per week on the clear roads and gravel pads of turbines.

In order to understand the absurdity of all this, imagine a mailman pulling up to a mailbox then glancing at your driveway. In a fraction of a second, a carcass

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sitting there in a mangled heap would be incredibly easy to spot. Now think of the hundreds of stops a mailman makes every day. It is about that easy to pre-scan for carcasses ahead of formal searches.

Yet in the wind industry's research now being produced, the industry makes it seem so difficult to find anything from the size a bat to an eagle in their search areas.

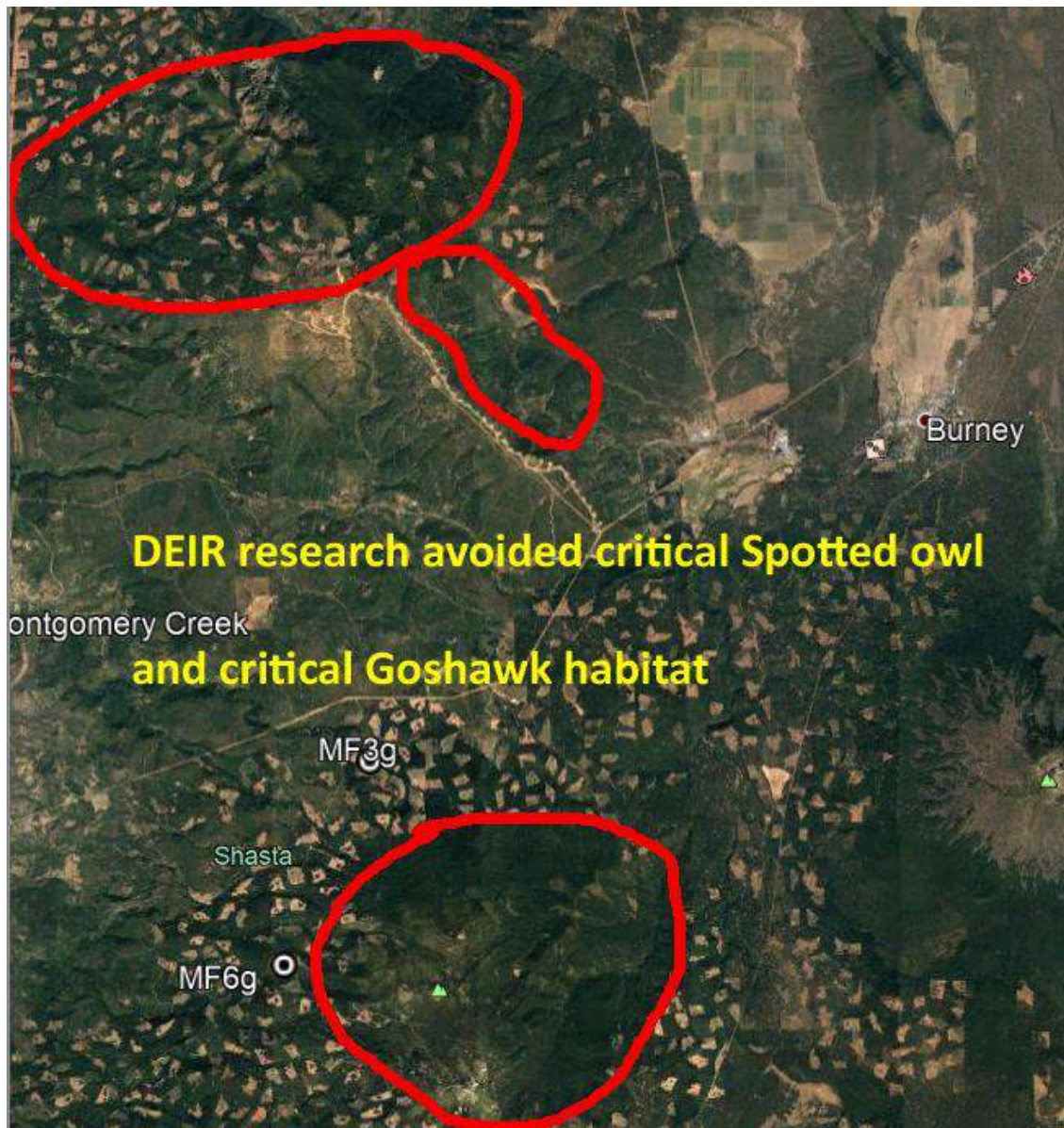
Spotted owls, Bald Eagles, Goshawks and other raptors

Hatchet Ridge has been killing off regional raptor populations and some of this information does exist in the DEIR to prove it. Keep in mind the wind industry doesn't have to report wind turbine fatalities, so they don't. Even so, nesting failures and habitat abandonment by special status species should be discussed in wind industry EIR's. This is a well-known but rarely mentioned impact from wind turbine developments.

Northern goshawks have been detected within the Project area during fixed-point large bird use surveys and incidentally by WEST biologists in 2017 and 2018, totaling five observations between April 2017 and May 2018. Potential risk to goshawks from Project operations (i.e.,

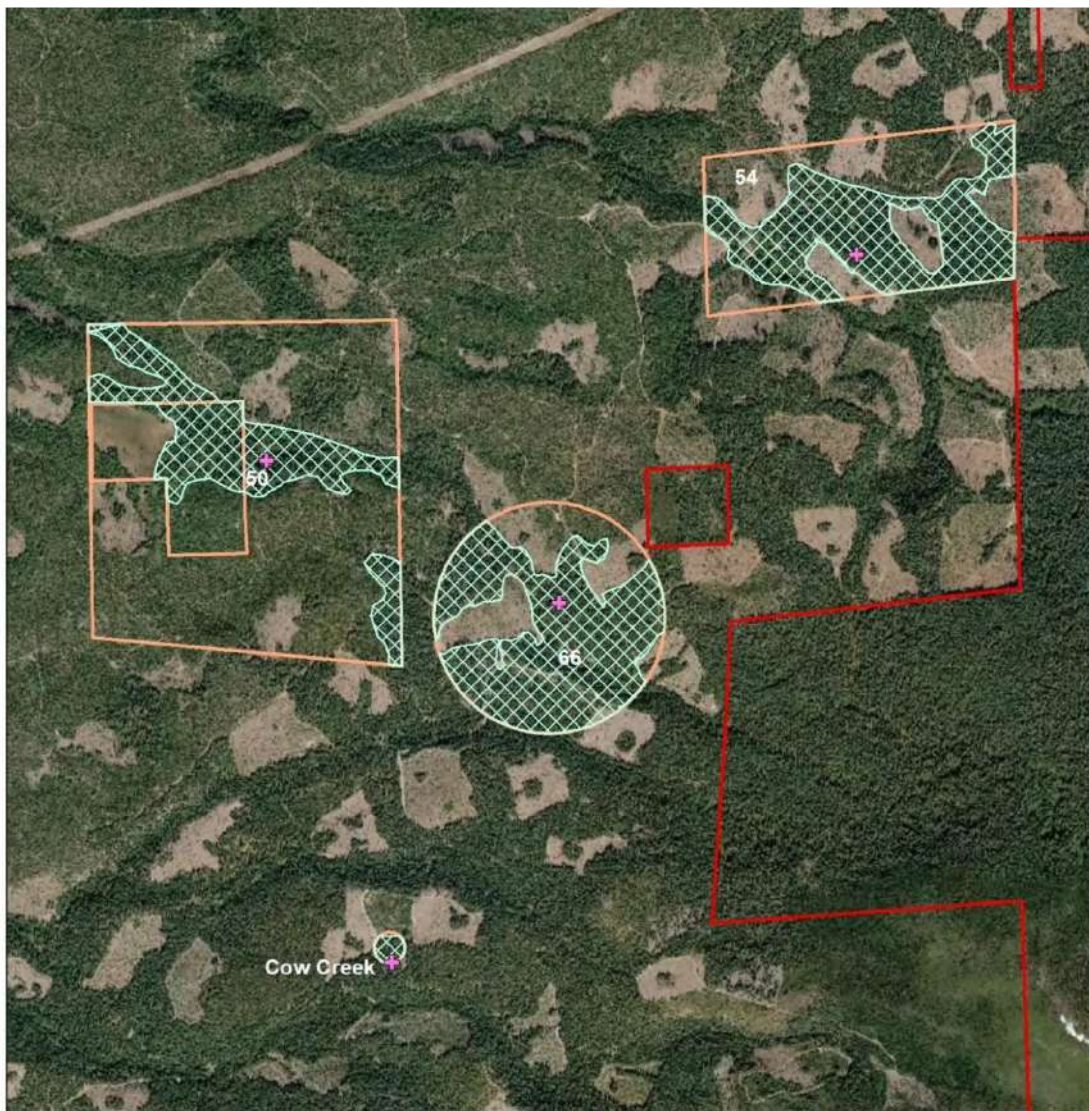
No Goshawk nesting or nesting territories were reported in the DEIR. This information tells me otherwise. But DEIR studies were deliberately **created to avoid** the most favorable habitat. Habitat well with the mortality footprint of both wind projects. There could be active nests 100 yards from turbine sites near MF3g and MF6g. But if research avoids looking, the public would never know.

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P29-16
cont.
↓

Fountain Project Shasta County, CA	
	<ul style="list-style-type: none"> Listening Station Broadcast Survey Area Northern Goshawk Occurrence Area Project Boundary
	<p>Data Source: Esri, CNDDP Coordinate System: NAD 1983 UTM Zone 10N Date: 9/18/2018 Author: K. Hutchison</p>

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Turbine site locations and critical habitat avoided in DEIR research.

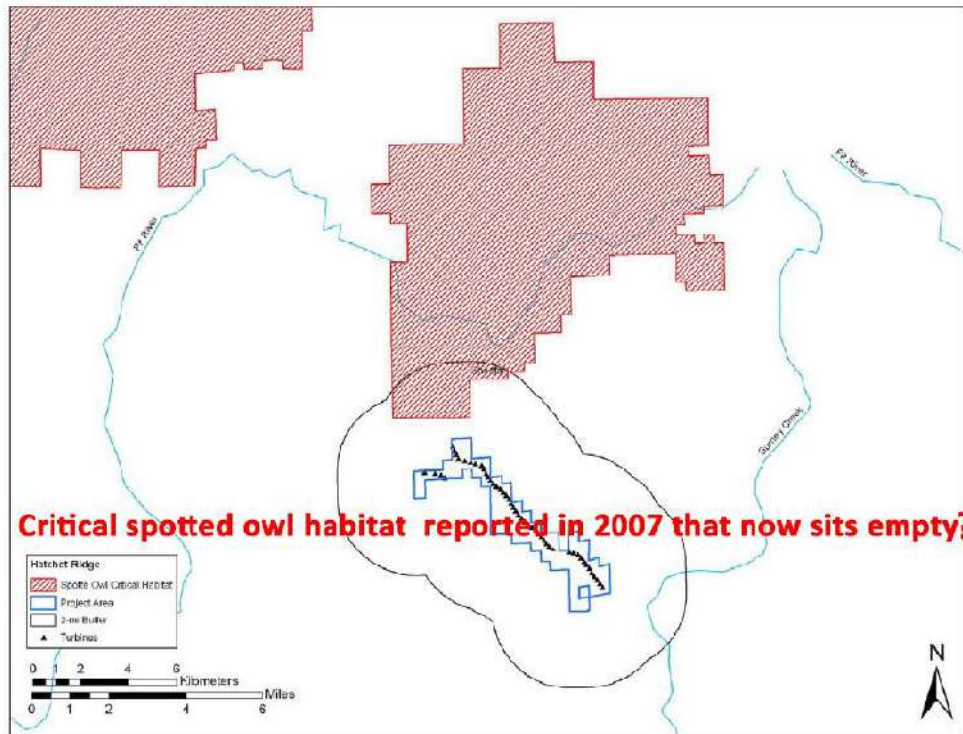


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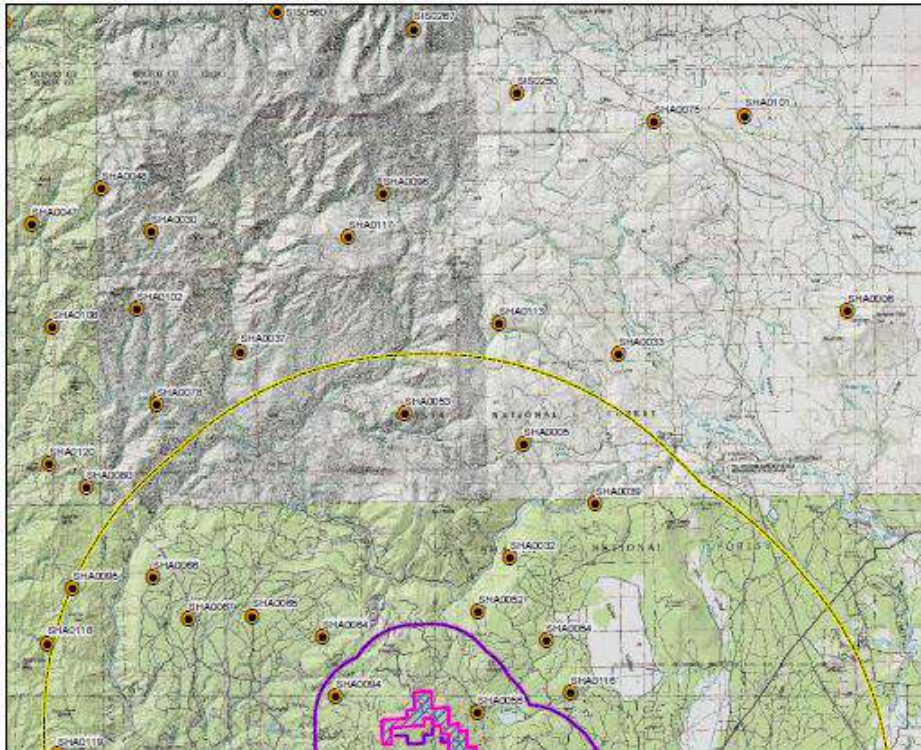
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June 2007

Figure 5. Critical habitat areas for the northern spotted owl near Hatchet Ridge.



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Besides the Fountain fire burning some of this owl habitat, what has happened to all these spotted owl nesting territories reported in the Hatchet Ridge EIR?

P29-17

The Fountain Wind DEIR does not say

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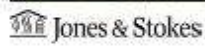
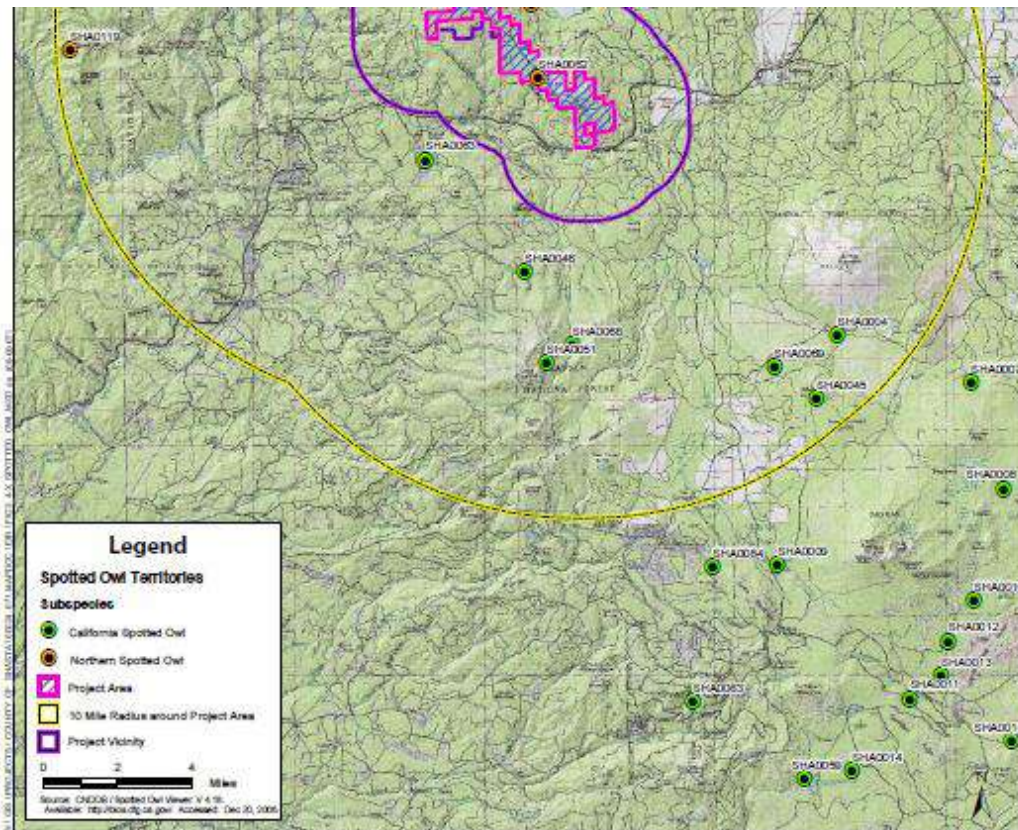


Figure 3.4-4
Spotted Owl Territories in the
Hatchet Ridge Wind Project Region

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Over the last 4 decades, impact studies disclosing turbine related species devastation from nesting failures and habitat abandonment, has been probably avoided the most by this industry. **Empty habitat is legacy of all these projects and they know it. They also know that empty habitat attracts new inhabitants that also end up getting killed by turbine blades.** The industry had proof decades ago when the eagles were killed off in and around Altamont. An insider told me golden eagles on occasion have attempted to nest within the 86 square mile area of the Altamont Wind Resource Area, but they fail.

An honest raptor survey around the Hatchet turbines will show abandoned habitat far beyond ridgeline turbine locations.

P29-18

The 4,464-acre site reported for Fountain Wind is about 7 square miles and the mortality footprint to raptors will not only be far more dangerous to species with a much higher density of deadly rotor sweep than at Altamont, because of this concentration, the mortality footprint will also reach out many more miles further in each direction from turbine locations.

In fact the Fountain wind project would probably have the highest concentration of deadly blade sweep in North America.

In 2006 before the Hatchet Ridge wind project was built, 23 spotted owl nesting territories were reported within 10 miles of the site. Today, the surveys being conducted in the same general area for the much larger Fountain Wind Project

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report none. If these owls are gone and not just because of the Fountain Fire, the public needs to know. If they still exist in the habitat that was not surveyed close to the project site, the public still needs to know because they will perish.

↑ P29-18
cont.

Those Poor Bats

There is a lot more that needs to be disclosed in this DEIR. Like the carnage coming to all those poor bats living near the streams and creeks. If post operational studies are honest and studies have daily searches of turbines, thousands and thousands of bat carcasses will be found.

Regarding bats and turbine mortality, pay close attention to the mortality study I mention later that was conducted at the Criterion wind project.

With Fountain Wind, most of the bats living around this project and this much concentrated rotor sweep, are destined to be wiped out. While Hatchet may have only reported 50 or so bats in their contrived mortality research, keep in mind that up until Altamont conducted a 4-month study, using tiny 40-meter search areas and 2-day search cycles around a group of turbines, only a handful of bats had ever been reported at Altamont. This study methodology revealed that Altamont's 30-90 day search cycles had likely missed many thousands of bat carcasses over the years. And with daily searches and larger search areas, even more would have found.

P29-19

At Altamont the small reported number of bat carcasses, was because most all of these tiny carcasses were being eaten or carted off before they could be found.

While daily searches are imperative, ignoring the obvious is not science. Results from a 5-year study around thousands of Altamont turbines with ludicrous 30-90 search cycles. Only 4 bats were found.

Hoary bat	4	4	4	0
Raptors	519	363	380	139
TOTAL	1,162	923	910	252

Table 3. Results of bat acoustic surveys by sampling station in the Fountain Wind Project area from 30 April – 13 November 2017. Passes are separated by call frequency: high frequency (HF), low frequency (LF), and very low frequency (VLF).

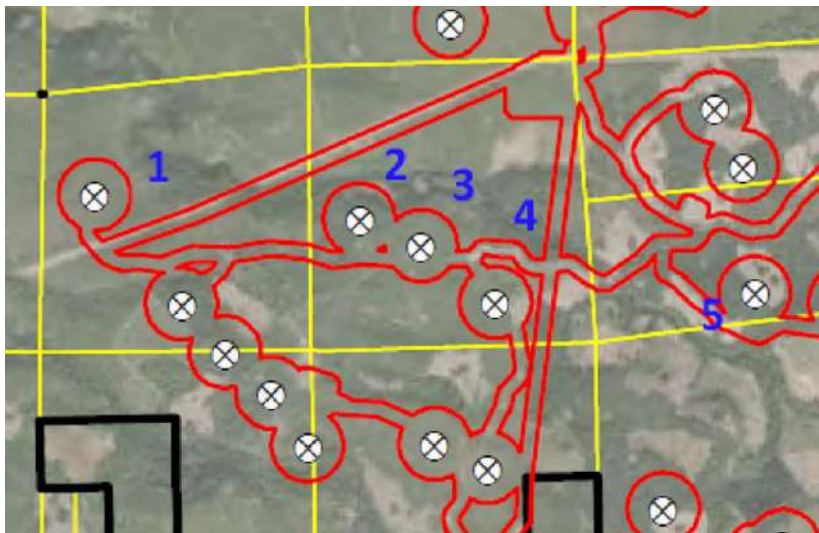
Sampling Station	Type	Habitat	# of HF Bat Passes	# of LF Bat Passes	# of VLF Bat Passes	Total Bat Passes	Detector-Nights	Mean Bat Passes/Night (\pm Standard Error) [†]
MF1g	Ground representative	Representative of future turbine locations	1,114	5,756	1	6,871	189	36.35 \pm 3.32
MF1r	Raised representative	Representative of future turbine locations	132	4,885	1	5,018	189	26.55 \pm 3.18
MF2g	Ground representative	Representative of future turbine locations	2,151	4,324	1	6,476	194	33.38 \pm 3.31
MF2r	Raised representative	Representative of future turbine locations	284	4,681	1	4,966	194	25.60 \pm 2.64
MF3g	Ground feature	Includes features possibly attractive to bats	23,031	26,508	2**	49,541	190	260.74 \pm 18.75
MF4g	Ground representative	Representative of future turbine locations	9,913	7,498	1	17,412	198	87.94 \pm 5.32
MF5g**	Ground representative	Representative of future turbine locations	2,539	1,719	0	4,258	88	48.39 \pm 5.72
MF6g**	Ground representative	Representative of future turbine locations	566	999	0	1,565	59	26.53 \pm 3.99
Total: Ground Representative Sampling Stations			16,283	12,798	3	36,582	728	50.25 \pm 4.33
Total: Raised Representative Sampling Stations			416	9,566	2	9,984	383	26.07 \pm 2.76
Total: Feature Sampling Stations			23,031	26,508	2	49,541	190	260.74 \pm 18.75
Total			39,730	66,370	7	96,107	1,301	68.18 \pm 4.08

* \pm : bootstrapped standard error.

†Sums may not total the values shown due to rounding.

The single feature sampling station recorded 49,541 bat passes on 190 detector-nights for a mean of 260.74 \pm 18.75 bat passes per detector-night (Table 3). The mean activity rate at the single feature station is not representative of activity levels at future turbine locations and should be considered an upper reference for bat activity in the Project area.

Not True - Five massive turbines will be located along this creek location (see image).



P29-20

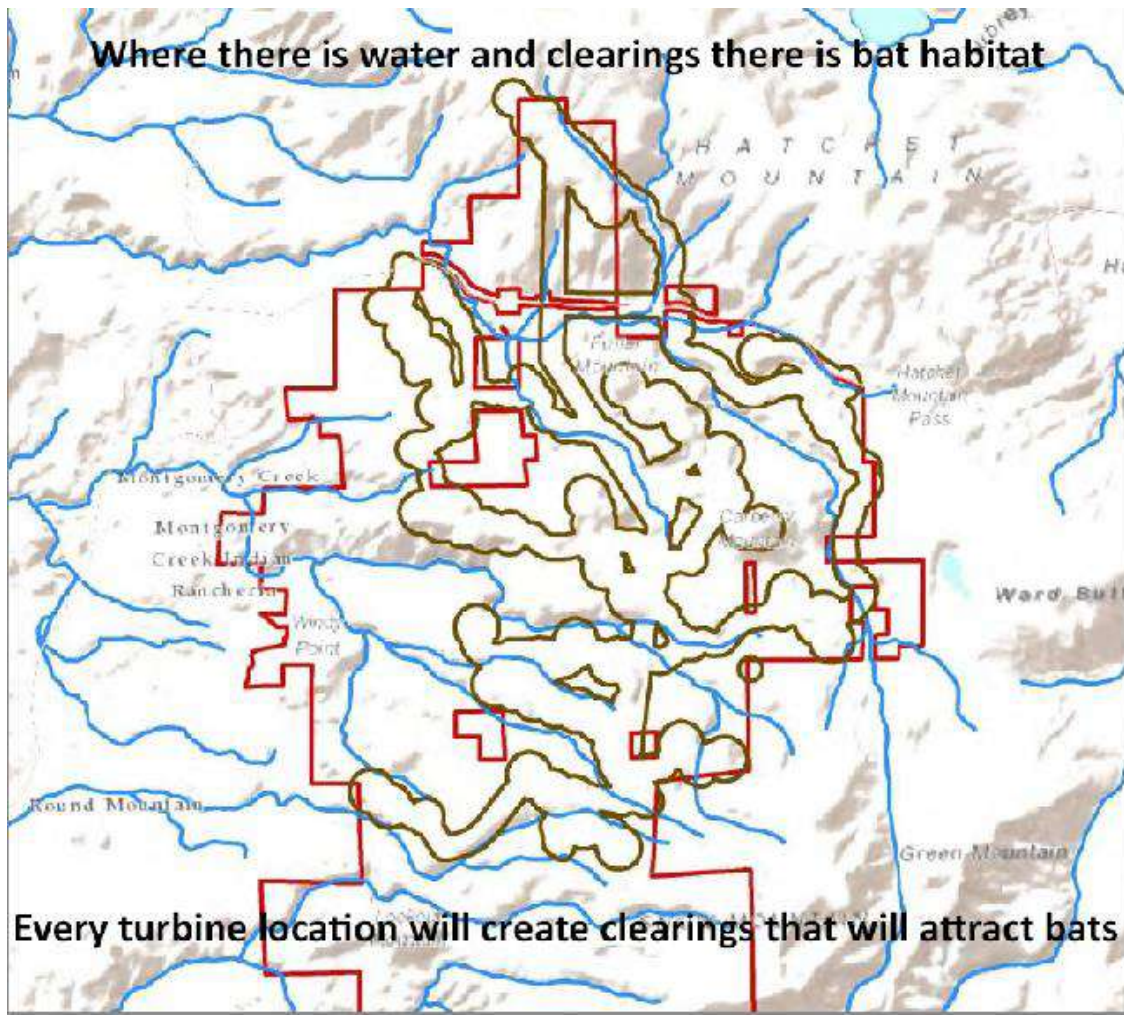
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If the Bat Acoustic survey had positioned all their equipment in open areas near water with clearings, the total bat passes in this survey would have easily been several hundred thousand. The MF3g site shows this. Wind Biologists also know this and when bat surveys are conducted, they try to locate equipment away from the best bat feeding locations. I have examples that show this research pattern in other studies. Of course, the bats living near MF3g will be annihilated by at least 5 of the Fountain Wind turbines, that will be locate along this creek site.



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cont.

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The importance of daily searches

In 2011 the Criterion wind project conducted a 7-month mortality study around 28 turbines. With **daily searches** in tiny search areas, that amounted to about a 40-meter area out from towers, **they still found 664 bat carcasses in these small search areas**. These turbines, like the Hatchet Ridge turbines, had a rotor sweep of 100 meters and search areas should have been accounted for bats being located in areas at least 10 times larger.

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Carcasses reported in 2011

American redstart	0	0	1	5.0	0	0	1	0.4
turkey vulture	0	0	1	5.0	0	0	1	0.4
Overall Birds	241	100	20	100	1	100	262	100
Bats								
eastern red bat	231	34.8	13	31.0	0	0	244	34.6
hoary bat	216	32.5	20	47.6	0	0	236	33.4
silver-haired bat	96	14.5	7	16.7	0	0	103	14.6
tricolored bat	47	7.1	0	0	0	0	47	6.7
big brown bat	37	5.6	1	2.4	0	0	38	5.4
little brown bat	30	4.5	1	2.4	0	0	31	4.4
unidentified bat	5	0.8	0	0	0	0	5	0.7
Seminole bat	1	0.2	0	0	0	0	1	0.1
unidentified myotis	1	0.2	0	0	0	0	1	0.1
Overall Bats	664	100	42	100	0	100	706	100

In 2012 the study was drastically changed and 16 times fewer bat carcasses were reported.

“With the weekly search interval and to spread the standardized searches over time, 2 or 3 turbines were searched each day for five consecutive days. The same turbines were searched on each day of the week to maintain a seven-day interval between searches at a given turbine. The order in which the 2-3 turbines were visited on the specified search day was varied over the course of the study so that any given turbine was not always searched at the same time of day.”

P29-22
cont.

Carcasses reported in 2012

Philadelphia vireo	0	0	0	0	1	11.1	1	3.6
unidentified passerine	0	0	0	0	1	11.1	1	3.6
Overall Birds	14	100	5	100.0	9	100	28	100
Bats								
eastern red bat	26	65.0	6	31.6	12	52.2	44	53.7
hoary bat	10	25.0	9	47.4	8	34.8	27	32.9
big brown bat	2	5.0	0	0	1	4.3	3	3.7
silver-haired bat	1	2.5	4	21.1	1	4.3	6	7.3
tricolored bat	1	2.5	0	0	0	0	1	1.2
unidentified bat	0	0	0	0	1	4.3	1	1.2
Overall Bats	40	100	19	100	23	100	82	100

*Fatalities found incidentally on turbine search plots were included in analyses.

Collecting carcasses ahead of formal searches? Is this also an industry “TRADE SECRET” protected by law?

When mortality studies were being conducted at the Criterion Wind Project this activity was reported to me by an eyewitness

P29-23

*“Because I purchased a pass from the Walnut Bottom Hunt Club to enter the land with my ATV, I frequently went out to observe activities on the project site, which is when I encountered the survey crews doing carcass collections. During my first trip out and encountering the crews, I noted them pulling up to turbine sites in an unmarked white truck and getting out and wandering around, as if they lost something. I watched for awhile and they moved on to the next turbine and repeated the same wandering around. There was no pattern to the wanderings and they seemed to walk from the road to the wood area past the turbine base and return to the truck in nearly the same path and move on. I waved and was friendly, and they waved back and smiled.
“During my second encounter with the crews, I saw nearly the same process and waved as I went passed. On my return trip, they were getting out of the truck as I approached, so I pulled up and attempted to*

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*see what they were doing. **Both had very heavy Hispanic accents and broken English, but they related that they were looking for “dead birds and bats”. The female didn’t seem to care for the bats by the way she reacted to the word. I asked if they had found any bats and they said “yes”. I thought what the hell they’re being chatty, so asked if they had found any Eagles or Indiana Bats. The male said they were not allowed to talk about what they found and if I understood him correctly, they had signed a paper saying they could not talk about anything they found. The male appeared to be getting very nervous so I moved on, so as not to upset the possibility of getting something later.”***

“During my last encounter with them, I pulled up to a high point and just watched as they did their searches. Again no real pattern, they would park on the road parallel to the turbine, get out and both walk past the turbine base, separated by approximately 40-50 feet and turn around near the tree line and return to the truck. I saw on several occasions that they stopped and picked something up and upon returning to the truck would place it in a 5 gallon bucket in the back of the truck... whatever was found, didn’t appear to be documented, there was no measuring, no pictures and again it was tossed into a bucket with other “finds”.

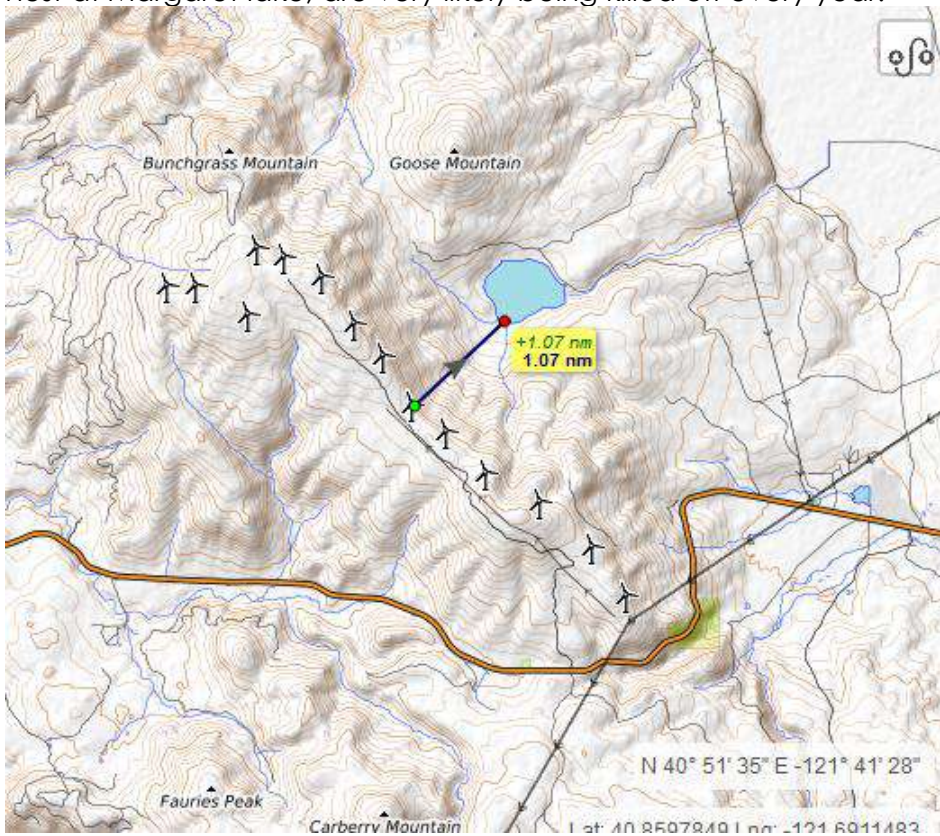
Hatchet Ridge Ten Years later

Now, 10 years after the Hatchet Ridge wind turbines started spinning, the Fountain Wind DEIR reported one occupied raptor nest, within 5 miles of these turbines with no credible explanations. Since 2010 bald eagles attempting to

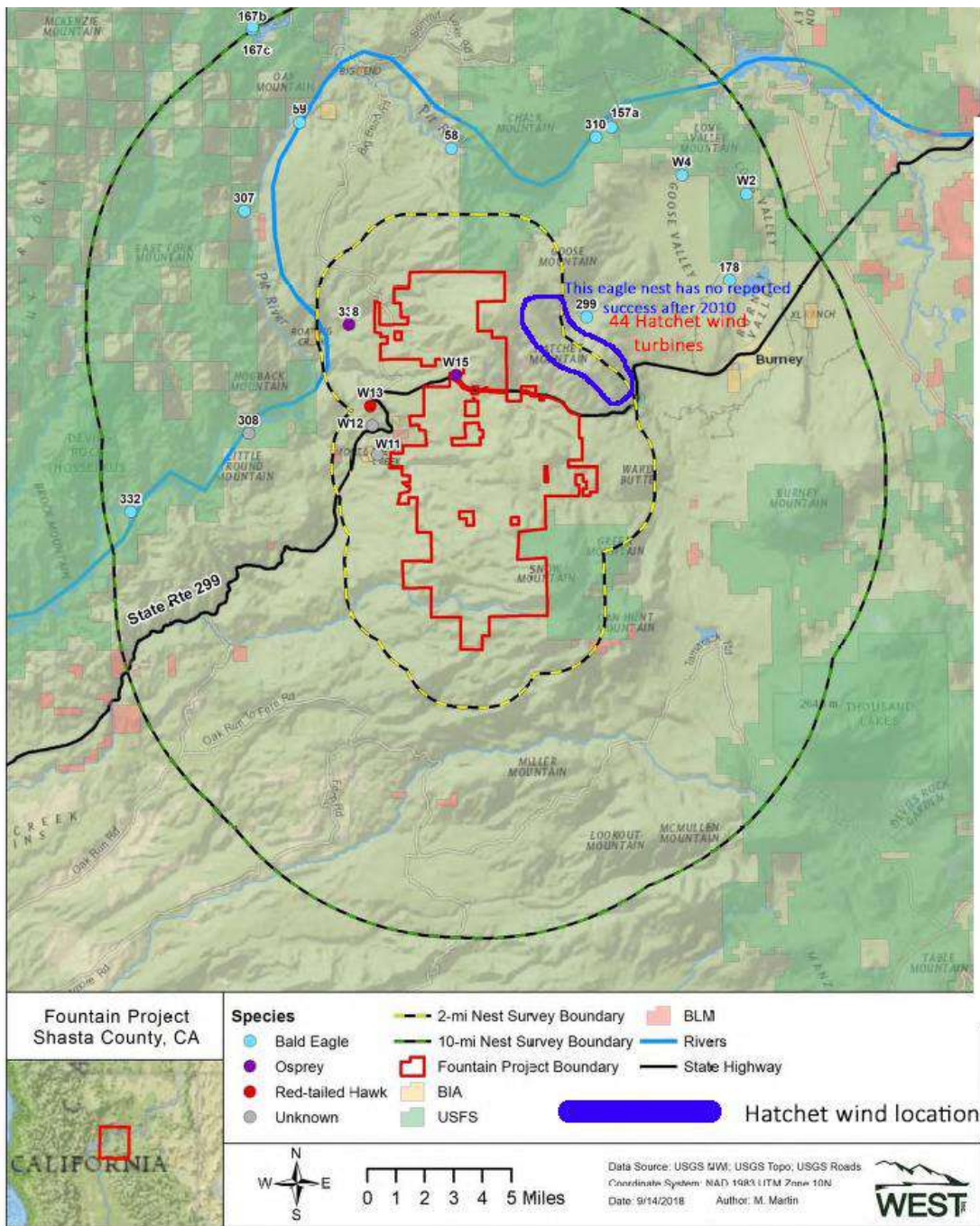
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nest at Margaret lake, are very likely being killed off every year.



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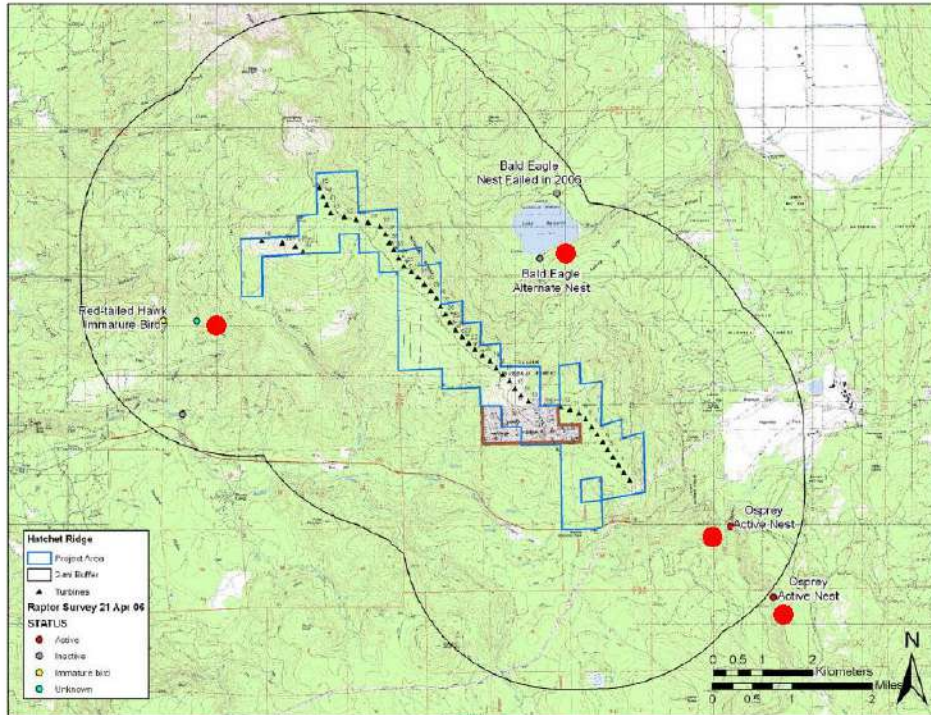


P29-24
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Figure 2. Eagle and other raptor nest locations documented during aerial surveys for the Fountain Wind Project, March 20 and May 9, 2017.

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Figure 7. Locations of raptor nests within two miles of Hatchet Ridge.



What has happened to these nesting territories since 2010 after 44 Hatchet ridge turbines became operational ???

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cont.

Since 2010, no nesting history success has been reported for the bald eagle nest just east of the Hatchet Wind project. Just nesting failures. In 2017, DEIR helicopter surveys reported four bald eagle nesting failures within 10 miles of the Hatchet Ridge wind turbines.

Fountain Wind Project 2017 Nest Survey Report

Two helicopter-based aerial nest surveys were conducted in 2017. The initial survey was conducted on March 20 and the second survey on May 9.

Table 1. Results of the 2017 eagle/raptor nest surveys conducted on March 20 and May 9 at the Fountain Wind Project in Shasta County, California.

Nest ID ¹	Species	2017 Nest Status ²	Nest Attributes		Comments
			Substrate	Size ³	
310	Bald eagle	Occupied / In-use	Tree	Very large	One chick in nest estimated to be 28 days old on May 9
178	Bald eagle	Occupied / In-use	Tree	Very large	Two chicks in nest estimated to be 21-28 days old on May 9
58	Bald eagle	Occupied / In-use	Tree	Very large	Two chicks in nest estimated to be 21-28 days old on May 9
59	Bald eagle	Occupied / In-use	Tree	Very large	One chick in nest estimated to be 21 days old on May 9
307	Bald eagle	Occupied / In-use	Tree	Very large	One chick in nest estimated to be 14 days old on May 9
157a	Bald eagle	Occupied / In-use	Tree	Very large	One chick in nest estimated to be 21 days old on May 9
W4	Bald eagle	Occupied / In-use	Tree	Very large	Adult in incubating/brooding position during May survey. No of young/eggs unknown
Fail 332	Bald eagle	Occupied / In-use	Tree	Very large	Adult observed in incubating position in March; no evidence of nesting in May indicate failed nesting attempt
Fail 299	Bald eagle	Occupied / In-use	Tree	Very large	Adult in incubating position in March; no sign of nesting in May indicate failed nesting attempt
Fail W2	Bald eagle	Occupied	Tree	Very large	Adult observed tending nest in March; no evidence of nesting in May
Fail 167b	Bald eagle	Occupied	Tree	Very large	Adult observed tending nest in March; no evidence of nesting in May
167c	Bald Eagle	Unoccupied	Tree	Very large	Historical bald eagle nest in good condition; no evidence of use
308	Bald eagle	Unoccupied	Tree	Very large	Historical bald eagle nest in good condition; no evidence of use
W15	Osprey	Occupied / In-use	Tree	Large	Three eggs observed in nest during May survey
Fail 338	Osprey	Occupied	Powerline	Very large	Adult osprey observed tending nest in March; no evidence of nesting in May
W13	Red-tailed hawk	Occupied	Powerline	Medium	Medium-sized nest in good condition
W11	Unknown raptor	Unoccupied	Powerline	Medium	Medium-sized nest in good condition
W12	Unknown raptor	Unoccupied	Powerline	Medium	Medium-sized nest in good condition

¹ IDs preceded by W indicate nests newly discovered by W&B during surveys. All other IDs are consistent with historical IDs provided by California Department of Fish and Wildlife.
² Highest level of reproductive status determined for the current breeding season. Occupied = contained eggs, young, or an incubating eagle, or had a pair of eagles on or near it, or had been recently repaired or decorated. In-use = an occupied nest in which eggs were laid, as evidenced by the presence of an incubating bird, eggs, young, or any other indication that eggs had been laid in the current year. Unoccupied = no sign of nesting or territory occupancy in the current nesting season, based on at least two visits. Unknown = nest was not located or status as occupied/unoccupied could not be confirmed as defined herein.
³ Small = small stick nest characteristic of corvids or accipiters; Medium = medium stick nest characteristic of buteos and large owls; Large = large stick nest that could support eagles, but may also be used by other large buteos, osprey, large owls; Very Large = very large stick nest characteristic of eagle nests

Five documented nesting failures with the outcome unknown for nests still occupied on May 9

IN 2018 eagle nest surveys were changed from helicopter to ground. In doing so, it appears the failed nesting attempts or abandonment taking place was not reported because a helicopter can look inside nests. A skilled observer from the ground can still tell if a nest is really occupied and how many fledged offspring there are. The fate of the nests that were known to fail in 2017 were also covered up with the useless data collected in 2018.

Also in 2018, only 5 nest images were (13 in 2017) were submitted for the DEIR and one of them was a duplicate from 2017.

A skilled observer could have easily taken images of every occupied bald eagle nest and offspring.



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Same image submitted for both surveys. 2017 survey submitted 13 images
2018 submitted 5 including this duplicate. In 2018 it was claimed to be occupied.

Fountain Wind Project

2017 Nest Survey Report



Nest 308, located approximately 5.0 mi (8.0 km) west of the Fountain Wind Project.

Fountain Wind Project

2018 Nest Survey Report

This nest reported to be occupied in 2018 looks beat down from snow and abandoned



Nest 308, located approximately 5.0 mi (8.0 km) west of the Fountain Wind Project, Shasta County, California.

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cont.

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Fountain Wind Project **Ground-based eagle nest status surveys were conducted by WEST biologists in April 2018 at all previously documented bald eagle nests within the 10-mi survey area that were accessible by public road and viewable from a public access-point.** 2018 Nest Survey Report

Table 1. Summary of the 2018 bald eagle nest status surveys conducted within a 10-mile buffer of the Fountain Wind Project, Shasta County, California. Additional details on 2017 nest status surveys are available in the 2017 nest survey report (WEST 2018).

Nest ID ¹	Species	2017 Nest Status ²	2018 Nest Status ²	2018 Survey Date	Comments
310 ?	Bald eagle	Occupied / In-use	Occupied	April 19	Two adults observed perched in nest tree, but not on nest
W4 ?	Bald eagle	Occupied / In-use	Occupied	April 22	Adult observed landing on nest, but not confirmed as incubating/brooding/tending young
W2 ?	Bald eagle	Occupied	Occupied	April 21	Adults seen in nest tree, but not on the nest
178	Bald eagle	Occupied / In-use	Occupied / In use	April 21	Adult(s) observed, two nestlings
308 ?	Bald eagle	Unoccupied	Occupied / In use	April 19	Adult(s) in incubating/brooding position
58 ?	Bald eagle	Occupied / In-use	Unknown	April 19	No activity observed during 4-hour survey
59 ?	Bald eagle	Occupied / In-use	Unknown	April 25	Nest not visually located, but no activity observed in area during 4-hour survey
157 ?	Bald eagle	Occupied / In-use	Unknown	April 18	Pair observed flying in the area, but no adults visited the nest or nest tree during the 4-hour survey
167b ?	Bald eagle	Occupied	Unknown	April 23	Nest not visually located; Nest is close to Nest 167c; Pair of adults observed flying on one occasion, but no activity observed at nest location during 6-hour survey
167c ?	Bald eagle	Unoccupied	Unknown	April 23	Nest not visually located; Nest is close to Nest 167b; Pair of adults observed flying on one occasion, but no activity observed at nest location during 6-hour survey
307 ?	Bald eagle	Occupied / In-use	Not surveyed / Unknown	not surveyed	Not accessible
332 ?	Bald eagle	Occupied / In-use	Not surveyed / Unknown	not surveyed	Not accessible
299 ?	Bald eagle	Occupied / In-use	Not surveyed / Unknown	not surveyed	Not accessible

¹ IDs preceded by W indicate nests newly discovered by WEST during surveys. All other IDs are consistent with historical IDs provided by California Department of Fish and Wildlife.
² Highest level of reproductive status determined for a breeding season: Occupied = contained eggs, young, or an incubating eagle, or had a pair of eagles on or near it, or had been recently repaired or decorated. In-use = an occupied nest in which eggs were laid, as evidenced by the presence of an incubating bird, eggs, young, or any other indication that eggs had been laid in the current year. Unoccupied = no sign of nesting or territory occupancy in the current nesting season, based on at least two visits. Unknown = nest was not located or status as occupied/unoccupied could not be confirmed as defined herein (e.g., only a single visit in 2018).

Status and nest outcome unknown for every nest

P29-24
cont.

Nesting Failures are a common impact for raptors nesting near wind projects.

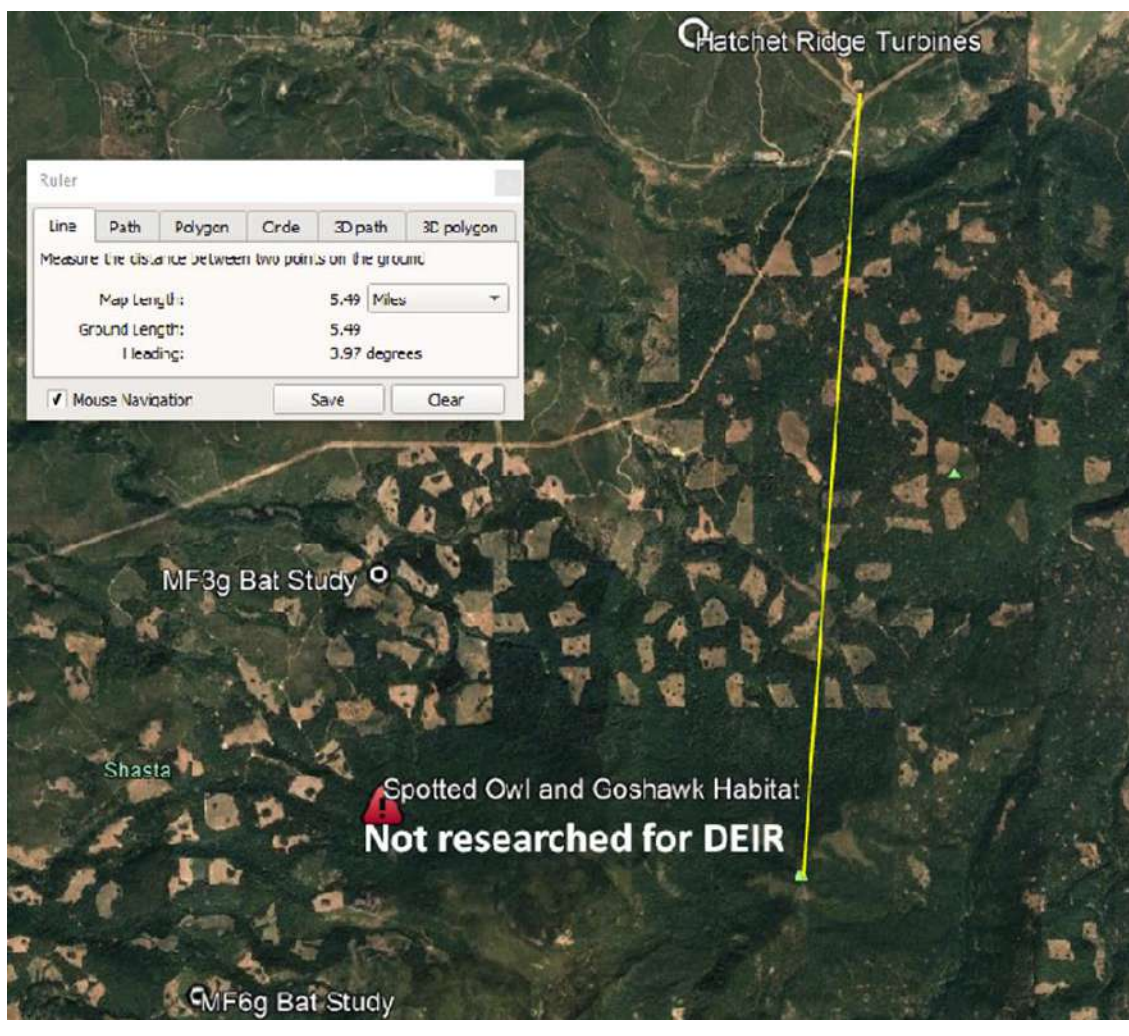
When one adult is killed the nest fails. The proper DEIR eagle surveys could have cleared this up, but they don't and instead the public is being fed a smattering of deflective information. **From the information given it appears nesting adult eagles nesting near the Hatchet Ridge project are being killed or that eagle territories are being abandoned. New surveys have to be conducted with credible observers so this information can become available to the public.**

The raptors studies conducted for the **DEIR showed a very deficient effort by researchers.** The DEIR should have reported far more nests and inhabited territories for other raptor species living in and around this project site. If the nests of sharp-shinned hawks, cooper's hawks, red-shouldered hawks, American kestrels and red-tail hawks cannot be documented in this habitat, then the Hatchet wind turbines have to be killing them off. The habitat for these species is there and at least 10 nests from these species should have been located.

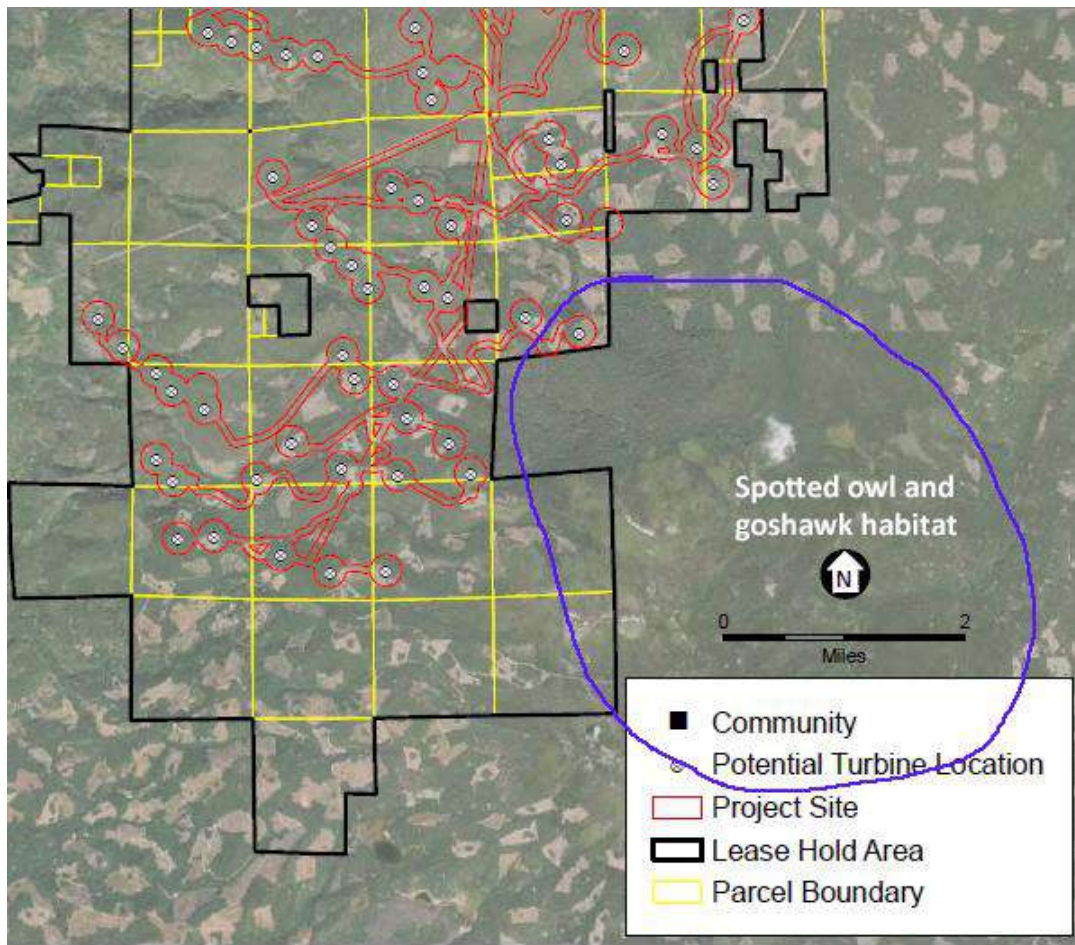
There is also gross lack of information provided about the eagles, spotted owls, and goshawks,

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cont.



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cont.

But our disappearing raptors are just a peep hole look into a world of annihilation to species taking place from wind turbines in our remote ecosystems.

Nocturnal migrations and the wind industry

From the Fountain Wind DEIR.....

"The results of the Hatchet Ridge fatality studies suggest generally low risk to passerines and no disproportionate."

Correction, this DEIR suggestion came from the fraudulent data collected from the fake research conducted at Hatchet Ridge.

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This industry can make references from hundreds of contrived studies, but they cannot cite one scientifically credible study conducted in the last 30 years related to the flying species impacted by wind turbines.

P29-27

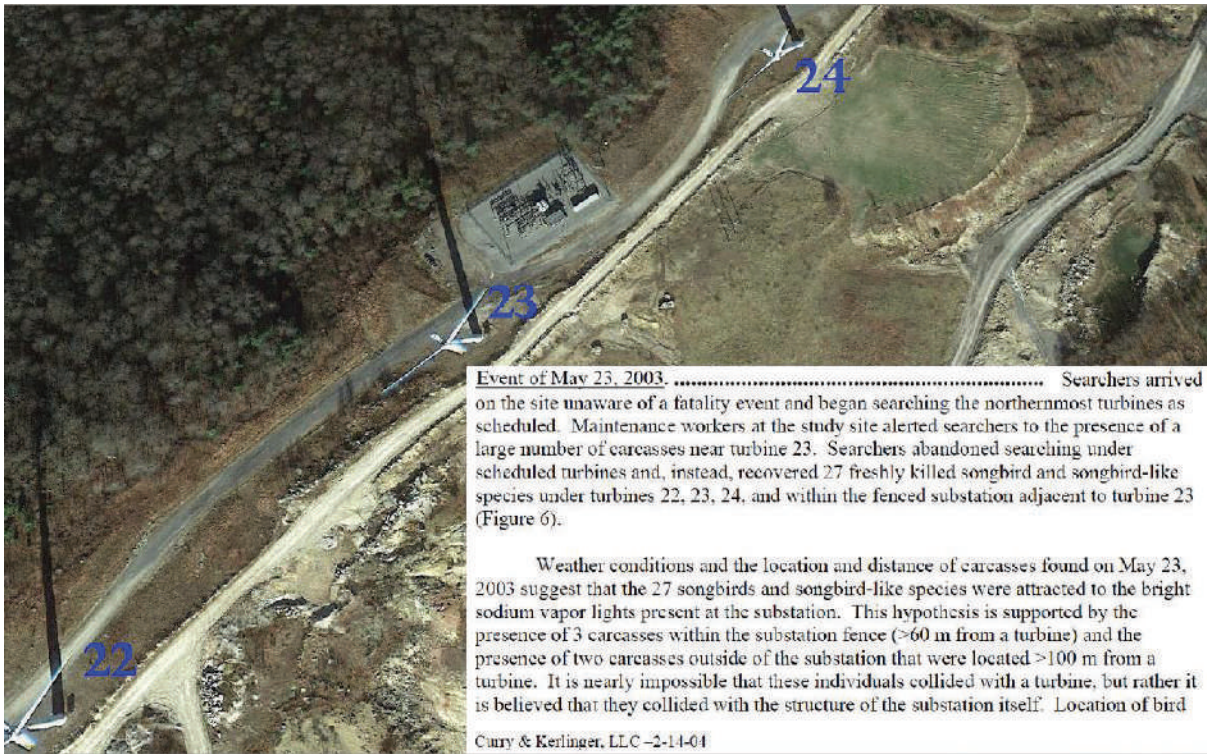
Over the years, another one of this industry's biggest lies by omission, has been the species **slaughter taking place during nocturnal migrations**. In America the first and only truly credible scientific turbine related mortality study I have come across, took place in 1985. It was conducted in Southern CA around a few small turbines and the results were published in 1986. This study estimated a mortality rate of 6800 fatalities annually from about 150-200 MW of small 40-100 kW turbines at San Geronio Pass. Using daily searches of 50-meter search areas around these tiny turbines, this study estimated mortality rate of 34-45 birds per MW and the majority of these fatalities were determined to be **nocturnal migrants**.

Since this study was conducted in 1985, there has never been another such study conducted in North America. This study has also been stripped from the internet and hidden for years.

P29-28

This lack of credible green energy research on wind turbine impacts to migrating birds is no accident, it is deliberate. From wind industry research it would appear that flocks of birds are safer at night than during the day. But the wind industry has known for decades how vulnerable and deadly wind energy developments are to nocturnal migrations of birds. Even a 2009 report from New Zealand took notice of the lack of turbine mortality research that has been conducted on nocturnal migrant birds.

Mass fatality events do occur to nocturnal migrants at wind farms. But these events are routinely covered up with this industry's fake research. Gag orders, not searching turbines daily and allowing wind personnel to handle carcasses during studies has help keep a lid on this. But on occasion word of one of these events does happen to get out. When it does, these wind farm fatalities are blamed other structures and equipment like a light being left on.



P29-28
cont.

Look at this Google Earth image and read several quotes from a mortality study. Read how fake wind industry research explained away this mass fatality. Turbine killing these migrating birds “nearly impossible”? Yes, but only for this industry because wind industry guidelines require no science. In reality, the impact from any of these three large wind turbines in the image could have easily launched migrating bird carcasses 100-200 meters, far beyond this substation. In my opinion there was far more than the 27 birds bird fatalities during this mass fatality event.

The study then went on to report these fatalities as being **“an anomaly in the annual data and therefore these carcasses are not included in the annual estimates of avian mortality.”**

When science and accountability are not required, fake research like this is produced. Wind industry research going back decades is riddled with this sort of deception. It is also why millions of birds and bats that are being killed annually by wind turbines are not reported. Without scientific principles, the post construction mortality research for the Fountain Wind project will be no different. How to Stop Fraudulent Wind Energy Research

Comment Letter P29**How Shasta County Can Stop Fraudulent Wind Energy Research**

When the public hears the word research, they assume that researchers are seeking out the truth. This is not the case with wind industry developments. With this green industry, preconstruction, post construction research and mitigation have all been an orchestrated fraud. It's very easy to prove and if the Interior Department chose to do so, they could shut this industry down today. But this will never happen because this branch of government has been a gatekeeper in green energy's massive industrial fraud.

This leaves communities stuck to fend for themselves. Communities can file lawsuits that expose this industry's fake research or laws can also be passed that require accurate research and accountability.

Wind energy developments rely on two types of research, preconstruction and post construction research. Both types of research are needed to determine projected impacts to regional species and post construction research is conducted that will supposedly document actual impacts to species. Problem is, it's all been an orchestrated side show, charade or fabrication. If not amended by Shasta County, the studies proposed for Fountain wind will end up being one more contrived fraud on the public.

P29-29

Since government agencies help this industry hide carcasses and have not or will not enforce legitimate wind energy PCMM research, I have put together some post construction research guidelines that can stop this cycle of fraud. If Shasta County insists on credible scientific guidelines and does not let developers or our puppet government agencies dictate their rigged own post construction methodologies, some of the true devastation from wind energy projects can be revealed.

Unfortunately, credible research would mean that most projects would be cancelled because the truth of this industry's true impact to species would then be documented. The public would also know of the habitat abandonment in and around wind projects and the carnage taking place from wind turbines.

The truth of this industry's impacts will also send offsetting mitigation for these destructive projects, into the stratosphere. With honest guidelines, ethical officials involved in the approval process, can cross check with wind developers to determine any presence of corruption.

I have looked over hundreds of wind industry studies and know most of the tricks used over the years to hide turbine mortality. If Shasta County planners do not see anything close to the conditions I have listed below, then as sure as your

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next breath, the mortality impact research for the project will be fabricated just as it was for the Hatchet Ridge Wind Project. ↑

Credible science-based study guidelines for the Fountain Wind's post construction mortality studies.

1) The words "Independent researchers" actually the industry has hired insiders that will go along with the industry's non-scientific industry study protocol. From past research it can be shown that these false experts cannot be trusted or are unqualified for their positions. They must never be hired unless you can watch them with camera surveillance 24 hours a day and treat them as if they were casino employees.

1) In order to maintain the scientific integrity of any mortality research, **post operational studies shall never allow wind personnel, USFWS agents, lease holders or anyone else except independent researchers**, to handle, move or touch carcasses. All past wind industry studies have allowed this.

2) The words Independent researchers actually the industry has hired insiders that will go along with the industry's non-scientific industry study protocol. From past research it can be shown that these false experts cannot be trusted or are unqualified for their positions. They must never be hired unless you can watch them with camera surveillance 24 hours a day and treat them as if they were casino employees.

3) For accuracy and integrity, nobody involved with wind energy research should be bound by any non-disclosure agreements or gag orders. Gag orders allow lying by omission and this tactic has been used to hide turbine impacts for decades. In other words, these are people that can't be trusted. Government agents are bound by Nondisclosure agreements or gag orders as are all wind farm employees. Just knowing this, means that whatever is said to Shasta County planners regarding the Fountain Wind project, will not be accurate.

4) All scanning for carcasses will require researchers to use a reasonable and ethical attempt to find carcasses. Besides the less frequent intense formal searches 1 ½ times out from maximum turbine heights, all turbine sites shall be scanned for carcasses twice a day. This task only takes a few minutes and the industry knows it. Scanning for large carcasses or even mid-sized carcasses the size of a cooper's hawk is relatively easy with the aid of binoculars. This scanning shall include all areas out at least several hundred yards from turbine towers.

5) During studies, **every carcass or wounded species** found must be photographed and this information disclosed to the public. In addition, this disclosure will apply to all special status species for the operational life of the ↓

P29-29
cont.

Comment Letter P29

wind project. **This includes every carcass, picked up by wind project personnel, USFWS agents, state wildlife agents and cripples picked up by animal rescue personnel.** This way the public will be aware of all the totality of the endangered and special status species being killed by a project's wind turbines.

6) If during studies, wind personnel must visit any turbine sites for work related duties, they must first check with researchers so they are aware of their presence and can keep an eye on their activities.

7) To further assist in the integrity of the post operational research, 24-hour surveillance including remote cameras will be used in open areas around specific turbine towers and roadways. This coverage will not only aid researchers of scavenger removal, it will act as a deterrent against inside rigging. With this industry, remote camera images and videos have a history of disappearing. I can provide examples if needed. So, if any of this coverage disappears or is found to have been tampered with, there should be very severe consequences.

I have many other suggestions maintaining ethical and scientific field research but I wanted to make sure that Shasta County planners could easily understand that there will be nothing close to these conditions will be proposed in Post Operational studies for the Fountain Wind project.

Instead of these conditions, post operational research protocol will use words like standardized methods, approved, in accordance with USFWS guidelines, in collaboration with state and federal experts, and so on. But these words are meant to deceive and mean absolutely nothing in the realm of science. Shasta County planners must keep in mind that with wind energy research, science has been missing for over 3 decades.

P29-29
cont.

The Purpose of This Document Has Not Been Met

1.1 Purpose of This Document

This Draft Environmental Impact Report (EIR) is an informational document intended to disclose to the public and decision-makers the potential environmental impacts of the Fountain Wind Project (Project). The Shasta County (County) Department of Resource Management, Planning Division, as the lead agency under the California Environmental Quality Act (CEQA),¹ has prepared this Draft EIR to document its analysis of the potential direct, indirect, and cumulative impacts of the Project described in Section 2.4, *Description of the Project*, and the alternatives described in Section 2.5, *Description of Alternatives*. All resource areas in the CEQA Guidelines Appendix G Checklist have been studied: Aesthetics, Agriculture and Forestry Resources, Air Quality, Biological Resources, Cultural Resources, Energy, Geology and Soils, Greenhouse Gas Emissions, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use and Planning, Mineral Resources, Noise, Population and Housing, Public Services, Recreation, Transportation, Tribal Cultural Resources, Utilities and Service Systems, and Wildfire. The potential for the Project to result in communications interference is also examined. See Chapter 3, *Environmental Analysis*.

P29-30

The purpose of the DEIR has not been met and anybody that reads over these comments will also know this to be true. The impacts reported from Hatchet Ridge are based upon fraudulent nonscientific research.

Will Shasta county look the other way and approve this project? Will Shasta county force hidden impacts on the people and our wildlife? Will there be a fraudulent and meaningless mitigation process? Or will Shasta County insist on new studies so the truth about our eagles and other species forced to live around wind turbines, can be told.

P29-31

A parting thought..... Avoiding science, research fraud, lying by omission and the rigging of data will never solve this world's problems.

Jim Wiegand
Lakehead, CA

Letter P29: Jim Wiegand

- P29-1 Each of the focused baseline biological studies performed for the Project (Draft EIR Appendix C) was performed using the most current survey methodologies from the CDFW, USFWS, and Army Corps of Engineers. Further, the Draft EIR's biological resources analysis (Section 3.4 at page 3.4-1 et seq.) follows all relevant and applicable environmental laws.
- P29-2 As a best practice or required by permits, individual projects such as the Hatchet Ridge Wind Project report eagle mortality statistics to state and federal resource agencies. Though all data may not be published for the public, such information is typically available to the public upon request to state and federal resource agencies. Post-construction mitigation monitoring data in the County's possession also is subject to public disclosure upon request.
- P29-3 The stated opinions about the Draft EIR are acknowledged. Pursuant to CEQA Guidelines §15204(c), "Reviewers should explain the basis for their comments, and should submit data or references offering facts, reasonable assumptions based on facts, or expert opinion supported by facts in support of the comments. Pursuant to Section 15064, an effect shall not be considered significant in the absence of substantial evidence."
- P29-4 The EIR is supported by credible science-based research, reference materials, and informed professional judgments of qualified scientists and EIR preparers. Technical studies and analyses relied upon are cited in each section of the Draft EIR; additional Project-specific or Project Site-specific analyses are provided in the appendices for ease of access and review by other agencies and members of the public. Materials have been published, peer-reviewed or independently reviewed on the County's behalf, follow applicable protocols, and otherwise are believed to be appropriate for consideration in the EIR.
- P29-5 Speculation about other projects' post-construction avian mortality reporting is acknowledged. Contrary to the general opinion stated, studies performed for the Hatchet Ridge Wind Project met state and federal resource agency survey guidance. The comment does not bear on the adequacy of the Draft EIR for the Project. See Final EIR Section 2.1.1, *Input Received*.
- P29-6 The commenter's opinions are acknowledged, but do not reflect on the adequacy of the Draft EIR for this Project. See Final EIR Section 2.1.1, *Input Received*.
- P29-7 As required by CEQA, the Draft EIR biological resources analysis summarizes and contains in-depth baseline data, an analysis of potential impacts, measures to reduce or avoid those impacts, and an analysis of alternatives to the Project. The Draft EIR biological resources analysis relied upon focused biological studies, studies from the Hatchet Ridge Wind Project, public and agency scoping comments, and agency coordination to refine the baseline and potential impacts of the Project. As requested in

the comment, the biological resources reports provided in Draft EIR Appendix C provide focused bird and bat studies and associated risk assessments for flying wildlife. Pre-construction data suggest that avian and bat fatality patterns at the Project would likely be similar to those documented at the Hatchet Ridge Wind Project. The location of creeks and drainages in and near the Project area was disclosed in Appendix C2, *Aquatic Resources Survey Report*. The Draft EIR Project Description (Chapter 2) disclosed the number of proposed turbines under each project alternative and the characteristics of typical wind turbines, including blade lengths (Draft EIR Figure 2-4a). See final EIR Table 1-1, *Comparison of Turbine Options*, for a comparison of the rotor swept areas of the turbine options under consideration. See also Response P20-15, which explains the relationship between the numbers, heights and locations of the proposed turbines.

- P29-8 The focused goshawk survey (Draft EIR Appendix C11) provides specific justification for the adopted survey methodology. Surveys were performed in historical goshawk occurrence areas to represent the most suitable nesting stands in close proximity to the Project Site, and are not considered comprehensive for the entire Project. The northern goshawk is not a federal or stated listed species or fully protected species, and the adopted survey methodology based on the Northern Goshawk Inventory and Monitoring Technical Guide were appropriate to characterize the Draft EIR baseline condition and support the impact analysis.

The portion of the comment that asks about partial reporting of fatality data by the wind industry and the clandestine removal of bird carcasses by the USFWS is not specific to the proposed Project and does not indicate a deficiency in the Draft EIR. See Final EIR Section 2.1.1, *Input Received*.

- P29-9 The County acknowledges receipt of this November 1997 USFWS article from *Fish & Wildlife News*. The article has been reviewed, considered, and included in the record, where it also may be considered by decision-makers.

- P29-10 As described in Draft EIR Appendix C10 (at page 5), the closest occupied bald eagle nest to the Project Site is at Lake Margaret, approximately 2.9 miles east of the Project Site boundary. The eagles at Lake Margaret are closely monitored as part of a USFWS movement study, and as such, are fitted with platform transmitting terminal tags that track their daily movements. Bald eagles attempted to nest at this location in 2017, however, the nest apparently failed. To date, no bald eagle mortality has been reported at the Hatchet Ridge Wind Project facility.

- P29-11 Consistent with federal and state regulations, the Draft EIR does not document the nests or territories of non-special-status raptor species. The regulations described in Draft EIR Section 3.4, including Fish and Game Code Sections 3503 and 3511, and the federal MBTA provide that it is unlawful to “take” any migratory bird, or any part, nest, or egg or any such bird, unless authorized by permit. The federal Bald and Golden Eagle Protection Act (BGEPA) provides additional protection to eagles. Aside from the

BGEPA protections afforded to eagles and protections for listed bird provided by the federal and state Endangered Species Acts, these regulations do not require an inventory or accounting of occupied nests or territories for non-listed raptors species.

The Draft EIR does not mention the status of the peregrine falcon nest in the Pit River canyon because this area is greater than 2 miles from the Project Site and because the occurrence is not reported by the CNDDDB. In addition, due to the lack of suitable nesting or roosting habitat on the Project Site (i.e., protected ledges and high cliffs), peregrine falcons have not been observed on the Project Site and are therefore not reported on-site.

A detailed assessment of potential raptor and bat mortality was provided in the Draft EIR. The Draft EIR biological resources reports provided in Appendix C provide focused bird and bat studies and associated risk assessments for aerial wildlife. Pre-construction data suggest that avian and bat fatality patterns at the Project would likely be similar to those documented at the Hatchet Ridge Wind Project. The County disagrees with the statement in the comment that “most of the bats and raptors located within in (sic) the project area will be killed off.”

- P29-12 The commenter’s opinion about the Hatchet Ridge project post-construction avian mortality studies does not relate to the adequacy of the Draft EIR. See Final EIR Section 2.1.1, *Input Received*.
- P29-13 The rotational speed of wind turbines is not regulated by state or federal agencies, and need not be stated in the EIR for a full examination of potential impacts to avian and bat species. PCMM studies would be developed in coordination with USFWS and CDFW. The comment also states that blades nearly 700 feet in the air; which is similar to the description provided in the Project Description (Draft EIR page 2-38), which describes the maximum potential overall height to be 679 feet tall, as measured from ground level to vertical blade tip.
- P29-14 The comment describes what is perceived as a flaw in post-construction avian mortality monitoring for a wind project in Solano County. However, it does not bear on the adequacy of the Draft EIR. See Final EIR Section 2.1.1, *Input Received*.
- P29-15 As described in Response P29-8, goshawk surveys detailed in Draft EIR Appendix C11 were performed by qualified raptor biologists to represent the most suitable nesting stands in close proximity to the Project Site. Surveys did not avoid the most favorable nesting habitat on the Project Site, as the comment contends. The implementation of Mitigation Measure 3.4-2 (Draft EIR at page 3.4-40 et seq.) would reduce potential impacts to nesting goshawk, if present, to less than significant by identifying species presence and providing adequate buffers to avoid direct and indirect impacts to active nests.
- P29-16 The comment states that the Draft EIR research avoided CSO habitat and goshawk habitat. Lacking further elaboration on this statement and the provided Google Earth

screen capture images, it is unclear how surveys avoided habitat for these species. Note that neither CSO nor northern goshawk are federally-listed species. Therefore, federal “critical habitat” is not designated for these species. The formal critical habitat polygon located north of the Hatchet Ridge facility was designated for the northern spotted owl, a species which does not occur and is not expected in or near the Project Site.

P29-17 As described in the Draft EIR (at page 3.4-11) northern spotted owls occur north of the Pit River, which is well outside of the Project Site. According to CDFW’s online BIOS database, most of the spotted owl observations associated with the comment, which includes northern spotted owl and CSO, are historic and have not been surveyed within the last 15 to 30 years. Hence, current survey data is not available to describe present conditions. CSO were not observed or detected during 2018/2018 avian surveys for the Project (which were not performed to the CSO protocol, but lacked detections nonetheless; see Draft EIR Appendices C6 and C7). In addition, Draft EIR Appendix C15, the *California Spotted Owl Risk Assessment*, found the potential risk to CSO posed by development and operation of the Project to be low, both in regard to loss of habitat during construction and as a result of collision fatalities. See also Response A3-48 regarding CDFW’s BIOS data.

P29-18 The comment shares a warning from “an insider” that golden eagles on occasion have attempted to nest within the 86 square mile area of the Altamont Wind Resource Area, but they fail. The Altamont Pass is commonly regarded as supporting the highest concentration of breeding golden eagles in the world.⁷⁶ While golden eagle mortality is high in the Altamont, the area also supports successful breeding by this species (Id.).

The commenter opines that the Project be more deadly to raptors than those in the Altamont due to the large amount of rotor sweep associated with the Project. This assertion is not true and is not supported by scientific data. As stated in Response P29-11, pre-construction data suggest that avian and bat fatality patterns at the Project Site would likely be similar to those documented at the Hatchet Ridge Wind Project facility.

The final portion of the comment attempts to link the loss of 23 spotted owl territories, lumping northern spotted owl and California spotted owl, to operation of the Hatchet Ridge Wind Project. This assertion inaccurately describes the spotted owl data that was available in 2006, as presented in Comment P29-17; and presumes that all mapped spotted owl nesting territories were active in 2006. A cursory review of the 23 spotted owl observations dataset on the current CDFW BIOS viewer indicates that at least half of the “active” spotted owl activity centers have not been revisited since 1989 to 1990; while approximately nearly half have been revisited in the last decade. Additionally, many other northern spotted owl and CSO activity centers are reported that were not

⁷⁶ Hunt, W.G., R.E. Jackman, T.L. Hunt, D.E. Driscoll and L. Culp. 1998. A population study of golden eagles in the Altamont Pass Wind Resource Area: population trend analysis 1997. Report to National Renewable Energy laboratory, Subcontract XAT-6-16459-01. Predatory Bird Research Group, University of California, Santa Cruz.

known in 2006.⁷⁷ As the data shows, the location and density of northern spotted owl and CSO in the regional landscape varies over time. There is no evidence to suggest that their distribution has changed appreciably or negatively due to construction and operation of the Hatchet Ridge Wind Project.

- P29-19 The comment states that most of the bats living around the Project Site will be wiped out due to the turbine rotor sweep. This opinion differs from the findings of the Bat Acoustic Survey Report (Draft EIR, Appendix C9), which conclude from bat acoustic data that bat fatality patterns at the Project would likely be similar to those documented at the Hatchet Ridge Wind Project (2.23 – 5.22 bats/MW/year). If these observed fatality levels hold true for the Project, annual injury or fatality of bats are not expected to exceed thresholds identified in Mitigation Measure 3.4-3b (i.e., injury or mortality to three or more bats of a single species identified as Western Bat Working Group high priority (red) species in a given year; or injury or mortality to six or more medium priority (yellow) species in a given year; and therefore are not expected to produce population level impacts to common or special-status bats. The comment states that bat search trials in the Altamont that relied upon longer, 30 to 90-day search cycles, were much less efficient at finding dead bats than using 40-meter search areas with 2-day search cycles. The comment is noted, but does not reflect upon the adequacy of the Draft EIR. See Final EIR Section 2.1.1, *Input Received*.
- P29-20 The comment asserts that survey equipment for the Bat Acoustic Survey Report (Draft EIR, Appendix C9) was intentionally located away from bat foraging areas, and that more bats would have been detected if survey equipment had been positioned in open areas near water. As described in the bat survey report, sampling stations were intentionally placed throughout the site to sample bat activity within the potential rotor-swept zone of wind turbines. The goal was not to census bats within prime foraging areas, or to estimate the maximum number of bats that use areas that are distant from turbine sites. The comment singles out the monitoring results for the station that was placed in a riparian meadow considered attractive to bats. The objective of this location was to provide an upper reference of bat activity at the Project Site. Anticipated bat fatalities are characterized in Draft EIR, Appendix C9 and presented in Impact 3.4-13 (at page 3.4-60) and Impact 3.4-18 (at page 3.4-75 et seq.). As described in the Draft EIR, turbine operation could have high mortality rates at both the Project level and cumulatively even despite the implementation of adaptive management approaches such as turbine curtailment and bat deterrence methods. As the Draft EIR discloses, even with protective measures, the Project's contribution to the cumulative impact to bats would remain significant based on the uncertainty associated with mortality estimates, the potential for unexpectedly high mortality rates, and the uncertainty regarding whether cumulative impacts could result in population-level declines to bat species.

⁷⁷ CDFW, 2020.

- P29-21 The comment states that “where there is water and clearings there is bat habitat” and goes on to assert that that turbine locations will create clearings that will attract bats. In the absence of water within cleared turbine locations, these areas are unlikely to concentrate insect forage and should not attract large numbers of foraging bats.
- P29-22 The comment presents data from the Criterion Wind project, presumably located on Backbone Mountain east of Oakland, Maryland. The commenter then asks whether bat carcasses are collected ahead of formal searches and if this practice is an industry trade secret protected by law. The information and question presented by the commenter have been reviewed and included in the record, but do not bear on the adequacy of the Draft EIR. To the County’s knowledge, such carcass collection is not anticipated on the Project Site. Furthermore, the event reported from the Maryland project is not understood to be consistent with any accepted post-construction monitoring methodology or practice. If the County were to discover that this activity were occurring on the Project Site, then it would be outside the MMRP protocol and subject to enforcement. See Response P21-12 for more information about the MMRP.
- P29-23 The described eyewitness observations regarding the Criterion Wind project in Maryland is acknowledged, but does not bear on the adequacy of the Draft EIR. See Final EIR Section 2.1.1, *Input Received*.
- P29-24 The status of the Margaret Lake bald eagle nest is described in Response P29-10. While the comment speculates as much, there is no evidence that the Hatchet Ridge Wind Project caused the Margaret Lake bald eagle nest to fail in any year, let alone in every year since 2010. In addition, the comment also attempts to interpret monitoring data from Draft EIR Appendix C12, the *2018 Eagle Nest Status Survey Report*, as nest failures attributable to the Hatchet Ridge Wind Project. Although focused raptor surveys are no longer required for that project, project personnel are required to report eagle mortality, if and when identified. To date, bald eagle mortality has not been documented for the Hatchet Ridge Wind Project. Hence, the connection between bald eagle nest failures and this project has not been validated.

The comment takes issue with the change in eagle nest survey techniques from aerial helicopter surveys in 2017 (Draft EIR Appendix C10) to ground-based surveys in 2018 (Draft EIR Appendix C12), citing the change as a survey flaw. We note that the USFWS (2020) updated Eagle Survey protocol references ground-based and aerial-based surveys, which validates the multi-year survey conducted for the Project (e.g., see Comment A4-11). As the commenter notes, skilled raptor biologists can work effectively from the ground.

The commenter is correct that photograph of nest 308, a large unoccupied eagle nest, is the same in the 2017 and 2018 reports. The 2018 survey was done terrestrially and documented nest 308 as occupied and in use.

- P29-25 The detailed avian studies appended to the Draft EIR provide an extensive description of golden eagles and bald eagles (see Appendices C10, C12, and C13), CSO

(Appendix C15), and northern goshawk (Appendix C11) on the Project Site. Additional avian use studies also characterize site use by these and other avian species. The Draft EIR and the above-mentioned reports also provide risk assessments for each of these species.

- P29-26 The commenter takes issue with the scientific rigor of the Hatchet Ridge avian mortality studies, and questions the applicability of such study findings to this Project. The County deems that post-construction avian mortality studies performed for the Hatchet Ridge project were performed by qualified avian ecologists and meet accepted scientific standards.
- P29-27 The comment does not cite a deficiency in the Draft EIR analysis, and is noted.
- P29-28 The comment describes the hazards that some wind facilities pose to nocturnal migrant songbirds. As discussed in Response A3-15 and presented in Draft EIR Appendix C7, the results of post-construction monitoring at the Hatchet Ridge Wind Project suggest no apparent disproportionate impacts to nocturnal migrants from the Project. This discussion is summarized in the revised Impact 3.4-9, and is considered less than significant. To effectively assess potential Project impacts on nocturnal migrants, as described in Response A3-19, Mitigation Measure 3.4-3b has been clarified such that the PCMM applies to all avian species encountered during ground searches. Such monitoring would commence immediately following the beginning of commercial operation.
- P29-29 The County acknowledges receipt of these general recommendations regarding the accuracy and completeness of research relied upon in environmental analyses for wind projects. Adherence to the commenter's recommended criteria is not required for surveys and scientific research to be credible, reliable, and to provide substantial evidence for the Project EIR. See Response P29-4.
- P29-30 The County acknowledges, but disagrees with, the commenter's opinion of the sufficiency of the EIR as an informational document. The Hatchet Ridge Wind Project data that has been considered in the Draft EIR for this Project has been reviewed and determined to be reliable as a source of information about the potential impacts of the proposed Fountain Wind Project. It has been considered together with the information and analysis documented elsewhere in the EIR. The commenter's questions about the reliability and accuracy of the Hatchet Ridge Wind Project data are noted, but do not render the Fountain Wind Project EIR insufficient.
- P29-31 As explained in Draft EIR Section 1.4.5 (at page 1-7), "The Planning Commission will review and consider the Final EIR before taking action on the Project." See also Section 1.4.6, *Findings of Fact* (at page 1-7 et seq.).

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CALIFORNIA WILDLIFE FOUNDATION
428 13th Street, Suite 10A
Oakland, CA 94612



WWW.CALIFORNIAWILDLIFEFOUNDATION.ORG
tel 510.208.4436
fax 510.268.9948



October 21, 2020

Lio Salazar, Senior Planner
Shasta County Department of Resource Management,
Planning Division
1855 Placer Street, Suite 103
Redding, CA 96001

Via email: fw.comments@co.shasta.ca.us, lsalazar@co.shasta.ca.us

RE: Draft Environmental Impact Report (DEIR) for the proposed project identified as the Fountain Wind Project (Use Permit 16-007)

Dear Mr. Salazar:

California Wildlife Foundation/California Oaks, Californians for Western Wilderness (caluwild.org), Endangered Habitats Conservancy (ehleague.org), River Ridge Institute (riverridgeinstitute.org), and Shasta Environmental Alliance (ecoshasta.org) are writing as members of California Oaks Coalition regarding the Draft Environmental Impact Report (DEIR) for the proposed project identified as the Fountain Wind Project. Members of California Oaks Coalition are united by the vital roles of oaks in sequestering carbon, maintaining healthy watersheds, providing habitat, and sustaining cultural values.

Unfortunately our review of the DEIR found many deficiencies, which are described below.

Inadequate impact area and oak analysis

Figure 3.4-1, Natural Vegetation Communities Found within the Project Site presented on page 3.4-5 of the DEIR, and reproduced in Attachment 1 of this letter, only shows vegetation communities proximate to turbines and roads. It is ludicrous to assume that project impacts are limited to the *immediate* vicinity of the project infrastructure. The DEIR’s Project Overview (ES.2.1.) states: “The Fountain Wind Project is a renewable wind energy generation development proposed on approximately **4,464** acres in unincorporated Shasta County (Project Site),” whereas page 1 of the Executive Summary of Appendix C, Biological Resources, states: “The proposed Project encompasses approximately **32,600** acres (50.9 square miles) of private land in central Shasta County.” By confining the analysis to 4,464 acres rather than 32,600 acres, many of the project impacts are not properly assessed. The removal of habitat to accommodate project infrastructure will impact habitat connectivity over an area greater than 4,464 acres.

P30-1



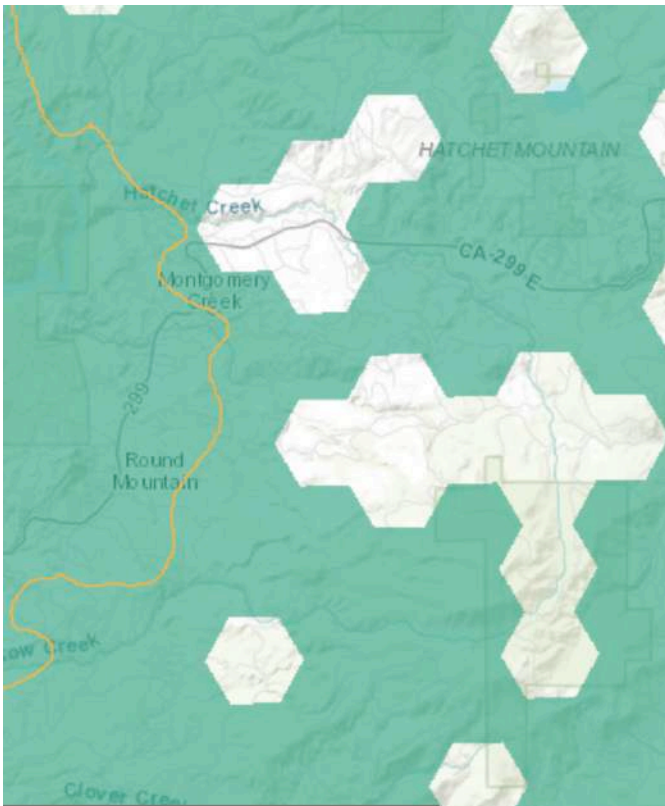
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Draft Environmental Impact Report (DEIR) for the proposed project identified as the Fountain Wind Project

Table 3.4-1, Natural Vegetation Communities Present and Area within Project Site and Alternatives, lists the project site as 4,373.1 acres, and it shows project impacts on 5.5 acres of oaks (California Black Oak Woodland) under Alternative 1 and no impacts under Alternative 2. The DEIR must identify all of the impacted oaks on the site and address the retention requirements addressed in the discussion of the California Board of Forestry and California Fish and Game Commission Joint Policy on Hardwoods, which follows on page 3 of this letter.

P30-1
cont.

The screenshot below was created utilizing the Department of Fish and Wildlife’s Areas of Conservation Emphasis mapping tool (<https://apps.wildlife.ca.gov/ace/>). The green hexagons are mapped as oak:



P30-2

The DEIR, including its Appendix C, discusses oaks in other plant communities, but not in a sufficiently robust fashion. For example, Page 3.4-6 of the DEIR contains general language about black oak in White Fir–Douglas-Fir Forest Alliances. Page 9 of Appendix C, Biological Resources, states: “...2.2% of the Project Area is covered by small amounts of deciduous forest (334.85 acres [0.52 mi²]),” but does not identify hardwoods growing in other plant communities. This is relevant because the Forest Practices Act has the following requirement for the Northern Forest District, which includes Shasta County, for black oak and Oregon white oak:

Post-harvest deciduous oak retention for the maintenance of habitats for mule deer and other hardwood-associated wildlife shall be guided by the Joint Policy on Hardwoods between the California Board of Forestry and California Fish and Game Commission (5/9/94). To sustain wildlife, a diversity of stand structural and seral conditions, and tree size and age classes of deciduous oaks should be



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Draft Environmental Impact Report (DEIR) for the proposed project identified as the Fountain Wind Project

retained in proportions that are ecologically sustainable. Regeneration and recruitment of young deciduous oaks should be sufficient over time to replace mortality of older trees. Deciduous oaks should be present in sufficient quality and quantity, and in appropriate locations to provide functional habitat elements for hardwood-associated wildlife.

Further, the Joint Policy on Hardwoods states:

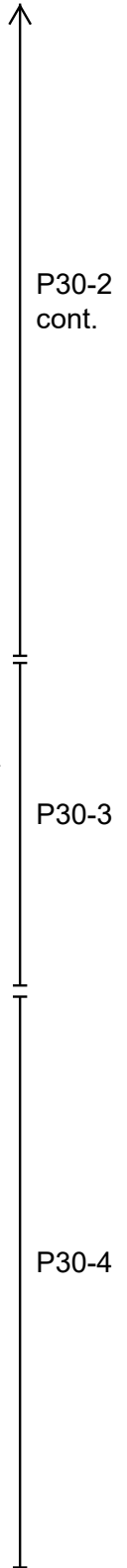
- A. The hardwood resources of California should be managed for the long-term perpetuation of their local and broader geographic representation and to continue to provide for their inherent natural and biological values and processes. These values and processes may include, but are not limited to, regeneration, plant species composition, vegetation structure and age class distribution, water quality, and other biotic and abiotic resources. Management should also address soil resources, air quality, rangeland improvement practices, recreational opportunities, and other benefits.

... hardwood harvesting and other land uses should be conducted in a sustainable manner which secures regeneration of all hardwood species, enhances the protection of fish, wildlife and plants of hardwood habitats, allows adequate recruitment of other native vegetation in hardwood habitats and meets state and federal water quality standards...

The map in Attachment 2 of this letter, Figure FW-1, *Deer Ranges*, shows much of the project site is a *fall holding area* for deer. If the project were to go forward, the environmental analysis and associated mitigation approach would need to address the requirements discussed in the Joint Hardwood Policy. The DEIR has a number of discussions of deer populations, with discussion of possible interactions with project infrastructure. It needs to also include analysis of proposed project impacts on hardwoods with consideration for deer populations given that the habitat fragmentation impacts extend from the roadways, turbine towers, and other associated infrastructure. Any other hardwood impacts in the 32,600-acre footprint of the project should also be assessed, and mitigation—the DEIR currently has no mitigation for hardwood impacts—should also be calculated based on the project’s full impacts.

Page 3.4-34 of the DEIR describes Shasta County’s oak canopy retention guidance. Unfortunately the statement, below, that these guidelines are considered in the analysis, is incorrect given that the DEIR only describes a small percentage of the oaks on the site, includes no discussion of any plans to retain oaks, no discussion of current oak canopy, and does not include any mitigation measures for impacts to oaks:

Oak Woodland Voluntary Management Guidelines The County adopted these voluntary guidelines in 1995 to encourage retention of an average canopy of 30 percent or more when harvesting oaks, including trees of a variety of species, ages, and conditions, as well as brush piles, hollow trees and other habitat components. The guidelines recommend the clustering of buildings, protection of residuals, and replacement of removed trees when building occurs among oaks. Development, including roads, cuts and fills, foundations and septic systems should be carefully planned to avoid impacts. The guidelines also recommend landowners consider replacing trees unavoidably removed during construction, and contact a specialist for help maintaining large or specimen trees. Because oak woodland habitat is present within the Project Site, these guidelines are considered in the analysis.



Comment Letter P30

Draft Environmental Impact Report (DEIR) for the proposed project identified as the Fountain Wind Project

Cultural, environmental justice, and climate impacts

The black oaks on the proposed project site are also living cultural resources for the Pit River Tribe. Acorns have been gathered as a major food source for thousands of years.

CWF/CO shares the Pit River Tribe’s concerns, which were articulated at a scoping meeting about the project and reported in the *Redding Record Searchlight* (<https://www.redding.com/story/news/local/2019/01/25/eastern-shasta-county-theres-skepticism-fountain-wind-project/2671702002/>), that the site will scar land that has been part of the tribe for many years.

P30-5

Pit River Tribe also raised the issue of extractive energy production in a low opportunity area to produce energy to be used elsewhere. The *Record Searchlight* reported:

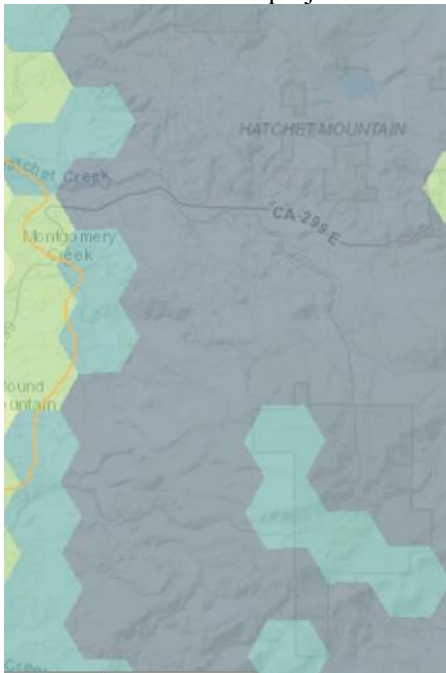
Brandy McDaniels, cultural information officer with the Pit River tribe, said projects like Fountain Wind take advantage of economically depressed areas like eastern Shasta County, and in the end, the power that is produced is transmitted to other areas.

“This means if a city wants the power, they need to generate it and not put it in our backyard,” she said.

CWF/CO appreciates the need for California to adhere to climate goals, but a project such as Fountain Wind is an ill-conceived approach. As Ms. McDaniels observed, the sustainable path is for energy to be produced close to where it is needed (see: <https://www.vox.com/energy-and-environment/2018/11/30/17868620/renewable-energy-power-grid-architecture>).

P30-6

Lastly, most of the proposed project area is mapped with Terrestrial Climate Resiliency ranking of 5 (high) as designated by the dark hexagons in the graphic presented below, created with Department of Fish and Wildlife’s Areas of Conservation Emphasis mapping tool. The purported climate benefits of the project are diminished if climate resilient habitat is destroyed:



P30-7

Comment Letter P30

Draft Environmental Impact Report (DEIR) for the proposed project identified as the Fountain Wind Project

Violation of California Environmental Quality Act

The DEIR violates the California Environmental Quality Act (CEQA) because it does not provide a preferred alternative and thus does not provide the public with a stable project to review.¹

P30-8

Fire danger


The catastrophic Fountain Fire in 1992, very high fire severity hazard zone designation by CAL FIRE, the extent and severity of the 2020 fire season in the western United States, and the implication of transformer boxes in a number of California’s largest fires further underscore the problematic nature of the Fountain Wind proposal.

P30-9

Thank you for your consideration of our comments. We welcome your inquiry should additional input be helpful. The project should not be approved.

P30-10

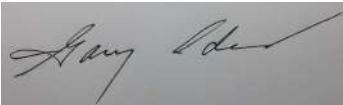
Sincerely,



Janet Cobb
Executive Officer, California Wildlife Foundation



Angela Moskow
Manager, California Oaks Coalition



Gary Adest, Ph.D., President, River Ridge Institute, info@river-ridge.net



David Ledger, President, Shasta Environmental Alliance, dledger@sbcglobal.net



Michael J. Painter, Coordinator, Californians for Western Wilderness, mike@caluwild.org



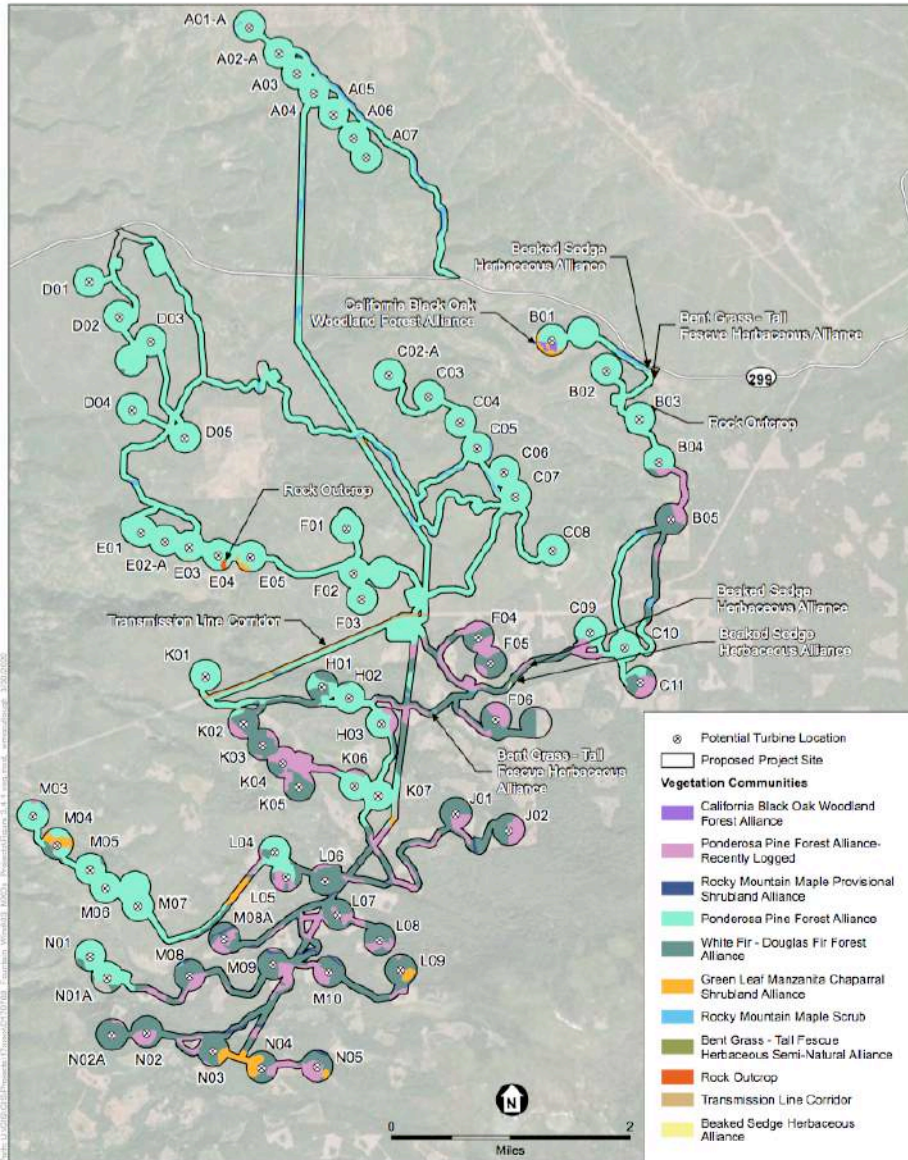
Dan Silver, Executive Director, Endangered Habitats League, dsilverla@me.com

¹ See: <https://www.californialandusedevelopmentlaw.com/2017/11/22/failure-to-identify-preferred-alternative-dooms-eir/> and <https://www.lwlegal.com/news/environmental-impact-report-that-describes-alternate-projects-under-consideration-does-not-satisfy-ceqa>.

Comment Letter P30

Draft Environmental Impact Report (DEIR) for the proposed project identified as the Fountain Wind Project

Attachment 1



SOURCE: WEST Rare Plant & Natural Vegetation Communities Report; 2018/2019

Fountain Wind Project

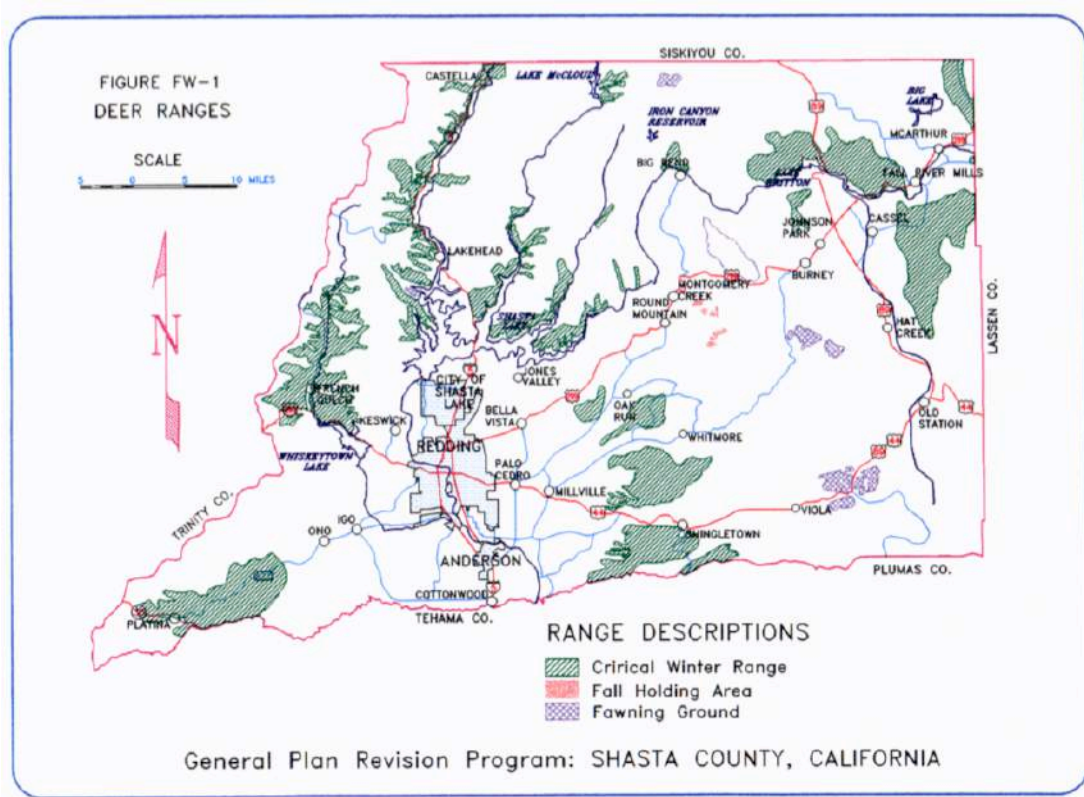
Figure 3.4-1
Natural Vegetation Communities Found within the Project Site



3.4-5

P30-11

Attachment 2



P30-12

Letter P30: California Oaks Coalition

P30-1 Consistent with CEQA, the Draft EIR analyzed potential biological impacts of the project development. The fact that the property ownership encompasses a much larger area than the Project will develop does not require an expanded examination of the Project impacts. The Draft EIR analyzed the potential impacts relating to wildlife habitat connectivity in Impact 3.4-17 (at page 3.4-66 et seq.) and found potential impacts to be less than significant. The Project would not result in adverse impacts to movement of any native resident or migratory fish or wildlife species or interfere with established native resident or migratory wildlife corridors. Where directed by state and federal survey guidance and protocols, a larger area of analysis (i.e., beyond the 4,464-acre Project Site) was used for certain species to refine the Project baseline and assess potential impacts. For example, the survey area for golden eagle and bald eagle considered the Project Site plus a 10-mile surrounding buffer and the California Natural Diversity Database (CNDDDB) searches run during the preparation of the EIR considered the area within and beyond the larger leasehold area within which the Project Site is located. Hence, when necessarily as dictated by state and federal guidance, the area of analysis extended beyond the immediate Project Site.

P30-2 The comment states that the Draft EIR must identify all impacted oaks on the site and address the retention requirements addressed in the discussion of the California Board of Forestry and California Fish and Game Commission Joint Policy on Hardwoods. As identified in Draft EIR Table 3.4-1 (at page 3.4-4), 5.5 acres of black oak woodland occur within the Alternative 1 Project Site; while none occurs within Alternative 2 area. All of the identified oak woodlands occur within the 700-foot-radius study area around turbine BO1. Upon reviewing this particular turbine pad, and site clearing and operations needs for clearing, total Project-level impact to black oak woodlands are estimated at less than 1 acre. The Project Description included in the Draft EIR (at page 2-18) describes that a 5-acre area would be cleared around each turbine to create a crane pad, construction laydown area, and rotor assembly area. This area equates to an approximately 263-foot radius around the turbine pad, and is much smaller than the 700-foot study buffer used to examine impacts in the Draft EIR. Based on this refined impact analysis, up to approximately 0.90 acre of black oak woodland would be removed by the Project under Alternative 1 (see Figure 1 in Final EIR Appendix H). No other oak woodland habitat was identified on the Project Site.

The following text, which is relevant to the context for oak woodland protection, is added to the State regulatory framework discussion on Draft EIR page 3.4-34, following discussion of the Z'Berg-Nejedly Forest Practice Act:

California Oak Woodlands Conservation Act

Oak woodlands are protected at the state level by the California Oak Woodlands Conservation Act (Public Resources Code §21083.4), which requires a county to determine whether a project in its jurisdiction may result in a conversion of oak woodlands that will have a significant effect on the environment, and would

require the county, if it determines there may be a significant effect to oak woodlands, to require one or more of specified mitigation alternatives to mitigate the significant effect of the conversion of oak woodlands.

The Draft EIR treats black oak woodland as a sensitive vegetation community. Therefore, under the county's Oak Woodland Voluntary Management Guidelines. Among other recommendations, the guidelines recommend the replacement of removed trees when building occurs among oak woodland habitat.

In 1995, the County adopted voluntary oak woodland management guidelines to encourage retention of an average canopy of 30 percent or more when harvesting oaks. As described above, the small amount of black oak woodland habitat that may be removed by the Project is consistent with this voluntary guidance. As described in Draft EIR section 4.1.4.3, Environmental Considerations Unaffected by the Project or Not Present in the Project Area, Biological Resources, the Project and alternatives would have no impact upon local policies or ordinances protecting trees because Shasta County does not have a tree protection ordinance, nor any language regarding tree preservation or heritage trees in the General Plan (see Section 3.4.1.3, Regulatory Setting). No changes are warranted to the Draft EIR in response to the comment.

- P30-3 As described in Response P30-1, the Project would not result in adverse impacts to movement of any native resident or migratory fish or wildlife species or interfere with established native resident or migratory wildlife corridors. Response P30-1 also considers the potential biological study and analysis needs outside of the Project Site. Response P30-2 describes the County's voluntary tree and hardwood protections.

The County acknowledges receipt of this copy of Figure FW-1, *Deer Ranges*, from the County's General Plan. The Draft EIR (at pages 3.4-15, 3.4-27, 3.4-67, 3.6-2, 3.6-16) discloses and considers that the Project Site has suitable habitat for deer fawning and that mammals found in mixed conifer forest include deer. In any conflict among the protection of habitat resources and the timber land use classification, General Plan Policy FW-b instructs that the timber land use classification "shall prevail in a manner consistent with State and Federal laws."⁷⁸

- P30-4 See Response P30-2.

- P30-5 The commenter notes that black oaks are living cultural resources for the Pit River Tribe and that acorns have been gathered as a major food source. Section 3.6.1.2, *Environmental Setting* (at page 3.6-3), recognizes that the availability of acorns and acorn processing is essential to the subsistence pattern of the indigenous people of the region, and that the area provided, and still provides, a rich resource base that was

⁷⁸ General Plan Policy FW-b provides as follows: "Recognition that classification of some fish, wildlife, and vegetation resources designated and used as Timberlands, Mineral Resource, Croplands, or Grazing lands does, in most cases, protect habitat resources. However, if there is a conflict, the timber, mineral extraction, or agricultural land use classifications mentioned above shall prevail in a manner consistent with State and Federal laws."

utilized by both prehistoric and historic Native American populations. See Response T4-1 for more information about the Draft EIR’s consideration of acorns.

- P30-6 The commenter’s support of climate goals and preference that energy be produced close to demand centers is acknowledged, but do not bear on the sufficiency of the EIR. See Final EIR Section 2.1.1, *Input Received*.
- P30-7 The Draft EIR evaluates the Project’s potential impacts on greenhouse gas emissions in Section 3.10. Regarding habitat removal, the Project’s potential carbon sequestration-related impacts, including from tree removal, are analyzed in Draft EIR Section 3.10, *Greenhouse Gas Emissions*. See pages 3.10-11 and 3.10-12, which describe the methodology used, and the analysis of Impact 3.10-1 (at page 3.10-13 et seq.). See also Table 3.10-2, *Estimated Annual Operational Greenhouse Gas Emissions* (at page 3.10-16), which expressly considers the amortized loss of carbon sequestration over 40 years in the context of the Project.
- P30-8 Draft EIR Section 4.3 (at page 4-2) identifies the No Project Alternative as the Environmentally Superior Alternative and, among the remaining alternatives, explains that the analysis could support a conclusion that either the Project or Alternative 2 were environmentally superior. As explained in Section 4.3, “Additional information received in or developed during the agency and public review period for the Draft EIR, or during the project approval process, could affect the balancing of the respective benefits and consequences of the alternatives.” Information received and developed following publication of the Draft EIR does not change the initial conclusions reached in the Draft EIR. Acknowledging that information received or developed during the project approval process could affect the balancing of the respective benefits and consequences of the alternatives, as of the drafting of the Final EIR, either the Project or Alternative 2 could be determined to be the Environmentally Superior Alternative.
- See Response P20-15 regarding the adequacy of the project description.
- P30-9 The commenter’s opinion that the Project is “problematic” based on wildfire risks is acknowledged. The Draft EIR analyzes impacts relating to Wildfire in Section 3.16 (at page 3.16-1 et seq.). The comment does not identify any deficiency in the accuracy or adequacy of the analysis.
- P30-10 The stated opposition to the Project is acknowledged and has been included in the record, where the County may consider it as part of the decision-making process.
- P30-11 Receipt of this copy of Draft EIR page 3.4-5 is acknowledged.
- P30-12 See Response P30-3 regarding this Shasta County General Plan figure showing deer ranges.

Comment Letter P31

Dogwood Acres LLC
19697 US Highway 89
Hat Creek, CA 96040
dogwoodacresllc@gmail.com

21 October 2020

Shasta County Department of Resource Management, Planning Division
1855 Placer Street, Suite 103
Redding, California 96001

RE: Fountain Wind Project Draft Environmental Impact Report

To Whom it May Concern:

Dogwood Acres LLC is a landholder of 60 acres in the Fountain Wind Project area. The purpose of the LLC is to preserve and protect the natural environment, and we do see that climate change is a major threat. We recognize the effort of the Fountain Wind Project to provide a major carbon-free source of energy, and at the same time are concerned that the project development could harm the natural environment we enjoy on our property. **Upon review of the Draft Environmental Impact Report (DEIR), members of our LLC would like the environmental plan to implement a modification to Alternative 2.** In support of this option, we include the following issues that relate to our stewardship of the property owned by Dogwood Acres, LLC.

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└ P31-1

- 1) The DEIR states that the entire Leasehold Area is managed for timber or for timber harvest. (eg Section ES.2.2, Section 3.1.4.2 on p. 3.4-3) This statement is incorrect and misleading. APN's 029-210-24, 25, 26, and 28 are managed under an LLC operating agreement that emphasizes natural and wildlife resources conservation and recreational values and enjoyment, not timberland management or timber harvest. Although these land uses are not inconsistent with the General Plan designation of Timber, it should not be represented that these parcels are managed equivalent to surrounding ownerships which are managed for timber harvest. It should be acknowledged by the DEIR, and reflected in its

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└ P31-2
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Comment Letter P31

- analysis pursuant to CEQA and its Guidelines, that the 60 acres are an “inholding” within the confines of the Leasehold Area that are specifically managed for preservation and protection of the natural environment, not for timber harvest. Moreover, these 60 acres and adjacent inholdings comprise 7 parcels, each of which can accommodate a single family residence per its U-unclassified zoning.
- 2) Section 3.16.1.2 *Factors Contributing to Impacts from Wildfire* fails to note that residential inholdings such as the 60 acres held by Dogwood Acres LLC may be impacted by fire escape and access issues within the Leasehold Area and the Project Site. Dogwood Acres LLC holds prescriptive rights to access its lands via Terry Mill Road, from Round Mountain east to its lands and from Hatchet Ridge summit west to its lands. Dogwood Acres LLC is concerned that the turbine sites, which may have restricted access gated entries, may restrict ingress and egress in the event of wildland fire (or other emergency needs such as medical emergency). Thus the effects on these 60 acres in regards to potential emergencies have not been adequately addressed. We suggest that free access without prior notice be assured to Dogwood Acres LLC, to assure timely ingress and egress for emergency services including but not limited to wildland fire.
- 3) Alternative 2 has setbacks proposed of 2,037 feet for residential areas, and 1,018.5 feet of Terry Mill Road. The cabin, used as a residence for LLC members when at the property, lies within that buffer zone of Terry Mill Road. The boundaries of the LLC property seem to lie (within the accuracy of the map presented in the DEIR) less than 2,037 feet from turbine locations L04, K03 and K04, and possibly of K02, K05 and L05. We believe the turbine sites must be located so that the visual and sound environment within the buffer zone is not disturbed.
- 4) Of particular concern to us is a potential Batch Plant, located between turbines K04 and K05. Batch plants are significant sources of noise and dust pollution, which can adversely affect wildlife resources, and thus run counter to the purposes for which we hold title to the land. We strongly desire that this Batch Plant be removed or relocated from this
- P31-2
cont.
- P31-3
- P31-4
- P31-5

Comment Letter P31

position to provide a suitable buffer from private inholdings such as Dogwood Acres LLC.

↑ P31-5
| cont.

- 5) In addition to the above concerns, we seek assurances, as asserted in the DEIR, that Terry Mill Road will not be further developed or used as a project artery. An increase in traffic, or realignment of this road would seriously impact the peaceful enjoyment of the Dogwood Acres LLC property. We also desire assurance that, as land owners, free access to our property along Terry Mill Road from both Round Mountain and Hatchet Pass will be maintained. This includes the understanding that we will be provided continued access through any possible locked gates that currently exist or may be installed along the route.

| P31-6
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| P31-7

In summary, we request a modified Alternative 2 to the DEIR as reflected in this letter. Thank you for your kind attention to this matter.

Sincerely,
DOGWOOD ACRES LLC

Tim Mallory, Chairperson

Letter P31: Dogwood Acres LLC, Tim Mallory

- P31-1 The County acknowledges receipt of this request to modify *Alternative 2, Increased Setbacks*, which was described in Draft EIR Section 2.5.3.3 (at page 2-38 et seq.).
- P31-2 In response to this comment, Draft EIR Section ES.2.2 has been revised to improve accuracy as follows:
- The approximately 4,464-acre Project Site is located within an approximately 29,500-acre area that comprises 76 Shasta County Assessor's parcels (APNs). The 76 APNs consist exclusively of private property operated and managed primarily as forest timberlands. There are private properties that occur within the vicinity of the 29,500-acre leasehold area, including seven parcels that are managed pursuant to an LLC operating agreement that emphasizes natural and wildlife resources conservation and recreational values and enjoyment. These properties are not associated with the Fountain Wind Project. The Project Site is located approximately 1 mile west of the existing Hatchet Ridge Wind Project, 6 miles west of Burney, 35 miles northeast of Redding, immediately north and south of California State Route 299 (SR 299), and near the private recreational facility of Moose Camp and other private inholdings.
- P31-3 See Response P26-64 regarding the Draft EIR's consideration of potential impacts relating to ingress and egress. The Project has not proposed to restrict ingress and egress to private properties, including those referenced by Dogwood Acres LLC. No significant impact to ingress/egress from this property is anticipated; however, disputes regarding access are outside the scope of the EIR.
- The request that free access without prior notice be provided to Dogwood Acres LLC, is acknowledged and has been included in the record where it may be considered by County decision-makers and the Applicant. However, is beyond the scope of the CEQA process for this Project.
- P31-4 It is not clear from the comment where exactly, or how much closer than 2,037 feet, the cabin is located. County building and appraisal records provide no indication that properties owned by the LLC have been historically or recently improved with a structure or other improvements necessary to establish a residential use such as an on-site sewage disposal system or improved water source. The County was not able to locate the cabin on a map, and no map, latitude/longitude, or other locational data was provided with the comments that would allow the County to investigate and confirm whether the boundaries of the LLC property (which the comment says "seem to lie") within the 2,037 distance identified as the residential threshold for Alternative 2. With such information, the County would confirm the distances between the cabin and turbine locations L04, K02, K03, K04, K05 and L05. If Alternative 2 is selected, and if the cabin is confirmed to be within the threshold distance, then the turbine locations that would be allowed under Alternative 2 would be adjusted accordingly. The County notes receipt of input from the Applicant based on its coordination with the commenter regarding the location of the cabin: "Mr. Mallory provided a verbal description of the cabin's approximate location, which appears to be located on Parcels 029-210-025 or 029-210-026. Although the exact position is unclear, the cabin's location on these parcels would not appear to affect the current turbine layout."

As indicated in Response P4-6, the distance to the closest residential receptor is disclosed in Draft EIR Section 3.3, *Air Quality* (at page 3.3-6), which states, “The nearest residence to any of the work areas on the Project Site are off Sycamore Road, approximately 1,900 feet to a construction staging area. The closest residence to any of the access roads on the Project Site are along Moose Avenue, at a distance of approximately 400 feet.” The potential impacts of vehicle emissions, noise, and vibration on sensitive receptors, including existing homes, are analyzed in Draft EIR Section 3.3, *Air Quality* (at page 3.3-1 et seq.) and Section 3.13, *Noise and Vibration* (at page 3.13-1 et seq.), respectively. Typical noise levels from construction equipment are provided in Draft EIR Table 3.13-5 (at page 3.13-20). Impact 3.13-1 (Draft EIR at page 3.13-22 et seq.) analyzes whether the Project would result in the generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. It concludes that a less-than-significant impact would result.

Whether the Project would result in the generation of excessive groundborne vibration or groundborne noise levels is analyzed in the context of Impact 3.13-3 (at page 3.13-32 et seq.). The analysis concludes that construction, decommissioning, and site reclamation of the Project would, with mitigation incorporated, cause a less than significant impact relating to the generation of groundborne vibration.

See also Response P4-1, which explains that CEQA does not protect private views.

- P31-5 See Response P31-4 regarding the Draft EIR’s analysis of potential impacts relating to Noise. The requested removal or relocation of the batch plant proposed between turbine locations K04 and K05 is acknowledged, and has been included in the record, where the County may consider it as part of the decision-making process. As described in Draft EIR Table 3.13-5 (at page 3.13-20), the concrete batch plant would result in a maximum noise level of 83 dBA at 50 feet. This noise level would be considered significant if the plant would be operated at night within 750 feet of the cabin. Based on the information provided by the commenter the distance to the cabin from the proposed batch plant is not known (see Response P31-4). For discussion of the dust emissions that would be associated with the concrete batch plant or trucking the concrete from offsite, refer to the last paragraph on Draft EIR page 3.3-16.
- P31-6 The Draft EIR describes and analyzes potential impacts of the Project and alternatives, including road use, to noise, vibration, transportation and the other resources identified in CEQA Guidelines Appendix G’s Environmental Checklist. The comment does not question the sufficiency of the analysis.
- P31-7 The commenter’s request for free access along Terry Mill Road from both Round Mountain and Hatchet Pass, including access through any locked gates, is acknowledged. See Response P26-64 and P31-3 regarding the Draft EIR’s consideration of potential impacts relating to ingress and egress.

Comment Letter P32

Lio Salazar

From: Jon Ferguson <jeferg67@gmail.com>
Sent: Wednesday, October 21, 2020 4:41 PM
To: Fountain Wind Project
Subject: Fountain Wind Draft EIR Comments
Attachments: FW Draft EIR Response.pdf

In addition to the attached letter, the fact that the company responsible for building the Fountain Wind Project plans on installing 800 foot tall wind turbines has not been addressed. This will inherently damper fire fighting air operations around our Recreational Camp that has been here for nearly 100 years. With the largest fire season on record in California it is imperative that this issue be FULLY addressed. The viewshed has not been properly documented with illustrations or images showing exactly what will be viewed from Moose Camp with 800 foot tall wind turbines. The fact that Shasta County has no offset regulations for these projects needs to be addressed as well.

P32-1
P32-2
P32-3
P32-4

Jon Ferguson



Virus-free. www.avast.com

Comment Letter P32

Moose Camp is surrounded by the Fountain Wind project. Moose Camp is mentioned in the FW draft EIR on at least twenty nine pages as to how the construction of seventy two six hundred seventy nine foot tall industrial wind turbines would disrupt our quiet, peaceful, residential neighborhood for twenty four months. The main road for construction of the project is less than one hundred feet from our property line.

P32-5

What is not mentioned in the FW draft EIR is the impact those industrial wind turbines would have on our residential neighborhood once they are towering over approximately 50 homes along with our community center, as close as 2200 feet away. Not designating Moose Camp as a “key observation point” (KOP) in the FW draft EIR is basically saying 75 Shasta county taxpayers do not matter to the county. The facts described in KOP 1 (Fountain Fire Overlook) which is a mile away from the nearest turbine are devastating and KOP 1 is twice as far away from the nearest wind turbines than is Moose Camp. Exact wording from FW draft EIR- (*i.e.* “Project turbines visible from this location would appear out of scale with what is visible in the rest of the view. The turbines would extend above the viewer’s perspective. This inferior viewer position to the project, in concert with its proximity, would accentuate the manner in which turbines would appear as darkened forms in afternoons when backlit by sunlight coming from the west.

P32-6

The turbines in this view would detract from the natural harmony of the existing view based not so much on any removal or obfuscation of natural elements but on their dominance of all other view elements. There are no similar structures to which they would relate, and without additional turbines in view, these two do not appear as a part of any broader pattern of development, within which some sense of order might be observed.”, “Nighttime lighting would be highly visible from this location and would introduce such lighting where none currently exists”)

Moose Camp needs to be added as a Key Observation Point to the final EIR. Our neighborhood of 50 homes is surrounded by proposed 679 foot tall wind turbines and we are by far the closest neighborhood to turbines in the entire project. To use the rationale that we are legally structured as a private recreational camp should not be an excuse for Shasta county to ignore the visual impact of this project on a neighborhood that has existed in the county for close to 100 years.

Moose Camp is demanding the removal of proposed wind turbines (D1 - D5) - If you have ever seen wind turbines in advertisements there is never a picture of a house in front of the turbine because the vast majority of industrial wind farms are located outside residential areas. This is clearly not the case with Fountain Wind. San Diego County code required that windmills

P32-7

Comment Letter P32

in the Tule Wind project (developed by Avangrid Renewables) be located 4 times the height of the turbines away from residences. In the state of Wyoming which has over 1000 industrial wind turbines (Avangrid & ConnectGEN are among the developers) and 1000's more planned, turbines must be located 5.5 times total turbine height away from residences. The FW alternatives listed in the draft EIR only remove one of the windmills (D5) we object to. The Fountain Wind project will still make plenty of money for the landowners in Australia (New Forests) and the project developers from Spain (Iberdrola), Portland, Oregon (Avangrid Renewables) and Houston, Texas (ConnectGEN). Shasta County officials should have the courage to do the right thing and tell the developers they need to remove five wind turbines from the 72 planned in order to gain approval of the project. Shasta County will still make plenty of tax revenue from the project with five less windmills than originally planned and a Moose Camp, a long established neighborhood, will not be ruined.

P32-7
cont.



P32-8

Google Earth view of the 50 Moose Camp residences, never shown in draft EIR.

Letter P32: Jon Ferguson

- P32-1 The Project does not propose to construct 800-foot tall wind turbines. See Response P20-15, which explains the relationship between the numbers, heights and locations of the proposed turbines.
- P32-2 Regarding potential impacts on aerial firefighting, see Response T3-3.
- P32-3 See Response P4-1 regarding Project impacts on views from Moose Camp.
- P32-4 See Final EIR Section 2.1.1, *Input Received*, which explains that requests that the County undertake a Countywide planning effort specific to the siting of wind energy generation projects are beyond the scope of the CEQA analysis for this Project.
- P32-5 These statements about Moose Camp and the EIR are acknowledged. To clarify, the Project would not result in the construction and operation of 72 turbines each 679 feet tall. See Response P20-15, which explains the relationship between the numbers, heights and locations of the proposed turbines.
- P32-6 Regarding potential effects of turbines and proximity to Moose Camp, see Response P4-1 and P4-3 regarding visual impacts, see Response P4-6 regarding noise and shadow flicker, Response P4-7 regarding surface waters and groundwater, Response T3-4 regarding water rights, Response P4-8 regarding the number of trips and vehicle types that could use local roads to access the Project Site, and Response P11-2 regarding potential impacts on use of the Moose Camp helipad.
- P32-7 See Response P4-3, which addresses a similar request that turbines not be erected in locations D1 through D5.
- P32-8 The County acknowledges receipt of this Google Earth view of Moose Camp. See Response P12-6, which explains that views seen from aerial photographs are “public vantage” points for purposes of CEQA.

Comment Letter P33

Lio Salazar

From: Rita Kauer <ritakauer@hotmail.com>
Sent: Wednesday, October 21, 2020 12:02 PM
To: Fountain Wind Project; Shasta County BOS
Cc: Rita Kauer; Rick Kauer
Subject: Fountain Wind Project/Moose Camp

To Whom it May Concern;

We are writing this letter to you to express our deep concern regarding the Wind Project - as it effects our Recreational Community - Moose Camp. As a community we have been fighting this project, not so much as stopping the entire project but stopping the wind mills that surround our community.

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Moose Camp Recreational has been there since the 1920's. It is NOT a camping ground where people come and set up tents etc it is an actual community with over 50 cabins, with a rich history of community, enjoyment and support for each other. In other words it is a sanctuary for all of us away from the realities of life. We do not want to see that our beautiful forests that surround us marred by huge wind mills.

In addition, we do not feel that Moose Camp was given serious consideration in the Enviromental report for the following issues were never considered:

- Designated "KOP" (Key Observation Point) within Moose Camp - photo simulations and accompanying comments for only neighborhood within project boundaries.
- Maps that show the 50 Moose Camp residences in relation to proposed wind turbines with distances from turbines noted
- Photo simulations and accompanying comments of all turbine views (every turbine that would be visible from a car along the route) of what drivers will see on Highway 299 driving from Round Mountain all the way to Burney and from Burney all the way to Round Mountain.
- Any mention of how wind turbines will affect Moose Camp helipad operation
- How wind turbines would affect CALFire ability to fight fires with helicopters and tanker planes?
- What effects of a large wildfire would be on residents of the surrounding area if wind turbines were to burn down? Specifically air quality effects from melted turbines?
- Effects of blasting along with construction and heavy use of roads surrounding Moose Camp on our 3 wells and water table in the area.
- Specific use of Moose Camp road and Moose avenue during and after construction of the project. How many trips and what kind of vehicles.

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├ P33-2
├ P33-3
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- The noise for months and months disrupting our community.
When everything is so dry how can you safely build without fear of starting fires.

┌ P33-8
├ P33-9
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- These are some of our main and important concerns that need to be addressed in the report. We just don't see how a project that will be so massive of an invasion to our land, when we won't even be using the power generated, is a good thing. We know that there are massive money credits etc being thrown out there but that is a short -sided goal when the long term problems need to be looked at too. Please take our concerns

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Comment Letter P33

seriously, Moose Camp along with the smaller towns may be just small in your map but it is a place many call home. There is a lot of land out there away from communities - go build on them

↑ P33-10
| cont.

~Rita Kauer and Richard Kauer, Moose Camp

Letter P33: Rita and Richard Kauer

- P33-1 The County acknowledges receipt of these concerns about the proposed Fountain Wind Project based on its potential impacts to the Moose Camp community.
- P33-2 See Response P4-1 and Response P4-3 regarding visual impacts. As noted there, simulations have been provided from representative viewpoints. See also Response P20-15, which explains that the Draft EIR's description of the project, including text and figures, is adequate for purposes of CEQA.
- P33-3 See Response P11-2 regarding potential impacts on use of the Moose Camp helipad.
- P33-4 Regarding potential impacts on aerial firefighting, see Response T3-3.
- P33-5 See Response P15-4.
- P33-6 See Response P15-5, which addresses these topics. See also Response P4-7 regarding potential impacts to surface waters and groundwater, including from blasting, if it occurs.
- P33-7 The Draft EIR discusses local access to the Project Site in Section 3.14.1.2 on page 3.14-2. Three existing access roads currently used for logging that intersect with SR 299 would provide local access to the Project Site, which are identified in the Draft EIR as West Access, North Access, and East Access. Neither Moose Camp Road nor Moose Avenue would be used for Project Site access during project construction or operation. Therefore, the Project would not result in any new vehicle trips on these roadways. See also Response P4-8, which clarifies that Moose Camp Road would not be used for Project purposes.
- P33-8 See Response P4-8 regarding the number of trips and vehicle types that could use local roads to access the Project Site.
- P33-9 The potential for Project construction to cause a fire is addressed in Draft Section 3.16, *Wildfire*. The commenter's question does not affect the sufficiency of the EIR. See Final EIR Section 2.1.1, *Input Received*.
- P33-10 The County has received and considered the stated concerns and has been included them in the record, where the County may further consider them as part of the decision-making process.

Comment Letter P34

Lio Salazar

From: Bob <rtkloe@gmail.com>
Sent: Wednesday, October 21, 2020 4:27 PM
To: Fountain Wind Project
Subject: comments with typos corrected

Here are my comments on the Environmental Impact Report (EIR). They are followed by three general comments.

1. The Executive Summary (ES) section 6.2 does not mention night light pollution caused by 152 flashing red lights required by the FAA for 72 wind turbines and 4 meteorological stations P34-1
2. ES 8, page ES-45. Reasoning in this paragraph is puzzling. The no Project according to a statement in this paragraph is environmentally superior. But says the writer of this section, wait until the final report and it will be identified as if the writer had not already identified it. The fact that the no Project does not meet the goals of the Project does not mean it is not superior with respect to the environment. To hold otherwise means that the Applicant alone can determine that the Project can go ahead. Revise this section so it makes sense. P34-2
3. Many of the mitigating steps stated in the EIR (to lessen an effect of the Project on the environment) do not state who is responsible to see that they are carried out. Nor do they state what the penalty is if they are not carried out. Specify each in every mitigating step. P34-3
4. Pages 3.9-1 through 3.9-5 does not recognize seismic activity arising out of blasting. Revise these pages accordingly. P34-4
5. Include solar power as an alternative. P34-5
6. Insert in the EIR what is meant by goal 7 of Section 2.3. P34-6
7. Figure 2-4(a) compares the size of the turbines to a pick up truck and a tree. Add to this comparison a building such as the Bank of American Building in San Francisco and the tallest building in Redding to more clearly indicate how really huge these turbines are. To put this in further perspective, an internet search indicated that San Francisco has only two buildings 670 feet or larger – not even close to the 72 structures proposed. P34-7
8. Revise Figure 2-4(a) to illustrate the actual proposed height of the turbines. The figure shows a turbine that is 100 feet shorter than what is proposed. P34-8
9. In Figure 2-5 identify where the access roads from CA299 to the Project are. P34-9
10. In the various photos of Section 2.2 insert a simulated turbine to scale to show how large it is and in turn how it will stand out from its surroundings. P34-10
11. Throughout section 3.2 in all statements of the obligations the Applicant is taking on change “would” to –shall–. For example, in section 3.2 the mitigation steps are introduced with the verb “would”. This word means the Applicant intends to do something as opposed to “shall” which obligates the Applicant to do something. To see the difference compare the sections on mitigation of fire hazards in section 3.16 with the mitigation steps stated in section 3.2. P34-11
12. In section 3.2 a few statements are made that trees and structures along CA 299 will hide the turbines. I doubt a turbine that is 6 to 10 times larger than a mature tree will hide it unless a person is nose to nose to the tree. Further trees do die or can be removed during the 40 year permit period. Existing structures can also be removed or P34-12

Comment Letter P34

- destroyed. And a leaf bearing tree like a black oak will lose its leaves for several months . Remove the referenced statements or revise it to state the forgoing observation. ↑ P34-12
| cont.
13. In the explanation related to KOP 3, page 3.2-26, states the PGE towers will have the effect of the Project turbines blending into the surroundings. This is hard to imagine when they are 6 times or more times higher than the PGE towers and the turbines have red flashing lights. Delete this statement and let the photo with the simulated turbine to scale tell the story. | P34-13
14. Section 3.2.2 down plays the effect 152 flashing red lights. Revise this section to recognize the detrimental effect on the night sky due to 152 flashing lights and its effect on stargazing and night sky exploration –something people who now come to the vicinity of the Project area do. | P34-14
15. In Section 3.2 reference is made to the Hatchet Ridge Wind Farm (H) as a basis for the Project to blend into the surroundings. This appears to be a false conclusion since the H turbines are 44 per cent shorter that the Project turbines. (679 ft/471 ft). This is like a person 4 feet tall standing next to a 6 foot person. With this difference in height the Project turbines will stand out. Delete these statements. | P34-15
16. Section 3.2 also states and implies that since H is here it is a basis to allow the Project to go ahead. This reasoning is tantamount to saying that a pile of garbage located on the street gives permission for others to drop their garbage in the same place. Please delete H from the report as justification for more turbines. If not done, it is basically telling the public that all the mountains in Shasta are open to locate wind turbines and the heck with those of us who live here and the investment we have made in the County. And heck with all those who come to see the natural beauty of the County and unobstructed views of the mountains. | P34-16
17. Section 3.3.1.2 states the maximum average temperature is 88 degrees fahrenheit. Insert the reason the average is used instead of the maximum, which can be over 100 for several days. | P34-17
18. In various places in the EIR states certain mitigation steps will be taken to change a significant impact to one that is not. But these mitigation steps do not state who is to check that these steps are done satisfactorily to achieve their goal and what the penalty is for not doing so. Revise the EIR to answer these points. | P34-18
19. Last paragraph, page 3.3-37 states that the turbine activities mentioned therein will affect 123 people. It goes on to say this is not a substantive number when compared with the total population of the County. For the Applicant to say 123 people who have chosen to live and enjoy the Country, its animal life and the night skies and pay taxes and make other investments in the County are insignificant and can be ignored is offensive. Revise the language so that it is not so offensive or delete it. | P34-19
20. Last paragraph, page 3.4-6 lists vegetation found in the Project area. It does not mention white leaf manzanita. Since it grows through the area especially in dry areas, I would expect it to be listed. Revise this accordingly. | P34-20
21. Page 3.4-14 should mention wild turkeys. | P34-21
22. On page 3.4-27 and also 3.4-36 and 3.4-41 states that bird and bat fatalities are similar to those at H. There is no evidence to prove this is true. Actually one would expect that there will be a lot more fatalities because the Project turbines are: 44 per cent taller and wider, more of them, and orientated differently in the Pacific Bird Fly Zone. Include convincing scientific evidence that supports the Applicant’s position or delete the analogy and all related conclusions. | P34-22
23. A couple of observations: The conclusion related to 3.4.9, page 3.4.52 is that the birds fly so high that they will be above the turbines. My experience based on where I live is that in times of low cloud cover they fly a lot lower than one might expect. In fact a few have landed on my property at such times and likely will give rise to more fatalities. Also the EIR states that the death rate in the best of times is 97.1%. This equals 290 birds per 10,000. Sounds like a good plan for extinction. Is this what the County should be supporting? | P34-23

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| <p>24. Further to the points in the previous item, the EIR relies on previous surveys related to bird and bat fatalities from wind turbine farms located elsewhere. The EIR should state what parameters the Applicant relies on to justify extending the survey findings to the Project. Are they the same height and size as the Project turbines? Are they in the Pacific Bird Fly Zone like the Project tribunes are? Are they at the same elevation? Without this information, the only finding that the Applicant can rely on is that wind turbines kill birds and bats. Not a good thing.</p> | <p>P34-24</p> |
| <p>25. First paragraph, page 3.4-59, 3.4-61 and elsewhere state in more detail what the compensation for permanently removing habitat is. What does minimum 1:1 compensation mean?</p> | <p>P34-25</p> |
| <p>26. Section 3.4.4.2 and first paragraph on page 3.4-75 states that the similarities with H is due there proximity. This is in serious conflict with an earlier section which points out how unsimilar they are. From a modeling point of view, H and the Project are seriously different due to size difference, location in the Pacific Flight Zone, the quantity of them (41 vs. 72), and their orientation. Delete this reference to proximity as being the basis for similarities.</p> | <p>P34-26</p> |
| <p>27. Third full paragraph , page 3.4-76 conflicts with the statement on bats found in an earlier part of the EIR. Revise this paragraph to remove the conflict.</p> | <p>P34-27</p> |
| <p>28. Table on page 3.5-2 does not mention the effect on FM broadcast frequencies and frequencies allocated to the amateur radio operators. There are several in the area. Revise to indicate how they would be affected.</p> | <p>P34-28</p> |
| <p>29. Section 3.5.3.1 refers to a description of the 10 percent rule in section 3.5.3.2. And section 3.5.3.2 refers back to the other section for the description. Revise one of these sections to actually state what the basis of the 10% rule is and why it is applicable to the Project .</p> | <p>P34-29</p> |
| <p>30. Section 3.9.3.2, page 3.9-14, does not mention why blasting is not a possible source of seismic activity or ground shaking. Insert language in this section that recognizes this source and its likeliness to cause damage and landslides.</p> | <p>P34-30</p> |
| <p>31. Section 3.10.3.1 and first complete paragraph, page 3.10-17, revise these sections to include an explanation why the removal of fossil power plants located somewhere outside of Shasta County makes the Project good for the County’s environment. An internet search states most active fossil power plants are located in Southern California. Perhaps that is where the Project should relocate.</p> | <p>P34-31</p> |
| <p>32. First paragraph, 3.10-19 again repeats the statewide benefit without addressing that the Project will actually make the County’s environment worse due to the removal of trees and their carbon sequestration. Support for the foregoing can be found throughout the EIR when statements are made related to the topic of no Project and its environmental effects in the County.</p> | <p>P34-32</p> |
| <p>33. Add to the last sentence of Section 3.10.4—Notwithstanding, there will be no benefit to the County but in fact a detriment due to the loss of carbon sequestration.—</p> | <p>P34-33</p> |
| <p>34. Sections 3.12, page 3.12-1and 3.9, second paragraph, page 3.9-8 states the water table is between 5 feet and 230 feet. In the last paragraph of page 3.11-11 states that the water reservoir is 230 feet. This is in conflict with the sections 3.12 and 3.9. The conclusion that water reservoirs would not be affected is incorrect if the water is 5 feet below grade. Revise page 3.11-11 so it does not conflict with the other sections.</p> | <p>P34-34</p> |
| <p>35. In the last paragraph of page 3.11-18 mentions that a new calculation will be done to show the effect of trees. This paragraph should state how it will account for trees that lose their leaves for several months of the year, or die or are removed.</p> | <p>P34-35</p> |
| <p>36. Section 3.11.2, third sentence, page 3.11-3. Change “would” to –shall--. It is presumptuous to think in advance what the subcontractor would or would not do.</p> | <p>P34-36</p> |

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37. Second paragraph. Page 3.11-18, states that the trees will minimize the effect of flicker. This conclusion cannot be supported if the tree loses its leaves (approximately 5 months of the year), or the tree is removed or dies. Add in this paragraph, -- provided the tree does not lose its leaves, dies or is removed. P34-37
38. Middle of the page 3.12-14 states the foundation for the Project turbines is 3 feet. This conflicts with the statement on page 3.12-17 and 3.12-19. Revise so they state the same foundation size info. P34-38
39. Page 3.12-16 and elsewhere in the EIR talks about a receptor. Sometimes it appears to mean a receiver installed by the Applicant and sometimes it appears to refer to a resident. Review the use of receptors throughout the EIR and make it clear which is which. P34-39
40. Page 3.12-17 states ground water is between 87 feet and 155 feet. This contradicts statements in section 3.9 and 3.11. Revise each of these to references to be consistent with the facts on the ground. P34-40
41. Bottom of the page 3.12-18 states why it's unlikely that blasting will not disturb groundwater since the groundwater is stated to be in the range of 5 to 230 feet. P34-41
42. Page 3.12 paragraph on site clearing states the Project requires spread footings are 10-15 feet deep. This conflicts with other sections of the EIR. Revise all to be consistent with what the Applicant intends. P34-42
43. In section 3.13, states helicopter noise will not be offensive since it will be a given distance away from any residence. What assurances will the residents have that the helicopter will not move from the given distance to get to and from that location and while doing so move over their residences? Include these assurances in this paragraph. P34-43
44. Section 3.13 makes no mention of noise produced by trucks who downshift to descend a hill. Address this in the EIR. Perhaps Applicant can get CalTrans to place signs in the proximity of the beginning of the hill descent prohibiting this. P34-44
45. Section 3.13 does not discuss the effect of the amplification that occurs due to the surrounding mountains. (At my location I can hear noises from miles away due to this amplification.) Address this in the EIR. P34-45
46. Last paragraph before section 3.13.3.3 relies on the event mentioned therein being "unlikely". Unfortunately, unlikely events do occur. Address in EIR what this will mean if the unlikely becomes real. For example, the Applicant shall indemnify the injured party for any and all damages including any court costs arising out the unlikely event. P34-46
47. On page 3.13-33 states that a 5 db increase above the normal noise is not significant. Since db is logarithmic an increase of 5 db is quite large. Add language to EIR to explain why the Applicant is of the opinion that the increase is not significant. P34-47
48. Section 3.14 states there are quarries east of Burney. After an internet search no such quarries were discovered. Nor were there any listed north or south of Burney. I know of one 20 miles or so west of Burney and others in the Redding area. For sake of completeness, insert the name of the quarries the Applicant intends to rely on. P34-48
49. Sections 3.2, 3.6, 3.14 and 3.15.2 states the Applicant provided information to the County who independently verified it. Insert further detail of how this was done. Did an independent expert review the data and information? Who was it? Was the data simply compared with what was submitted for H? Was only data reviewed and approved or was the entire section as written approved along with its conclusions? This is important because without this information the conclusions in these sections and especially section 3.2 are suspect and give the perception that the County's Planning Department has a bias in favor of the Project when it should be neutral. P34-49
50. Page 3.16-9 states the Applicant states it is not subject to California Public Utilities Commision (CPUC). Insert additional language to explain why the Applicant is not subject to CPUC. And additionally why it will not voluntarily P34-50

Comment Letter P34

follow the safety requirements of CPUC. To the uninformed, the Applicant has private investors and produces electric power and sells it. Why is this not a public utility?

↑ P34-50
cont.

51. In chapter 4, the summary chart does not include all the alternatives stated in the EIR. The most important one to many is the “no project” alternative. The Applicant gives a mere one sentence to this important alternative before the table. It is important to include the “no project” alternative in the table because it will show side by side with all the other alternatives that it is environmentally the best. By looking at the table as now written, one gets the impression the table lists all the alternatives—yet it does not.

P34-51

52. The EIR mentions at least two different turbines manufactured by two different companies. Identify which one is to be used because the properties between the two may be different and influence some of conclusions. If one cannot be picked then the characteristics of each should be discussed in the conclusions.

P34-52

53. Appendix on frequency interference does not discuss FM broadcast interference as well as interference in the Amateur Radio Bands. There are few amateur radio operators in the area who are protected by law from interference with their transmissions. This Appendix should ascertain that there will be no interference to any of the Amateur Radio Bands.

P34-53

54. The Appendix on frequency states the turbine will be made from non conducting material. This Appendix should state what this material is and confirm it can withstand the forces the blades will encounter. Metals are generally considered conductors. Non metals generally cannot withstand the forces a turbine would be exposed to.

P34-54

55. The Appendix on sound mentions there is anticipated that a number of blasts will occur during construction. Since the Project is adjacent to several hundred residences, the report should specify what is the effect on the ground due to shock waves emanating from the blasts. There are several potential results that could occur in the areas, such as creek diversion, earthquake shock waves, foundation damage.

P34-55

Now three general comments: First is an editorial comment- my one and only one. It is: Many sentences are 4 to 6 typewritten lines long. Shorten them to 2 to 3 lines. In doing so the Applicant will surely find other editorial things to change. Without this effort the EIR is extremely and unnecessarily difficult to read especially with all the abbreviations used throughout the report.

P34-56

The second comment is that the next version of the EIR includes an annotated one that shows all the changes made between the two.

P34-57

The third comment is add a word search feature in the next computer version of the EIR.

P34-58

Letter P34: Bob Loe

- P34-1 See Draft EIR Section ES.6.4, *Summary of Project Impacts and Mitigation Measures*, including Table ES-2, which lists the environmental impacts of the Project and mitigation measures to avoid or substantially reduce potential significant impacts of the Project. The first section of that table summarizes Aesthetic impacts. As noted on page ES-8, line 3, the Project would not create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area. The summary of light and glare effects included in Section ES.6 is discussed in detail in the Draft EIR (at pages 4.2-42 through 3.2-45), and includes a discussion of the FAA-required lighting. As discussed, the Project would not introduce a significant new source of nighttime lighting that would contrast with existing nighttime lighting conditions. The Draft EIR concludes that, in these views, due to existing sources of lighting, the space between the viewer and the turbines, and the few turbines visible from each of the KOPs, the additional source of nighttime lighting would not have a substantial impact on nighttime views. Therefore, impacts under the criterion related to potential light and glare effects would be less than significant.
- P34-2 CEQA Guidelines Section 15126.6(e) says, “If the environmentally superior alternative is the ‘no project’ alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.” This is why Draft EIR Section 4.3 (at page 4-2) goes on to discuss the remaining alternatives. Draft EIR Section 1.4.5 (at page 1-7) explains that that Planning Commission will review and consider the Final EIR before taking action on the Project. The Planning Commission, consistent with its land use authority, may approve, approve with modifications, or deny the requested use permit application. Accordingly, the Draft EIR’s discussion of the Environmentally Superior Alternative, should not be understood to assure Project approval.
- P34-3 See Response P21-12 regarding the MMRP and the County’s oversight and enforcement of compliance with the requirements of mitigation measures.
- P34-4 Blasting for the purpose of fracturing bedrock to enable excavation is a practice that is done by licensed professionals who are required to obtain the training appropriate to plan, design, implement and monitor blasts in a manner that is applicable to the site specific characteristics of underlying materials. As noted on page 3.12-15 of the Draft EIR, Mitigation Measure 3.12-2 requires a blasting plan be implemented consistent with the technical requirements of 30 CFR §§816.61 through 816.68. Generally, most of the energy produced by the blast is by design expended to create the necessary fractures for the targeted area of excavation. The proposed blasting would occur at the near surface and relatively far from where crustal earthquake epicenters typically originate from (often 1 to 12 miles below ground surface). Vibrations from controlled blasting also dissipate rapidly with distance. Therefore, considering the regulated and localized nature of the blasting that would be implemented at the site as well as the depth to which earthquakes typically originate from, there is no reasonable means to believe that the proposed blasting would have any effect on causing an earthquake on one of the regional faults.

- P34-5 See Draft EIR Section 2.5.2.3, Alternative Technologies (at page 2-32), which explains that the County initially considered a solar energy project alternative to the Project. However, for the reasons discussed there, did not carry it forward for more detailed consideration.
- P34-6 See Response T2-3, which provides additional information and clarification about the project objectives set forth in Draft EIR Section 2.3 (at page 2-6).
- P34-7 Comparisons of the size and height of proposed components of the Project are acknowledged, but do not affect the sufficiency of the EIR. Further, the figure identified in the comment was not relied upon to support any impact analyses or conclusions.
- P34-8 See Response P20-15 regarding the adequacy of the project description, including specifically regarding its identification of turbine heights. See also Response P20-15, which explains the relationship between the numbers, heights and locations of the proposed turbines.
- P34-9 As described in Draft EIR (at page 2-3, and at page 3.14-2), access to the Project Site would be provided locally by SR 299 and the three existing, gated logging roads that intersect with SR 299 that are shown in Figure 2-5, *Road Network* (at page 2-15): the westernmost of the three local accessways is proposed along a road called G Line, which intersects with SR 299 approximately 37 miles east of the interchange with I-5 in Redding; the northernmost access is proposed along an existing and unnamed logging road that intersects SR 299 just east of Little Hatchet Creek, and the easternmost access is approximately 8 miles west of Burney along an existing, unnamed logging road that provides access to the area south of SR 299. Given the existing level of specificity in the description of the location of the three local access roads, Figure 2-5 has not been modified. See also Response P4-8, which clarifies which roads would be used to access the Project Site.
- P34-10 Photographic simulations of the Project are provided in Figure 3.2-7, KOP 1: Fountain Fire Overlook (at page 3.2-23), Figure 3.2-8, KOP 2: Montgomery Creek (at page 3.2-25), Figure 3.2-9, KOP 3: Round Mountain (at page 3.2-27), Figure 3.2-10, KOP 4: SR 299 at Tamarack Road (at page 3.2-29), Figure 3.2-11, KOP 5: Burney (at page 3.2-31), Figure 3.2-12a, KOP 6: SR 299-Pit River Overlook (at page 3.2-33), Figure 3.2-12b, KOP 6: SR 299-Pit River Overlook (Simulation) (at page 3.2-34), Figure 3.2-13a, KOP 7: Redding (at page 3.2-36), and Figure 3.2-13b, KOP 7: Redding (Simulation) (at page 3.2-37). These simulations do include simulated turbines. Accordingly, the figures included in Draft EIR Section 2.2 have not been modified in response to this request. Nonetheless, see Final EIR Appendix A4, which includes the visual resources technical report from Draft EIR Appendix A as updated to delete the word “draft” to avoid confusion, and to include larger-format simulations for greater ease in review.

- P34-11 See Response P21-12 regarding the mitigation monitoring and reporting program (MMRP) that would be implemented on the Project if it is approved. In addition to the mitigation measures adopted by the County if the requested use permit is approved, the final MMRP would identify required implementation activities and schedule, the party responsible for monitoring implementation, and the required monitoring and reporting activities and schedule.
- P34-12 Draft EIR Section 3.2, *Aesthetics*, includes descriptions of *existing conditions* and notes that existing trees and structures enclose existing views from SR 299 in many locations. However, the impact analysis does not indicate that trees and structures would block views of turbines. The Draft EIR (at page 3.2-21) acknowledges that turbines would extend above the tree line and be visible from surrounding vantage points. As discussed on Draft EIR page 3.2-40, from locations where wind turbines are not currently visible, the Project would introduce a greater level of visual change. While the amount of visual change from most representative viewpoints is not considered significant, when considered as a whole, the Project would have a significant impact on the visual character and quality of views in the Project region. There is no feasible mitigation that could reduce the visual impact of the Project as a whole. Therefore, the impact of the Project on scenic vistas, visual character, and visual quality would be significant and unavoidable.
- P34-13 Contrary to the suggestion in this comment, Draft EIR page 3.2-26 does not state that “the PGE towers will have the effect of the Project turbines blending into the surroundings.” Draft EIR page 3.2-36, paragraph 3 describes the existing conditions and visual character at KOP 3 as defined by an extended, rounded and articulate ridgeline in the background and rural development in a narrow valley the middle ground. Under existing conditions, no structures interrupt the skyline. Built features such as power lines, transmission towers, power lines, fence lines, and roads introduce linear, man-made features which traverse the view, partially blocking the ridgeline in the background. The visual character; therefore, is defined by the form of the forested ridgeline in the background and the infrastructure and development in the foreground.
- Regarding Project effects, EIR page 3.2-26, paragraph 5 notes that the Project would introduce a number of turbines atop the ridgeline. The turbines would be visible at various heights resulting in varying visibility of turbine towers, nacelles, and blades. Project turbines would extend above the ridgeline, interrupting the currently undisturbed skyline. The Project would result in changes to the visual character of views at KOP 3. In summary, while the Project would not impact a scenic vista from KOP 3, the visual character of views from KOP 3 would be adversely affected. Additionally, the visual quality of views from KOP 3 would be reduced from moderate to moderately low. See also Response P34-10.
- P34-14 See Response P34-1.

P34-15 Draft EIR Section 3.2 does not assert that the Hatchet Ridge Wind Farm would serve as a basis for the Project to blend into existing conditions. Rather, Section 3.2 describes the existing Hatchet Ridge Wind Farm as part of existing conditions from some public views; and part of the built environment from those views. For views where the existing wind farm is not visible or minimally visible, Draft EIR impact discussions do not assert that the presence of the existing wind farm allows the Project to blend into the surroundings; but rather discusses the Project effect based on the baseline existing conditions present in those views.

While it is correct that the existing Hatchet Ridge Wind Farm turbines are shorter than proposed under the Project, the location and topographic and landscape setting of the existing turbines, proposed turbines, and viewing location are also considered in the analysis of aesthetic resources effects. For instance, in KOPs where the existing wind farm is closer to view locations, or where proposed turbines would be separated partially by a ridge, and/or where the number of existing turbines greatly outnumbers the proposed turbines that would be visible, the EIR does indicate that the visual character of views would not change substantially compared to existing conditions (e.g., KOP 4, as discussed on EIR page 3.2-28 and depicted on Figure 3.2-10).

P34-16 The purpose of an EIR is to disclose the potential physical environmental changes that could result from implementation of a project. The changes are evaluated relative to the conditions that exist at the time the project is proposed. This is referred to as the baseline condition. See Draft EIR Section 3.1.2.1, *Baseline* (at page 3.1-1) and response P21-19 for more information. Consistent with the Lead Agency's responsibility under CEQA to evaluate the potential physical changes of a Project relative to baseline conditions, the existing windfarm must be considered part of the baseline conditions. For the consideration of effects on aesthetic resources, the existing windfarm is considered in the analysis of effects as observed from some views. See, e.g., Response P34-15.

P34-17 The *Geography and Climate* discussion in Draft EIR Section 3.3.1.2 presents data for the average maximum and minimum winter (i.e., January) and average maximum and minimum summer (i.e., July) temperatures to provide the reader with a general characterization of the climate in the Project Area. Average maximum and minimum temperatures for the winter and summer better reflect the climate of an area compared to presenting the maximum temperatures.

P34-18 See Response P21-12 regarding the MMRP and the County's oversight and enforcement of compliance with the requirements of mitigation measures.

P34-19 Impact 3.3-5 (Draft EIR at page 3.3-27 et seq.) evaluates whether the Project would result in other emissions (such as those leading to odors) adversely affecting a "substantial number of people." The County evaluated whether the number of people potentially affected by Project odors (123 people) was "substantial" relative to the number of Shasta County residents based on census data (180,000 people). The

analysis determined that because only a fraction of a percent of Shasta County residents could be affected by Project odors, this was not a “substantial number of people” and so concluded that a less than significant impact would result. The reasonableness of the points of comparison used is underscored by case law interpreting CEQA, which confirms that the environmental analysis is intended to focus on the public at large, rather than on individual members of the public. See, e.g., *Parker Shattuck Neighbors v. Berkeley City Council* (2013) 222 Cal.App.4th 768, 782 and *Mira Mar Mobile Community v. City of Oceanside* (2004) 119 Cal.App.4th 477, 492. To further clarify, as shown in Draft EIR Chapter 5, the County and its consultant team (not the Applicant) prepared the EIR. No offence was intended.

- P34-20 Although the Project Site is within the described range of white leaf manzanita, which includes Shasta County, this species was not identified during focused botanical surveys performed in 2018 and 2019 (Draft EIR Appendices C3 and C5). White leaf manzanita is not a special-status species. Green leaf manzanita was identified during surveys and is mentioned on Draft EIR page 3.4-6 and is mapped throughout the Alternative 1 and Alternative 2 Project Sites (see Draft EIR Figure 3.4-2, page 3.4-69; and Figure 3.4-3, page 3.4-72).
- P34-21 While it is expected that wild turkeys (*Meleagris gallopavo*) may use the Project Site, they were not identified during avian point count surveys. Wild turkeys are not considered a sensitive species under federal, state, or local laws or regulations. Therefore, this species has not been added to the Draft EIR.
- P34-22 The comment states that anticipated bird and bat fatalities should be greater at the Project Site than for the Hatchet Ridge Wind Project because, intuitively, the proposed turbines are larger and there are more of them. The Avian Use Study prepared for the Project (Draft EIR Appendix C7) and independently-reviewed on behalf of the County, concluded, given the similarity in avian species composition and temporal use patterns reported at Hatchet Ridge and observed at the Project Site, that it is reasonable to expect that fatality rates and the species composition of fatalities for the Project would be similar to that documented at the Hatchet Ridge Wind Project. Final EIR Section 1.2.3, *Changes to the Project Since Issuance of the Draft EIR*, identifies updates to the Project that the Applicant has made since the County’s issuance of the Draft EIR, including an additional turbine option, and analyzes the impacts of the changes relative to the analysis provided in the Draft EIR. As shown in Final EIR Table 1-1, *Comparison of Turbine Options*, the new turbine option would increase the rotor swept area relative to the largest rotor swept area analyzed in the Draft EIR; however, since fewer turbines would be required to generate 216 MW, the Project’s overall rotor-swept area would be reduced (see Final EIR Section 1.2.3.2 under “Biological Resources”).
- P34-23 The Draft EIR (at page 3.4-53) recognizes that waterfowl fly at relatively lower altitudes during high wind and/or low visibility conditions, which puts them at a greater relative risk for encountering turbines compared with high visibility conditions. To

clarify a mistake stated in the comment, the Draft EIR states that between 97.1 percent and 99 percent of observed waterfowl flew above the rotor swept height of wind turbines during Years 1 and 2 of the avian surveys at the Project Site; hence, between approximately 1 and 2.9 percent of waterfowl were observed within the rotor swept height. It is inaccurate to presume, as the comment does, that all birds that traverse the Project Site below the maximum rotor height would be killed by rotors. Anticipated mortality rates for waterfowl are presented in the Draft EIR (at page 3.4-53). Based on observed species use of the site and review of species habitats, the potential risk of substantial waterfowl mortality is considered low.

- P34-24 As stated on Draft EIR pg. 3.4-41, both the Hatchet Ridge Wind Project and the proposed Project are somewhat unique among western wind projects in their high percentage of forested landscape; however, the Project turbines would be 62 percent taller with 70 percent larger blade diameters than the Hatchet Ridge project. Even with these design differences, the Hatchet Ridge project is located at a comparable elevation to the proposed Project and supports similar vegetation coverage. At just 1 mile away from the Project Site, the Hatchet Ridge post-construction mortality studies provide the best available data from which to estimate potential Project impacts to avian and bat species.
- P34-25 The stated 1:1 compensation ratio for impacts to aquatic habitat requires the creation of 1 acre of compensatory (i.e., replacement) habitat for each acre of habitat that is permanently impacted by the Project. Permanent impacts generally occur when the footprint of a facility, such as a road or building, is constructed over the impacted feature. This is further described in Response A3-62, which considers the post-restoration condition of the Project Site.
- P34-26 Consistent with the conclusion of technical reports prepared for the Project (e.g., Draft EIR Appendix C6 at page 13; Appendix C7 at page 37 et seq.), given the similarity in species composition and temporal use patterns reported for the Hatchet Ridge project and observed at the Project Site, it is reasonable to expect that fatality rates and the species composition of fatalities at the Project Site would be similar to that documented at Hatchet Ridge. For this reason, the subject text in the Draft EIR is retained in the Final EIR.
- P34-27 The comment is correct: a statement on bats should be removed from the Draft EIR in the third full paragraph on 3.4-76. Cumulative impacts on bats are more accurately described in the paragraph that follows on the same page. The third paragraph on Draft EIR page 3.4-76 is modified as follows:

“For goshawk, no recent breeding activity has been locally described locally and low number of goshawks have been detected at the Project Site or the Hatchet Ridge project site. Sandhill cranes do not use the Project Site for roosting and breeding, and but sandhill cranes have been detected at the Project Site and the Hatchet Ridge project site during migration. ~~Use of the Project Site by smaller bat species is limited, and mortality from turbines appears low at Hatchet Ridge,~~

~~compared to other wind facilities.~~ Several conservation measures are suggested to further reduce several less than significant impacts to California spotted owl, nesting songbirds and greater sandhill crane, include conservation measures for Impact 3.4-11 (Conservation Measure for Nesting Songbirds; Conservation Measure for Vaux’s Swift, and Conservation Measure for Willow Flycatcher and Yellow Warbler), one conservation measure for Impact 3.4-10 (Sandhill Crane Conservation Measure), and one conservation measure for Impact 3.4-5 (California Spotted Owl Conservation Measure).”

- P34-28 The Draft EIR’s analysis of the potential for the Project to result in communications interference evaluates the extent to which the Project could cause a significant disruption to the service areas of Federal Communications Commission (FCC)-licensed or consumer radio frequency facilities. It considered broadcast, land mobile, wireless, public safety, microwave, radar and other RF spectrum users within the study area using industry and FCC standard procedures and equipment. More specifically, it considered six different modes of communication including safety radio transmitters, AM radio, television, microwave and cellular, aircraft navigation, and satellite earth stations. This suite of modes of communication was established as appropriate for the EIR based on the scope of work proposed by B. Benjamin Evans of Evans Engineering. Mr. Evans is a recognized expert in both communications engineering and wind turbine siting to avoid disruption of wireless and broadcast communications. Mr. Evans has developed his expertise over 30 years in the analysis of radio frequency propagation, interference, transmission and reception, including for California wind projects in Kern, Solano, Lake & Colusa, and Riverside counties. The request to include two additional forms of communication does not question to adequacy or the accuracy of the analysis. As stated in CEQA Guidelines §15204, “CEQA does not require a lead agency to conduct every test or perform all research, study, and experimentation recommended or demanded by commenters. When responding to comments, lead agencies... do not need to provide all information requested by reviewers, as long as a good faith effort at full disclosure is made in the EIR.” Because a good faith effort at full disclosure has been made in this EIR, including in Draft EIR Section 3.5, *Communications Interference*, the requested revision has not been made.
- P34-29 References to the “10 percent rule” refer back to the statement in Table 3.5-1 (at page 3.5-2), which says “About 10 percent of receiver locations can be affected to some extent within 3 miles of a large turbine when the turbine is between the TV station and the receiver.” This is consistent with the statement in the engineering report provided in Draft EIR Appendix D, page 23 of which says, “Usually, a rule of thumb is that approximately 10% of the receiver locations are affected to some extent within three miles of a large turbine when the turbine is between the TV station and the receiver.” This is a statement of expert professional opinion from the engineer who authored the report, Ben Evans, who has approximately 30 years of experience in

telecommunications engineering.⁷⁹ Because the intent of the reference already is described in the Draft EIR, no revision has been made in response to this comment.

P34-30 As noted above in Response to P34-4, blasting would be done by licensed professionals who are required to obtain the training appropriate to plan, design, implement and monitor blasts in a manner that is appropriate for the site specific characteristics of underlying materials. As noted on page 3.12-15 of the Draft EIR, Mitigation Measure 3.12-2 requires a blasting plan be implemented consistent with the technical requirements of 30 CFR §§816.61 through 816.68. The proposed blasting would occur at the near surface and relatively far from where crustal earthquake epicenters typically originate from (often 1 to 12 miles below ground surface). Vibrations from controlled blasting also dissipate rapidly with distance. Therefore, considering the regulated and localized nature of the blasting that would be implemented at the site as well as the depth to which earthquakes typically originate from, there is no reasonable means to believe that the proposed blasting would have any effect on causing an earthquake on one of the regional faults or related effects such as causing landslides.

P34-31 The geographic scope of impacts related to GHG emissions is global. For example, reducing fossil-fueled powered generation in southern California would have the same effect in terms of lowering global GHG emissions as reducing fossil-fueled power generation in Shasta County. In other words, the benefits to Shasta County would be the same as the benefits to anywhere in California regardless of where the fossil-fueled generation decrease would occur.

P34-32 For discussion that addresses the effects of Project-related tree removal and the associated reduction of carbon sequestration, see Draft EIR Section 3.10.3.2 (at page 3.10-16).

P34-33 Greenhouse gas (GHG) emissions for projects are addressed in aggregate (i.e., total net emissions), and the geographic scope of cumulative impacts related to GHG emissions is global, although the Draft EIR analysis focuses on the state and overall region, but not on the County. Nonetheless, loss of carbon sequestration due to removal of trees and vegetation would result in an increase in GHG emissions that would be offset due to the Project's displaced use of traditional fossil-fueled energy sources (see Draft EIR Table 3.10-2, *Estimated Annual Operational Greenhouse Gas Emissions*, at page 3.10-16). Therefore, the commenter's suggested sentence has not been added to Draft EIR Section 3.10.4.

P34-34 The seventh and eighth sentences in the last paragraph of page 3.11-11 of the Draft EIR have been revised as follows:

As stated in Section 3.9, *Geology and Soils*, the depth to groundwater is variable and ranges from 5 to more than 230 feet below ground surface; therefore, the

⁷⁹ Evans Engineering Solutions, 2021. Telecommunications Consulting Engineers. <http://evansengsolutions.com/>. Accessed March 11, 2021.

potential risk of Project-caused transport of naturally occurring arsenic to groundwater would be remote for most areas where the groundwater is relatively deep. Regardless, the SWPPP discussed in Section 3.12, *Hydrology and Water Quality*, would provide further assurance that any construction runoff that might contain naturally occurring arsenic in the rocks would not contaminate the groundwater.

- P34-35 The Draft EIR concludes that the Project would have a less-than-significant impact relating to adverse health effects and shadow flicker. CEQA provides no basis to impose mitigation measures to further reduce a less-than-significant impact. Here, the Applicant voluntarily has offered to prepare the study, has provided an updated study (provided in Final EIR Appendix A3) that analyzes the potential shadow flicker-related impacts of the Applicant's newly proposed 6.2 MW turbine (and concludes that its use would not alter the less-than-significant impact conclusion of the Draft EIR), and has volunteered to update the analysis based on final design. The County acknowledges receipt of the request for additional specificity about what should be considered in the final report, but has not modified the Draft EIR as requested.
- P34-36 Section 3.11.2, *Significance Criteria*, is found on Draft EIR page 3.11-8, not page 3.11-3. Page 3.11-3 provides information about blasting and the regulatory setting. It is not clear what language is the focus of this comment. In any event, changing "would" to "shall" would not affect the sufficiency of the analysis or the enforceability of any applicable requirement.
- P34-37 See Response P34-35, which reminds reviewers that the final shadow flicker study is an Applicant-proposed feature of the Project, and not a mitigation measure for purposes of CEQA. Regardless, the statement that trees can minimize flicker is true. Further, as stated on Draft EIR page 3.11-8, the analysis would "account for any screening by existing yard trees, buildings, or proximity to stands of trees and the number and/or orientation of windows in residential receptors."
- P34-38 The referenced discussion on page 3.12-14 of the Draft EIR is describing the depth of excavation that would be necessary for decommissioning purposes. The depth of excavation described on pages 3.12-17 and 3.12-19 are referencing excavation depths for initial construction.
- P34-39 The concept of a sensitive receptor is described in Draft EIR Section 3.3, *Air Quality* (at page 3.3-6). See also Section 3.13, *Noise* (at page 3.13-10) ("Sensitive receptors to vibration include people (especially residents, the elderly, and sick people), structures (especially older masonry structures), and vibration-sensitive equipment.").
- P34-40 Sections 3.9 and 3.11 of the Draft EIR describe the range of groundwater depths that have been measured across the project site at between 5 and 230 feet below ground surface. Page 3.12-17 of the Draft EIR is more specifically referencing only the groundwater depths measured in the vicinity of the proposed switching station.

- P34-41 The bottom of page 3.12-18 is part of the analysis for Impact 3.12-3, which analyzes the potential impact the project would have on groundwater resources including the potential to interfere with groundwater recharge. There is no mention of the proposed blasting as that would be considered to have no measurable effect on groundwater recharge or groundwater supplies. As required by Mitigation Measure 3.12-2, blasting would be conducted in accordance with a blasting plan consistent with 30 CFR Sections 816.61 through 816.68. Current blasting practices typically are accomplished with levels of detonation that are appropriate for the site-specific characteristics of the underlying materials, which would make the areas affected by blasting more localized than widespread. Therefore, with implementation of the blasting plan required by the mitigation measure and consistent with regulatory requirements, the potential impact to groundwater recharge or groundwater supplies, would be less than significant.
- P34-42 Foundations and other components are described in Section 2.4, *Description of the Project*. See, e.g., Section 2.4.1, *Wind Turbine Generators* (at page 2-8), which describes spread footing foundations for turbines: “Each turbine tower would be mounted on a concrete pedestal supported by a foundation. Spread footing foundations, which have a wide base that spreads the weight of the structure over a larger subsurface area for greater stability, are likely to be used for the foundation design. This type of foundation is buried underground to a depth of approximately 10 to 15 feet with a pedestal that extends approximately 1 foot above ground.” It is not clear from the comment, or based on further review of the Draft EIR in response to this comment, where the Draft EIR relies on information inconsistent with this.
- P34-43 Helicopter noise impacts are addressed in the Draft EIR at pages 4.13-30 and 3.13-31. Because the potential would exist for helicopter noise to exceed speech interference thresholds and sleep disturbance thresholds, the impact is identified as significant. Mitigation Measure 3.13-2 (Noise-Reducing Construction Practices) identifies restrictions on helicopter operations to reduce this potential significant construction-related impact to a less-than-significant level. Helicopter operational altitudes will be dictated by the height of the towers being strung with an additional increment for maneuverability and safety. The restrictions implemented by Mitigation Measure 3.13-2 include limiting helicopter use to a period of 2 weeks or less so that the overall duration of helicopter noise would not occur over an extended period that would be considered significant. Additionally, helicopter operations would be limited to daytime hours and neighboring residential uses would be notified 2 weeks in advance of line stringing activity.
- P34-44 Construction truck noise impacts are addressed on pages 4.13-29 and 3.13-30 of the Draft EIR. Because the potential would exist for truck noise to increase noise levels more the 5 dBA over existing ambient noise levels during nighttime hours, the nighttime impact from construction noise is identified as significant. Mitigation Measure 3.13-2 (Noise-Reducing Construction Practices) requires haul trucks and delivery trucks to prioritize use of the east access road, if available, over the west access road, and to avoid use of the west access road during nighttime hours.

The commenter is correct that the use of downshifting (also known as Jake Braking) to slow trucks is known to generate increased noise levels during descents. Such methods would be employed on paved roads such as sections of SR 299 which is indeed within the management of Caltrans. It is unlikely that Caltrans would authorize erection of signs on a state highway, as project-related truck traffic on SR 299 would be a temporary phenomenon.

- P34-45 There is a perception that topographical conditions can result in amplification of sound. The perception of sounds being louder or amplified is best explained by the effect of the terrain on ambient noise and sound propagation rather than amplification.

First, the shape of the terrain tends to act as a noise barrier for ground based noise sources in all directions except toward the mouth of the valley to the east. For example, the hillsides act as noise barriers, blocking noise sources beyond. This tends to reduce the background sound level and make other sounds more noticeable. Second, the slope of a valley means that homes, like seats in an amphitheater, have a “good view” of noise sources. This means that noise will propagate better than in a typical flat community because buildings are less likely to intercept the line-of-sight to a noise source.

As stated on page 3.13-17 of the Draft EIR, three-dimensional modeling (using SoundPLAN Version 8.1) was conducted to account for topography, atmospheric and ground absorption, and the spectral characteristics of the operational noise sources. Neutral environmental conditions are assessed for CEQA purposes (i.e., no wind or temperature gradients). Turbines would be unlikely to operate during temperature gradients, such as an inversion, which occur during periods of atmospheric stability.⁸⁰ The model was run assuming a worst-case condition with simultaneous operation of all wind turbines. Therefore, the analysis of operational noise impacts in the Draft EIR appropriately considered the effects of the local topography.

- P34-46 This comment is addressing the level of significance after implementation of Mitigation Measure 3.13-3: *Charge Weight Limits on Blasting Activities* (Draft EIR at page 3.13-33). Caltrans criteria for vibration damage are established for different types of structures. The performance standard established in this mitigation measure (0.3 inches per second, peak particle velocity, is sufficient to avoid structural damage to “new residential structures, “older residential structures”, and “historic buildings.”⁸¹ from transient sources such as blasting. More stringent criteria (0.12 to 0.2 inches per second peak particle velocity) would apply to fragile buildings, ruins and historic monuments. However, as stated on page 3.6-26 of the Draft EIR, there are no structures in the Project vicinity that would fall into these latter categories. Therefore, the performance standard

⁸⁰ An air temperature inversion is a reversal of the typical daytime air temperature in the layer of atmosphere closest to the ground. Usually, the temperature of the air during the day decreases as altitude increases. However, with the presence of an atmospheric inversion, there is an increase of air temperature with the increase in altitude, meaning there is warmer, lighter air aloft with a cooler, heavier layer of air next to the ground. When there is little to no wind present, these two air masses will not mix, resulting in a distinct temperature inversion.

⁸¹ Caltrans, 2013a. Transportation and Construction Vibration Guidance Manual (Table 19, p.38), September 2013.

identified in Mitigation Measure 3.13-3 is appropriate to address potential vibration impacts to the nearest structures from blasting activities.

- P34-47 As stated on page 3.13-5 of the Draft EIR, with regard to increases in A-weighted noise level, a change in level of 5 dBA is a readily perceptible increase in noise level.⁸² Additionally, as stated on page 3.13-14 of the Draft EIR, Policy N-g of the Shasta County General Plan Noise Element states that where existing traffic noise levels are less than 60 dB L_{dn}, a +5 dB L_{dn} increase will be considered significant. As shown in Table 3.13-2 on Page 3.13-9 of the Draft EIR, monitoring of the receptors in the surrounding areas indicates that noise levels are all below 55 dBA, L_{dn}. Therefore, a 5 dBA increase is the appropriate threshold to apply to traffic-related noise.
- P34-48 The name(s) of quarries that could supply the Projects are not relevant to the environmental analysis, since it is the potential impacts associated with the transportation of materials that could have an effect on the environment. Nonetheless, the County can confirm that one or more existing County approved and regulated quarries are in operation within the bounds of assumptions made in the Draft EIR.
- P34-49 Representatives of the County and members of the County's environmental consultant team (identified in Draft EIR Chapter 5 as including Environmental Science Associates and subconsultants) who have the relevant professional credentials and experience independently reviewed all Applicant-provided studies and technical reports on behalf of the County. The review included consideration of whether the studies were suitable for reliance in combination with other sources of data informing the analysis of potential environmental impacts of the Fountain Wind Project. In making this determination, the County's reviewers considered whether: the work has been performed in accordance with appropriate standard of skill and care, basic assumptions are reasonable and consistent with the elements of the Project description, the methodology is sound, conclusions reached are reasonable. Any errors or omissions were reported for correction or clarification, or were corrected by the preparers of the EIR in the text of the Draft EIR itself. Corrections or clarifications received from the Applicant similarly were reviewed. This approach is consistent with the County's past and current practice for the consideration of applicant-prepared materials.
- P34-50 As explained in Draft EIR Section 3.1.2.4 (at page 3.1-3), the CPUC governs investor owned utilities, including PG&E. The Applicant is a private company, not an investor owned utility, and so is not subject to the CPUC's oversight. Nonetheless, Project design features and Applicant-proposed measures reflect a commitment to safe operation. See, e.g., Draft EIR Section 2.4.2 at page 2-11 (construction approach to be modified if conditions unsafe), Section 2.4.2.2 at page 2-11 (vegetation clearance for overhead collector system), Section 2.4.3 at page 2-12 (posting of safety signage around high voltage equipment), Section 2.4.5.1 at page 2-16 (fencing and site security) and pages 2-17 and 2-18 (separately, blasting and road widths for safe travel, and safe ingress/egress),

⁸² Caltrans, 2013b. *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, September 2013, p. 2-45.

Section 2.4.6 at page 2-22 (fire prevention plan to be prepared consistent with County standards), and Section 2.4.8.3 at page 2-25 (proposed Hazardous Materials Business Plan/ Spill Prevention Control and Countermeasures Plan to be prepared consistent with Health and Safety Code and implementing regulations).

- P34-51 The comment correctly states that the No Project Alternative is not included in the referenced table. As explained in Draft EIR Section 4.2, *Comparison of Alternatives* (at page 4-2), “Because the No Project Alternative would avoid all potential impacts of the Project and Alternatives 1 and 2, the No Project Alternative is not included in Table 4-1, *Summary of Impacts of the Project and Alternatives*.”
- P34-52 See Response P20-15, which explains the relationship between the numbers, heights and locations of the proposed turbines. See response P20-25, which explains that the names of the manufacturers of the turbine options have no bearing on whether the construction, operation or decommissioning of a turbine could cause a significant impact.
- P34-53 See Response P34-38, which addresses the commenter’s request to evaluate additional modes of communication.
- P34-54 Page 22 of the technical report provided in Draft EIR Appendix C says, “turbine manufacturers have replaced all-metal blades with blades constructed of mostly nonmetallic materials.” This is true generally, and in the context of this Project. See Response P4-2, which explains that the turbine blades for this Project would likely be made of fiberglass.
- P34-55 Potential impacts of blasting vibrations on structures are addressed in Impact 3.13-3 on pages 3.133-32 and 3.13-33 of the Draft EIR. This analysis identified a potential impact related to building damage (inclusive of foundations) if blasts are too large near to existing structures. Mitigation Measure 3.13-3: *Charge Weight Limits on Blasting Activities*, is identified to address this potential impact. See Response P34-47 regarding the appropriateness of the performance standard established by this mitigation measure. See Response P34-4 for information about blasting and vibration.
- P34-56 The suggestion to reduce sentence length is acknowledged, but because the resulting edits would not bear on the sufficiency of the EIR, they have not been implemented.
- P34-57 All changes made to the Draft EIR are provided in Final EIR Chapter 3.
- P34-58 The pdf files posted online are searchable using an industry-standard format. Even if they were not, however, optical Character Recognition (OCR), is a technology that enables computer users to convert different types of documents, such as PDF files, into searchable data. PDF readers such as Adobe, FoxIt and others allow for conversion to an OCR format. The request is acknowledged, but has not been implemented because the revision would not affect the sufficiency of the EIR.

10/21/2020

Shasta County Dept. of Resource Management
Planning Division
1855 Placer Street, Suite 103
Redding, CA 96001

Attn: Mr. Leo Salazar
Senior Planner

Dear Mr. Salazar,

My name is Linda Loveness, I am a resident of Montgomery Creek, and I am very much opposed to the proposed Fountain Wind Project! Whether the company that is pushing for the project is foreignly owned, or not, I believe it is wrong that this installation be forced upon our community, with all of it's negative consequences.

P35-1

Following are a few of the concerns I have:

1. Aesthetics - Most of us that live here do so because of the pristine, natural, unspoiled beauty of our mountainous area. This will be permanently ruined if these monstrous wind turbines scar our mountains.

P35-2

2. Loss in property values - Some areas with these wind turbines have experienced up to 50% in loss of property values.

P35-3

Comment Letter P35

B. Transportation of the turbine parts on our 2 lane highway -

A. Damage to highway due to massive size and weight of component parts and multiple truck loads to deliver them.

B. Highway stoppages and delays. With the current Hatchet Mt. wind turbines, I had many delays on my way to work. One morning a semi-truck hauling them was jackknived across the highway. I was told no one could get through for several hours. Needless to say I was late for work as I had to back track through Oak Run to Redding. With the much greater size of these turbines, it stands to reason this will be a greater problem.

C. Blocked highway endangers our community and communities on up the mountain for access to speedy medical emergency care.

P35-4

P35-5

P35-6

Thank you,
 Linda M. Lovess

Letter P35: Linda M. Loveness

- P35-1 The County acknowledges the stated opposition to the Project is acknowledged and has been included in the record, where the County may consider it as part of the decision-making process.
- P35-2 Opposition to the Project based on its impacts to the visual landscape is noted. See Final EIR Section 2.1.1, *Input Received*, which explains that comments that do not bear on the sufficiency of the EIR, including adequacy or accuracy of its analysis or the support provided for its conclusions, are beyond the scope of the CEQA process. For this reason, they may be considered by decision-makers in deliberations about the requested use permit, but will not receive detailed responses in the Final EIR. Regarding potential effects of turbines and proximity to Moose Camp, see Response P4-1 and P4-3 regarding visual impacts.
- P35-3 As explained in Final EIR Section 2.1.1, *Input Received*, input regarding property value is outside the scope of CEQA. The commenter's concern that the Project could result in losses of property value are acknowledged and have been included in the record, where the County may consider them as part of the decision-making process.
- P35-4 The Draft EIR discusses the use of oversize/overweight vehicles for Project construction in Section 3.14.3.2 (at page 3.14-13). During Project construction, heavy construction equipment and wind turbine components (e.g., blades, nacelles) would be delivered to (and during decommissioning would be removed from) the Project Site using area roadways, some of which may require transport by oversize/overweight vehicles. The transport of these materials would require transportation permits from Caltrans for oversize/overweight vehicles. Such permits deal primarily with safety, and do not address pavement condition; however, unlike local, non-arterial roadways, State Highways are designed and constructed to handle a mix of vehicle types, including heavy trucks. Therefore, oversize/overweight truck trips generated by the Project to transport heavy construction equipment and wind turbine components are not expected to result in abnormal or unexpected wear-and-tear to SR 299.

Caltrans Office of Pavement Management regularly reviews pavement conditions on State Highways and addresses deficiencies as part of maintaining the State Highway System.⁸³ Shasta County, the Lead Agency for the Project, does not have jurisdiction over SR 299 or any State Highway. Therefore, it does not have the authority to place any conditions on the Project with respect to pavement damage that may occur as a result of the Project. By comparison, County decision-makers could impose a condition of use permit approval to address potential damage to County roads during construction. Impacts to County roads that could occur during decommissioning would

⁸³ Caltrans, 2021. Pavement Management. <https://dot.ca.gov/programs/maintenance/pavement/pavement-management>. Accessed January 12, 2021.

be addressed through overall programs, including via the payment of the gas tax on diesel which taxes go toward road maintenance.⁸⁴

- P35-5 The Draft EIR addresses the potential for delays to traffic on SR 299 due to the transport of heavy construction equipment and wind turbine components using oversize/overweight vehicles in Section 3.14.3.2 (at pages 3.14-13 through 3.14-15). Specifically, Mitigation Measure 3.14-3 would require that all oversize/overweight vehicles used on public roadways during construction obtain required permits and obtain approval of a Construction Traffic Control Plan, as well as identify anticipated construction delivery times, vehicle travel routes, and potential conflicts with other projects generating traffic or delay on SR 299, in advance to minimize the potential hazard to the public associated with limiting motorist, bicyclist, and pedestrian views on roadways and introducing obstructions on SR 299. Mitigation Measure 3.14-3 would require the construction contractor to incorporate measures targeted at limiting unnecessary delays and providing safe access through the construction zone for all roadway users (including vehicles, bicyclists, and pedestrians).

Appendix H of the Draft EIR contains a Project-specific, Applicant-prepared Traffic Study that was independently reviewed by the County. Pages 8 and 9 of the Traffic Study document preliminary discussions with the Caltrans Office of Transportation Permits with respect to oversize/overweight vehicle permits that would be needed for the transport of certain Project components on SR 299. In these discussions, it was established that pilot cars (i.e., escorts) would likely be required for each blade delivery vehicle, and the contractor would likely be required to contract with the California Highway Patrol (CHP) for escorts. If an accident involving an oversize/overweight vehicle were to occur, the presence of a CHP escort on the scene would ensure an appropriate and expedient emergency response that would minimize to the extent possible any resultant disruptions to traffic on SR 299.

- P35-6 The Draft EIR discusses emergency access in Section 3.14.3.2 (at pages 3.14-15 and 3.14-16). The Project's proposed use of oversize/overweight vehicles during construction and decommissioning would not cause a significant adverse impact on emergency access to or near the Project Site if oversize/overweight vehicle permits and related requirements are complied with. Because Mitigation Measure 3.14-3 includes a plan for communicating construction/decommissioning plans with emergency service providers that operate in the vicinity of the Project Site, and drivers of emergency vehicles can use sirens to clear a path of travel, emergency access would be maintained and response times would be comparable to delay experienced under baseline conditions during other traffic control scenarios that occur on the highway, such as road construction, during Project construction and decommissioning.

⁸⁴ Shasta County Department of Public Works, 2021. Email of P. Mintern to L. Salazar regarding Fountain Wind. February 4, 2021.

Comment Letter P36

Lio Salazar

From: Lee Mahoney <lmahoney@foranyauto.com>
Sent: Wednesday, October 21, 2020 9:55 AM
To: Fountain Wind Project
Subject: Fountain Wind Project

This email is in regards to the Fountain Wind Project’s Environmental Impact Report. As a resident of Montgomery Creek in Shasta County, I am concerned about several issues that I feel were not adequately addressed.

First and foremost, the EIR does not address how the 650 foot tall wind turbines will affect fire protection, should the need arise. Is it the understanding of the Planning Commissioners that these 33,000+ acres will not ever need helicopters or air tankers to help battle a future fire in the area? What is the alternative that the US Forest Service is able to put into place?

P36-1

Secondly, the EIR does not address the potential pollution both to the land and air if the turbines were to burn in a wildfire. Did Shasta County require a bond upfront to make sure that in the case of a fire or when the turbines become obsolete the company is responsible for returning the land to how it was before the wind farm was created?

P36-2

Third, the EIR did not include photo simulations of how the turbines will impact the residences of Moose Camp, of which I am one. It does not address the actual distance from the turbines to each of the homes in the region. Will noise be an issue? What decibel level will be perceived at each of the homes in the area? Will light flicker hinder the view? How much vibration will the turbines cause on the volcanic earth and to our homes?

P36-3

Fourth, the EIR does not address our water wells and the existing water table in which we rely. Will construction and maintenance of the turbines cause any contamination or change in the level of the water?

Fifth, the EIR has not specifically said how many trips will be made through our neighborhood on Moose Camp Road. How large of vehicles will be traversing on Moose Camp Road? What fuel type will the vehicles use? Will they add pollution to the homes that line Moose Camp Road? Will they vibrate the area? What decibel level will the vehicles emit?

Finally, given our fragile ecosystem in the area, I do not believe the Fountain Wind Project needs the large number of turbines or even the enormous size of these turbines in order to produce energy.

P36-4

I believe a more thorough EIR is necessary before our Shasta County Planning Division can make a decision on the next step in the process.

Lee Mahoney
19614 Sycamore Road
Montgomery Creek, CA 96065

--
916-405-7000 = Office
530-681-7357 = Cell
[Lmahoney@foranyauto.com](mailto:lmahoney@foranyauto.com)



Your privacy is important to us. See our [Notice at Collection of Personal Information](#) and [Privacy Policy](#).

Letter P36: Lee Mahoney

- P36-1 Regarding potential impacts on aerial firefighting, see Response T3-3.
- P36-2 See response P15-4, which addresses this concern.
- P36-3 Regarding potential effects of turbines and proximity to Moose Camp, see Response P4-1 and P4-3 regarding visual impacts, see Response P4-6 regarding noise and shadow flicker, Response P4-7 regarding surface waters and groundwater, Response T3-4 regarding water rights, Response P4-8 regarding the number of trips and vehicle types that could use local roads to access the Project Site, and Response P11-2 regarding potential impacts on use of the Moose Camp helipad.
- P36-4 The County acknowledges the commenter's preference for fewer or different turbines. See Final EIR Section 2.1.1, *Input Received*, which explains that comments are beyond the scope of the CEQA process if they do not bear on the sufficiency of the EIR. For this reason, the opinion stated here may be considered by decision-makers in deliberations about the requested use permit, but has not received a detailed response in the Final EIR.

Comment Letter P37

Lio Salazar

From: Hannah Murphy <hemurphy9@gmail.com>
Sent: Wednesday, October 21, 2020 5:44 AM
To: Fountain Wind Project
Subject: Fountain Wind EIR concerned resident

Shasta County Planning Commissioners,

This email is in regards to the Fountain Wind Project's Environmental Impact Report. As a resident of Montgomery Creek in Shasta County, I am concerned about several issues that I feel were not adequately addressed.

First and foremost, the EIR does not address how the 650 foot tall wind turbines will affect fire protection, should the need arise. Is it the understanding of the Planning Commissioners that these 33,000+ acres will not ever need helicopters or air tankers to help battle a future fire in the area? What is the alternative that the US Forest Service is able to put into place?

Secondly, the EIR does not address the potential pollution both to the land and air if the turbines were to burn in a wildfire. Did Shasta County require a bond upfront to make sure that in the case of a fire or when the turbines become obsolete the company is responsible for returning the land to how it was before the wind farm was created?

Third, the EIR did not include photo simulations of how the turbines will impact the residences of Moose Camp, of which I am one. It does not address the actual distance from the turbines to each of the homes in the region. Will noise be an issue? What decibel level will be perceived at each of the homes in the area? Will light flicker hinder the view? How much vibration will the turbines cause on the volcanic earth and to our homes?

Fourth, the EIR does not address our water wells and the existing water table in which we rely. Will construction and maintenance of the turbines cause any contamination or change in the level of the water?

Fifth, the EIR has not specifically said how many trips will be made through our neighborhood on Moose Camp Road. How large of vehicles will be traversing on Moose Camp Road? What fuel type will the vehicles use? Will they add pollution to the homes that line Moose Camp Road? Will they vibrate the area? What decibel level will the vehicles emit?

Finally, given our fragile ecosystem in the area, I do not believe the Fountain Wind Project needs the large number of turbines or even the enormous size of these turbines in order to produce energy.

I believe a more thorough EIR is necessary before our Shasta County Planning Division can make a decision on the next step in the process.

Hannah E. Murphy
[19615 Sycamore Road](#)
[Montgomery Creek, CA 96065](#)

P37-1

Letter P37: Hannah Murphy

P37-1 Please refer to the responses to comments made in Letter P36, received from Lee Mahoney. The comments in Letter P36 are substantially the same as these.

Comment Letter P38

Lio Salazar

From: Morgan Murphy <murphymorgan@me.com>
Sent: Wednesday, October 21, 2020 7:29 AM
To: Shasta County BOS
Subject: Fountain Wind Project

Shasta County Planning Commissioners,

This email is in regards to the Fountain Wind Project's Environmental Impact Report. As a resident of Montgomery Creek in Shasta County, I am concerned about several issues that I feel were not adequately addressed.

First and foremost, the EIR does not address how the 650 foot tall wind turbines will affect fire protection, should the need arise. Is it the understanding of the Planning Commissioners that these 33,000+ acres will not ever need helicopters or air tankers to help battle a future fire in the area? What is the alternative that the US Forest Service is able to put into place?

Secondly, the EIR does not address the potential pollution both to the land and air if the turbines were to burn in a wildfire. Did Shasta County require a bond upfront to make sure that in the case of a fire or when the turbines become obsolete the company is responsible for returning the land to how it was before the wind farm was created?

Third, the EIR did not include photo simulations of how the turbines will impact the residences of Moose Camp, of which I am one. It does not address the actual distance from the turbines to each of the homes in the region. Will noise be an issue? What decibel level will be perceived at each of the homes in the area? Will light flicker hinder the view? How much vibration will the turbines cause on the volcanic earth and to our homes?

Fourth, the EIR does not address our water wells and the existing water table in which we rely. Will construction and maintenance of the turbines cause any contamination or change in the level of the water?

Fifth, the EIR has not specifically said how many trips will be made through our neighborhood on Moose Camp Road. How large of vehicles will be traversing on Moose Camp Road? What fuel type will the vehicles use? Will they add pollution to the homes that line Moose Camp Road? Will they vibrate the area? What decibel level will the vehicles emit?

Finally, given our fragile ecosystem in the area, I do not believe the Fountain Wind Project needs the large number of turbines or even the enormous size of these turbines in order to produce energy.

I believe a more thorough EIR is necessary before our Shasta County Planning Division can make a decision on the next step in the process.

Morgan Murphy
[19615 Sycamore Road](#)
[Montgomery Creek, CA 96065](#)

P38-1

Letter P38: Morgan Murphy

P38-1 Please refer to the responses to comments made in Letter P36, received from Lee Mahoney. The comments in Letter P36 are substantially the same as these.

Comment Letter P39



Hatchet Ridge Wind, LLC
19400 Bunchgrass Lookout Road
P.O. Box 2675
Burney, CA 96013
T +1 530 335 3736
F +1 530 335 3741
www.patternenergy.com

October 21, 2020

Via Electronic Mail to
fw.comments@co.shasta.ca.us

Shasta County Department of Resource Management
Planning Division
1855 Placer Street, Suite 103
Redding, CA 96001
Attn: Lio Salazar, Senior Planner

RE: Proposed Fountain Wind Project
Comments on Draft Environmental Impact Report

To the Shasta County Department of Resource Management:

Having reviewed the Draft Environmental Impact Report (EIR) for the Proposed Fountain Wind Project (Proposed Project), Hatchet Ridge Wind, LLC has identified potentially significant environmental impacts and other key considerations regarding the Proposed Project that the Draft EIR does not acknowledge or evaluate. These impacts, described below, must be addressed in the Final EIR. In light of these additional impacts, the Department and the Planning Commission should approve EIR Alternative 1 (south of SR 299), rather than the proposed action.

P39-1

I. Impact of the Proposed Project on the Hatchet Ridge Wind Project

The Draft EIR recognizes that the Proposed Project would be located approximately 1 mile west of the existing Hatchet Ridge Wind Project (Hatchet Ridge). However, the Draft EIR fails to address the impact that the Proposed Project would have on the ability of Hatchet Ridge to generate energy.

P39-2

The Proposed Project is located close enough to Hatchet Ridge that the "wake effect" from the Proposed Project's turbines will reduce the amount of energy produced by Hatchet Ridge. A wake of reduced wind speed is created in the air downstream from a wind turbine. As the airflow proceeds downstream, the wake spreads out and the airflow recovers toward free streaming conditions. A key consideration in setting turbine spacing is to minimize wake influences, since reducing the speed of the wind as it flows past a turbine reduces the amount of electric power that turbine can generate. The "wake effect" is the aggregated influence on

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Hatchet Ridge Comments to DEIR
October 21, 2020
Page 2

energy production of a wind energy project from the changes in wind speed caused by other turbines.

Potential impacts on downwind turbine arrays are a key concern in permitting new wind energy projects and repowering existing projects in California’s more established wind resource areas of Palm Springs (Riverside County), Tehachapi (Kern County) and Altamont Pass (Contra Costa and Alameda Counties). Riverside County has addressed this issue in its General Plan. For example, the West Coachella Valley Area Plan (2003) includes policy WCVAP 2.4: “Require proposed wind energy development to address significant impacts caused by wind turbine wake effects upon existing and approved downwind wind turbines.” Other counties with established wind resources require that wake effects be addressed in CEQA analysis. For example, wake effects on an existing downwind turbine array were addressed in the CEQA analysis for two repowering projects in Contra Costa County (Buena Vista Wind (2005); Tres Vaqueros Windfarm (2011)) involving the replacement of older, smaller turbines with fewer, larger turbines. In both cases, proposed turbines were removed from the repowering project to reduce downwind wake effects. The EIRs for both projects are available on Contra Costa County’s website.

We have modeled the wake effect of the Proposed Project on Hatchet Ridge and determined that it will result in an approximately 7,000 MWh per year reduction to Hatchet Ridge’s generation. The most pronounced wake effect impact of the Proposed Project on Hatchet Ridge results from the short string of seven turbines proposed north of SR 299. This is due to their close proximity and prevailing wind patterns. We have calculated that this proposed string of up to 7 turbines would by itself reduce generation from Hatchet Ridge by about 3,600 MWh per year. Even if the string north of SR 299 is removed from the Proposed Project, the rest of the Proposed Project is likely to reduce energy production from Hatchet Ridge by 3,400 MWh per year.

The reduction in Hatchet Ridge’s generation of renewable energy would have a significant financial impact on Hatchet Ridge, including potentially impacting Hatchet Ridge’s ability to comply with its contractual obligation to meet the minimum gross energy production requirement under its power purchase agreement, but it also would result in significant adverse environmental impacts and changes in how impacts are calculated that should be addressed in the EIR.

Draft EIR Sec. 3.7 Energy

The Draft EIR recognizes that a project can result in a potentially significant environmental impact “due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction, operation and maintenance, or decommissioning.” Draft EIR Sec. 3.7.2.

The Draft EIR discusses the amount of energy that operation of the Proposed Project will consume and the amount of electricity it will generate and concludes that the Proposed Project’s electricity demand would not constitute a wasteful, inefficient, or unnecessary use of energy.



P39-2
cont.

Comment Letter P39

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Page 3

Page 3.7-12. However, the Draft EIR does not analyze how much existing renewable electricity generation would be lost due to the Proposed Project's wake effect on Hatchet Ridge. This impact on existing generation is wasteful, inefficient, and unnecessary.

The impact is particularly significant when considering the incremental impact of the turbines proposed north of SR 299. The Draft EIR indicates that removing those turbines from the Proposed Project (i.e., adopting Alternative 1), would reduce the Proposed Project's nameplate generating capacity by approximately 21 MW. Page 3.7-14. This assumes 3.0 MW turbines, however if 5.0 MW or 5.7 MW turbines are installed north of SR 200, the total would be 35 MW to 39.9 MW. The potential electricity generation from these turbines proposed north of SR 299 would result in more than half of the lost production from the existing generating capacity at Hatchet Ridge. Once that impact is taken into account, the Draft EIR's suggestion that the Proposed Project's impacts on energy are less than significant are unsupported. A reduction in existing generation of renewable energy is a significant adverse environmental impact under Impact 3.7-1 (see page 3.7-9).

P39-3

Adoption of Alternative 1 would adequately minimize the impact of the Proposed Project on energy generation from Hatchet Ridge. Some wake effect from the Proposed Project on Hatchet Ridge would remain, but eliminating the turbines north of SR 299 would minimize the impact. The Draft EIR also concludes that adopting Alternative 1 would not prevent the Proposed Project from achieving its objectives, and that: "Overall, Alternative 1 would result in no significant impacts to energy; impact conclusions would be the same as those identified for the Project."

P39-4

Draft EIR Sec. 3.10 Greenhouse Gas Emissions

The loss of Hatchet Ridge energy generation that would result from the Proposed Project also must be incorporated in the estimates of greenhouse gas emissions discussed in section 3.10 of the EIR. The EIR calculates the Proposed Project's potential to offset fossil-fuel powered generation using a CARB estimate that each MWh of wind generation could displace approximately 830 pounds of carbon dioxide-equivalent (CO₂e) emissions, or 0.38 metric tons (MT) CO₂e (assumes displacement of natural gas-fired generation). Using those same estimates, the 7,000 MWh per year of lost renewable energy generation from Hatchet Ridge due to the wake effect from the Proposed Project's turbines is the equivalent of 2,660 MT CO₂e per year. The loss of this existing renewable electricity generation, with the resulting lost potential to offset fossil-fuel generation, is an adverse environmental impact from the project.

P39-5

When the impact of the Proposed Project on Hatchet Ridge is taken into account, the net CO₂e benefits from the Proposed Project would be reduced by more than 1 percent. That would not be considered a significant adverse environmental impact under the criteria identified in the Draft EIR (which identifies "no net annual increase in greenhouse gas emissions" as the significance threshold, page 3.10-12). Still, it is a material change from the information presented in the Draft EIR. This adverse impact of the Proposed Project should be discussed in the Final EIR and incorporated into the analysis of greenhouse gas emission impacts.

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Conclusion

The comments above identify a potentially significant adverse environmental impact from the Proposed Project that are not identified or evaluated in the draft EIR: The wake effect of the Proposed Project on the existing Hatchet Ridge Wind Project, particularly from the short string of turbines proposed north of SR 299. The inclusion of these turbines in the Proposed Project is a wasteful and inefficient use of electricity generating assets. The greenhouse gas analysis for the Proposed Project also must account for its impact on Hatchet Ridge. Alternative 1 would minimize the significant incremental impacts of those additional turbines.

The Final EIR for the Proposed Project should address this potentially significant environmental impact. When the County proceeds to make a decision regarding the Proposed Project, to avoid or minimize impacts on the existing Hatchet Ridge Wind Project, the County should adopt Draft EIR Alternative 1.

Sincerely,

Hatchet Ridge Wind, LLC

By: 

Name: Dyann Blaine

Title: Authorized Signatory

P39-6

Letter P39: Hatchet Ridge Wind, LLC, Dyann Blaine

- P39-1 The County acknowledges the stated preference for Alternative 1, South of SR 299, which is described in Draft EIR Section 2.5.3.2 (at page 2-35 et seq.).
- P39-2 Potential impacts on the ability of the Hatchet Ridge Wind Project to generate energy are not potential impacts on the physical environment, and so are beyond the scope of the CEQA process for this Project. See also Response P26-27.

As described in Response P21-3, the concepts of wind shear, turbulence, and wake effect are related. “Wind shear” is a measurement found by comparing the wind speed at two different pressure levels or heights, where the difference produces an eddy of rotating air. The resulting turbulence can affect turbine power production. “Wake effect” occurs downstream from a rotating turbine, where wind speed is reduced. As the air flow proceeds downstream, the wake spreads and then recovers. Wake effect can be internal or external, meaning that turbines within a wind farm can cause wake effect for other turbines within the same project or for a downwind project’s turbines.

Partly in response to this comment, Stantec evaluated the potential wake effects of the Project and submitted a memorandum documenting its conclusions.⁸⁵ The County has independently reviewed the memorandum, and finds its conclusions to be sufficiently documented, consistent with CEQA, and persuasive. In summary, wake effects are economic rather than environmental impacts. Because the CEQA Guidelines are clear that “[e]conomic or social effects of a project shall not be treated as significant effects on the environment” (CEQA Guidelines §15131 (a)), the consideration of wake effect is beyond the scope of the CEQA process for this Project.

The County acknowledges the commenter’s interest in minimizing wake effect to the Hatchet Ridge Wind Project and that other jurisdictions have elected to regulate wake effect. The County has not done so.

The County acknowledges the statement in this comment that Pattern has modeled the wake effect of the Project on the Hatchet Ridge Wind Project and determined that it would result in an approximately 7,000 megawatt-hour (MWh) per year reduction to Hatchet Ridge’s generation. The commenter did not provide any supporting information or associated modeling data that would allow the County to verify the estimated loss of generation; therefore, the accuracy of the estimate is unsubstantiated.

As explained in Final EIR Section 2.1.1, *Input Received*, comments about financial considerations are beyond the scope of CEQA and so are not addressed in the EIR.

- P39-3 Consistent with Section VI of the Environmental Checklist provided in CEQA Guidelines Appendix G, Draft EIR Section 3.7.2 (at page 3.7-9), and CEQA Guidelines Appendix F, the Draft EIR considers whether the Project could result in a potentially significant environmental impact due to “wasteful, inefficient, or unnecessary

⁸⁵ Stantec, 2020. Response to Comment Letter re: Fountain Wind Energy Project Wake Effects. December 11, 2020.

consumption of energy resources.” Because wake effects do not result in consumption of energy, but instead the disturbance of wind flow, which is then restored further downwind, wake effects cannot be an “inefficient, wasteful and unnecessary consumption of energy.”

Even if the 7,000 MWh per year reduction estimate accurately reflects the generation loss that the Project’s wake effect would have on the Hatchet Ridge Wind Project, the loss in generation would equal approximately 1 percent of the total Project generation of 605,491 MWh. Therefore, there would continue to be a large net gain of renewable energy associated with the Project.

Upon further review of the Draft EIR’s description and analysis of Alternative 1 in response to this comment, it is possible, depending on the turbine option selected, that the Project’s proposed 216 MW could be generated entirely south of SR 299.

- P39-4 As noted above, the wake effects described in this letter are not impacts to the physical environment for purposes of CEQA. Regardless, the County acknowledges the stated preference for Alternative 1.
- P39-5 As acknowledged in Comment P39-3, wake effects are in the category of economic impacts. The 7,000 MWh per year Project-related wake reduction estimate is unsubstantiated. Regardless, the approximately 1 percent reduction in the net GHG emissions benefit of the Project would change the Project net benefit to a reduction of 222,496 metric tons CO₂e per year as opposed to the 225,131 metric tons CO₂e per year reduction disclosed in the Draft EIR (at page 3.10-16). This would not result in an adverse or significant environmental impact, or represent a material change from the information presented in the DEIR.
- P39-6 The County disagrees that these comments identify a new potential significant adverse impact relative to what was disclosed in the Draft EIR. The County acknowledges the stated preference for Alternative 1. See Response P39-4.

Comment Letter P40

Basic Summary of Fountain Wind Project DEIR: By Doreen Smith Power – Paralegal
Fountain Wind LLC – Applicant
Operator: PG&E
Use Permit No. 16-007 (page 2-34 or 94 consecutively)
1 | Page

To Lassen County Planning Department: Lead Agency for the Fountain Wind Project
Atten: Lio Salazar, Senior Planner
From: Doreen Louise Smith-Power/Paralegal

October 21, 2020

Comment Letter Regarding the Fountain Wind Project – Use Permit Number 16-007

Overall Comments to the DEIR:

- 1) The DEIR should have a page limit and really should be under 1,000 pages. Understanding that several departments have collaborated on the project. A “coordinator” and an assistant “coordinator” to implement the logistics of putting the DEIR together is sometimes necessary. Sometimes when a page limit is imposed, coordination becomes easier and required when brevity is followed, the document becomes concise and not redundant. P40-1
- 2) The comment period is ending today. A timeline should be placed on the website. My concern is that permitting for the project will begin without the project being approved for construction and the final EIR being approved and the “construction permit” and “use permit” being issued. P40-2
- 3) At page 2-18 the applicant states new wells may be required but does not state “who” would construct the new wells or the number of wells and alternatively “Burney Water District” would supply domestic wells. The number of wells to support the additional housing should be defined in the DEIR. As it is necessary to determine if the “community” defined requires the power proposed. P40-3

Fountain Wind LLC – Applicant Identified at page 61 consecutive and 2-1 paginated

Land Owner & Managed By: Shasta Cascade Timberlands, LLC

Use Permit Through CEQA and Applicant is requesting a use permit for 40 years @ Page2-22 in the Operations and Management (is PG&E applying for the use permit under a separate application?) California Public Utilities Commission CPUC -oversite. California Energy Commission, some oversight granted by CPUC. P40-4

Project Operator: PGE @ page 1-2– ...“an onsite switching station to connect the “project” to the regional grid operated by PG&E and interconnections to the grid ...”to be owned and operated by PG&E” Further the 2-18 the DEIR discusses the “project operator” and a “timber operator”. The operators should be clearly delineated and defined. The assumption is drawn that the “timber operator” is the land owner. ((@ page 2.6 footnote 4 California Independent System Operator manages the operation of California’s power grid, including the generation and transmission of electricity by PG&E and the CAISO’s other member utilities. The CASIO divides California’s electricity into three regions NP15, SP15 and Z26. NP15 is corresponds to PGE’s electric service territory. (CASIO 2008, PG&E 2014). P40-4

2.2 **Project location** 1 mile west of Hatchet Ridge Project, 6 miles west of Burney, 35 miles north east of Redding, immediately north and south of State Route 299 and near the private recreational facility of

Comment Letter P40

Basic Summary of Fountain Wind Project DEIR: By Doreen Smith Power – Paralegal
Fountain Wind LLC – Applicant
Operator: PG&E
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Moose Camp. (Moose Camp is 146 acre private recreational facility owned and operated by Moose Recreational Plant Ltd A California Non-Profit Mutual Benefit Corporation for the Benefit of its approximately 75 members and their families (Moose Recreational Camp Ltd 2012). ... Within Moose Camp there are 50 cabins used year round.) Other communities near the project Site include Montgomery Creek, Round Mountain Wengler and Big Bend. The Project is affiliated with the Pit River Tribe.

Comment: The executive summary @ page 616 consecutively or vi the turbines would be located on 76 parcels within Shasta County. The Parcel numbers are not identified and should be. I would like the list of parcels numerated with legal descriptions. If environmental reporting needs to occur, parcel numbers and legal descriptions are requested. Further, one of the goals of the project is to provide 216 MW of power to support approximately 100,000 houses is discussed and disclosures will need to be made and possible underground materials will need to be disclosed if left in place and could cause a hazard.

P40-5

Project Objectives at page 66 consecutive and 2-6 paginated

- 1) Develop, construct and operate a commercial wind energy generation facility capable of generating up to 216 MW of wind energy,
- 2) Interconnect to the Northern California electrical grid (NP15),
- 3) Locate the project in close proximity to an existing transmission line with sufficient capacity to reduce impacts and costs associated with the building new transmissions infrastructure
- 4) Assist California in meeting the renewable energy generation targets set in Senate Bill 100.
- 5) Create temporary and permanent jobs in Shasta County and contribute to the County’s tax base
- 6) Obtain entitlements to construct and operate a commercially financeable wind energy project
- 7) Support landowner(s) through diversification of revenue streams ,
- 8) Offset approximately 128,000 metric tons of carbon dioxide emission generated by fossil fuels and
- 9) Provide emissions-free energy for approximately 100,000 households.

Comment: The objective stated above go beyond the project description and the scope of the project. Currently there is one land owner identified Shasta Cascade Timberlands. There are also several quarries in the area and various landowners of those lands. Objective 4 is too broad and although is somewhat described in the DIER it is not an objective but a reason in part for the project. Also, if funding is to be received for project through Senate Bill 100 then the DEIR and EIR should so state. Any set aside or budgeted funding through that Senate Bill should be attached as an exhibit. Objectives 6-9 seem to be a little overbroad and anticipate further construction and if the “households” are new will require further zoning changes and use permit applications not in the current project description. Define exactly what you mean by fossil fuels and emissions-free energy.

P40-6

Project Description

1)Construct 72 Turbines including associated concrete foundations, pads and temporary construction areas 2) construct 34.5 kv overhead and underground collector lines and fiber optic communication cabling and 3) an onsite substation and switching station for connecting the Project into the existing PG&E transmission line. The elements of the above three components are further detailed....

Comment Letter P40

Basic Summary of Fountain Wind Project DEIR: By Doreen Smith Power – Paralegal
 Fountain Wind LLC – Applicant
 Operator: PG&E
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Underground fiberoptic communication lines, an onsite switching station to connect the Project to the regional grid operated by PG&E (interconnection facilities to allow interconnections to the grid (to be owned by PG&E) a temporary construction equipment laydown area 14 temporary laydown areas distributed throughout the Project Site and to store and stage building materials and equipment, operational and maintenance (O&M) facility with employee parking of up to four permanent meteorological evaluation towers (METs) , temporary episodic deployment of mobile sonic detection and ranging (SoDAR) or Light detecting ranging (LiDAR), systems within the identified disturbance areas (e.g. at MET locations), two storage sheds and three temporary batch plants. New access roads would be constructed within the Project Site and existing roads would be improved. See figure 2-2 Project Site Plan which shows the project layout of the Project components. The Project would be operated year round. ((@ page 2.6 footnote 4 California Independent System Operator manages the operation of California’s power grid, including the generation and transmission of electricity by PG&E and the CAISO’s other member utilities. The CASIO divides California’s electricity into three regions NP15, SP15 and Z26. NP15 is corresponds to PGE’s electric service territory. (CASIO 2008, PG&E 2014). An existing line 230kv line crosses the Project site south of 299 (CEC, 2014) The Project would interconnect to the grid along this line.))

Comment: There 72 turbines each turbine generating between 3-5.7 MW of energy to obtain the 216 MW of energy. How much energy does Hatchet Project turbines generate and why isn’t the Hatchet Project discussed as a cogeneration or an alternative source to “tap” into? Also, at with respect to the fiber optic cabling and four Meteorological Equipment (MET) towers. A “microwave” tower or overhead fiber optic communications circuits “could be” required. Why do you not yet know what will be “required” for this project and discuss the dangers of overhead microwave towers to both the environment and humans. There are 6 other Wind Projects discussed as alternatives and I have a couple of comments about those further into this letter. The turbines are not powered by wind at all times so how are you getting this estimate of power per turbine? Please put the conversion of MW to KV in the document. At page 2-12 it states that The Project will “tap” into PG&E existing 230kv (switching station) line at page 2-11 §2.4.2.2 it states the turbines would be connected to a substation/switching station to create 34.5 kv of energy on overhead lines attached to wooden poles to match the existing 230kv of PG&E energy) where does this “tap” into the community to “power” households or have those households not been built.

P40-7
 P40-8
 P40-9
 P40-10
 P40-11

Current Zoning: Timber, Timber Production and 6 acres unclassified

Disturbance Areas described at page 67 consecutively and 2-7

Temporary acres disturbed 1,384 and permanent 713 acres (Project area is described as 4,464 acres)

Comment: The number of acres disturbed per component is described at page 67 consecutively or 2-7 paginated - however amount of acreage per turbine is 5 acres initially and 2.5 acres permanently – the **distance between the turbines is not listed**. Disturbance of 50 foot initially to 30 ft permanently would be required – it is unclear if this is a right of way requirement, also it states that the cables would be within the or co-located to access roads (page 2-11) and most would be adjacent to the access roads (is this

P40-12

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initially, then when the road is widened as stated would the cables then be under the access roads?). Cables terminate at each turbine then the cables would connect to junction boxes overhead power lines or at the onsite substation. Junction boxes would also be installed on the long collector runs between the strings (overhead or underground?) (Purpose of the junction boxes to read power meters? Or read amount of power being generated in case of extreme wind and the turbines need to be shut down?) (pg 2-11).

↑ P40-12
 cont.
 P40-13

Landuse comments:

- **Abandoned Underground Cable:** 2-22 states that “underground cables would be abandoned in place.” Effect – compare to underground storage tanks (CEQA required reclamation or SUPERFUND) and further disclosure upon land sale... 100,000 additional housing units discussed.
- **Waste – During construction** about 10,000 pounds of solid waste would be generated per week (scrap lumber, metal and operational debris). Waste would be transferred to Burney Disposal and recycled at Anderson landfill. (What about after construction? When is a new landfill required and can the current landfills handle the additional waste during construction?)
- **Water Use -the water affected within the disturbance area** –page 2-24 and § 2.4.8.1 Within the project there are about 38 acres of water at page 3.4-58 and of the 38 acres and at pgs. 3.4-74 2.22 acres of wetland and 1.33 acres of other waters will be affected. How will this water be affected? Evaporation and turbine use of “cloud seeding” for the spreading of water should be discussed and if the water has the possibility of being toxic that should also be discussed.
- **Water Use During Construction** However, water usage at page 2-24 will be 5.6 acres or 5,000 gallons per day during construction and approximately \$1,338 truck trips will be required for the delivery of water. During portable toilet will be used and the Operation and Management Facility will use an on site septic system.
- **Water Use After Construction:** Amount of water need not estimated.

P40-14
 P40-15
 P40-16
 P40-17
 P40-18

Alternatives

No Project Alternative –_@ page 2-27 The No project alternative was discussed at the time the NOP was published on or about January 15, 2019 (see page 1-5 for date of NOP - Notice of Preparation) per CEQA Guidelines 14 Cal Code Regulation §15126.6), consideration alternatives regarding other sites was decided against and only other energy alternatives within the project will be considered and no such alternatives were brought forth page 2-29,

P40-19

- **Repowering Alternative : Six Wind Projects are discussed at page 2-30** the closest is **Shiloh in Solano County which produced 505 MW of Power** (the current project will produce 216 MW of power – the repowering of the Shiloh Wind Project should be further analyzed) – none of the six wind projects discussed are owned or operated by Applicant (Fountain Wind LLC) or the County (Shasta) thus neither has the legal means or right to repower them. **HOWEVER**, Wind Projects numbers 5 & 6 Shiloh in Solano County producing 505 MW and Manzana Project in Kern, County, producing 189 MW are within the “operator” PG&E service area of N15. The Shilho was not considered because it was installed in 1989. It is also stated at page 2-30 that the Kern Wind

P40-20
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Project produces 189 MW of energy and was not considered because it does not meet the project capacity – produce enough energy.

Comment: If the Kern Wind Project was combined with reducing the number of components turbines you could have the same amount of power with less turbines. Also the DEIR does not state who/what company operates the Wind Projects 1-4 described at page 2-30 and “why” those projects are current shut down. Have Shiloh Project turbines been maintained? The maintenance of the Shilho Wind project in Solono County should be discussed. Further, the Repowering alternative was not followed because of the “environmental impacts” but no exhibits were attached that discuss the impacts. I would like to review the evidence separate from the DEIR but attached to the DEIR. Further the “applicant” requests the “use permit” associated with construction and operation of the turbines for a “40 year term”.

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P40-20
cont.

- **Alternative of hydroelectric energy** was considered see page 2-30, although between Shasta and Keswick dam 915 MW of energy would be produced, wind energy is what this project is requiring. **Comment & question:** why turbines could not be tied into the hydroelectric power instead of PG&E and thereby creating wind energy and more that the current project of 216 MW proposed);

P40-21

- **Cogeneration Alternative** –see pages 2-31&32 Also, cogeneration the small hydroelectric facilities defined hydroelectric because the amount of power produced is about 30MW of energy Anderson Wheelabrator (31MW) and Sierra Pacific Industries (31MW) and Shasta Renewable Resources LLC 6 MW were discussed but dismissed because they did not produce the project goal of energy.

P40-22

Comment: The possibility of combining the smaller facility to use less turbines and all of what the community is producing as far as RPS (Renewable Portfolio Standards) was not discussed. Hat Creek Construction was mentioned as a business with land but no use permit therefore not MW of energy was quoted.

- **Solar Alternative** -see page 2-32, solar energy was considered and was not carried forward because it would not meet the project specific goals of wind energy to blow of 128,000 metric tons of carbon dioxide and provide emission free energy for approx. 100,000 houses.

Comment: No Comment.

- **Alternative – Reduction in Components** at page 2-37&38 Reducing the number of turbines to up to 65 would still produce 195 MW of energy and supply 91,746 households with energy (it is noted the original goal was to provide emission free energy to 100,000 households) and reduce the total temporary disturbed area to 1,259 and the permanent disturbed area to 652. (Planning for additional housing is anticipated) this reduction of acreage may lessen the effects to aesthetics and wildlife preserve including nesting eagles.

P40-23

Comment: (If the eagle nests are within the lessened acreage and you can state that with certainty the discussion may increase as the eagles are fully protected animals.)

Emission/Air Quality Comments

(The Project itself creates a large amount of emissions. Air quality prior to the “project” and estimated amount of emissions during “construction” was not discussed. Because the majority of the project is zoned timber and timber production solar may be a significant fire hazard. Conservation and Demand-

P40-24
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P40-25

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Side Management (ie supply and demand) the public suggested utilizing a conservation method of reducing energy use during peak times and reducing the demand by reducing construction. This was ruled out because the project calls goals were construction of a commercially financeable wind project.

↑ P40-25
cont.

- At page 3.3-2 seven “principal pollutants,” which are called the criteria pollutants:

Carbon Monoxide (CO), Lead, Nitrogen Oxide, Ozone, Particulate matter equal to 10 microns (PM-10) (may be harmful to the environment), Particulate Matter equal to 2.5 or less microns (PM-2.5) (can be inhaled and may be harmful to humans), and sulfur dioxide [This mentions the ozone layer but does not discuss the chlorfluorobromine and the halons and nitrogen oxides that can diffuse and into the ozonesphere that can destroy the ozone layer. Concern over the ozone layer led to international restrictions on the use of chlorfluorcarbon and halons to scheduled restrictions...” Encyclopaedia Britannica 1993 (9:40-b) The effect of the wind turbines creating an “inversion” layer pushing some toxins up, (turbines using some diesel) to “combust” with the ozone make up, creating a hole and decreasing the oxygen level. Also, this triggers NEPA National Environmental Protection Agency and their “Standard of Care” should be outlined and attached as an exhibit]

P40-26

CEQA Comment:

Fully protected animals were identified and the way “the project” is going to handle this is to count the number of dead eagles annually. I have a hard time with this being the ‘MITIGATION’ with respect to attempting to avoid killing the protected animal. This one example. CEQA requires a list of all of the fully protected animals and those on the endangered species list that currently populated the project area, prior to any construction and a mitigation plan. It does not mean not reclaim the land and wait for an endangered species to habitat the land and then give a reason not to reclaim the land. One section stated reduce the components, ie the number of turbines but did not tie it to the location of the fully protected species the bald eagle. The list of endangered and fully protected animals is incomplete. Finally, amount of water included in quote “disturbed” area is 38 acres ...the amount of water included in the “disturbed” area can change daily due to the increase use of canals and the lack of care taken to protect our rivers. I am sure the citizens between Bieber and Burney will want an accounting of water usage.

P40-27

P40-28

CEQA/SMARA Quarry Comment:

Finally, the turbines create an inversion of wind, there are several quarries in the vicinity of the project area, defined as over 4,000 acres with the temporary disturbance area of about 1,200 acres and permanent disturbed at about 750 acres. The turbines will blow the silt and the amount of silt which is residue waste of the quarries should be discussed as the silt is creating a problem with respect to our waterways. Also, the turbines may affect the quarries ability to confine other toxic materials within the mine site.

P40-29

Separate Permitting and Separate Application:

Housing and other construction plan were not discussed with respect to community growth, creating additional energy needs including power, water and waste management and land use. Change of zoning will be required for further housing and question will be presented – can we add additional housing and

P40-30

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communities and support those communities with respect to POWER, WATER AND WASTE MANAGEMENT. This will avoid This project only addresses one aspect of that growth. Once construction is complete, developers will come forward with the plans for that 100,000 limit in housing and create additional emissions through daily use.

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P40-30
cont.

I thank you for your time and consideration of this comment letter. A timeline of the process to review the DEIR on the Shasta County Resource Management/Planning Department Website will avoid attempts to obtain permitting before the use permit has been issued.

Doreen Louise Smith-Power/Paralegal

Letter P40: Doreen Louise Smith-Power

- P40-1 The commenter’s preference for a shorter document is acknowledged. The Draft EIR analyzes potential significant impacts of the Project at a level of detail indicated by the nature and intensity of the potential impacts. The analysis has not been abbreviated in response to this comment.
- P40-2 The Project may not proceed unless and until approved by the County and other permitting agencies. See Draft EIR Section 1.4, *CEQA Process Overview*, which provides information about the next steps in the County’s process, which steps include the Planning Commission’s review and consideration of the Final EIR (Draft EIR at page 1-7). After publication of the Final EIR and before deciding whether to certify the EIR or approve, modify, or deny the Project, the County must make the findings specified in Section 1.4.6 (at page 1-7).
- Draft EIR Section 1.3, *Use of this Document by Agencies* (at page 1-2 et seq.), explains that “responsible agencies,” i.e., other agencies that have discretionary permitting authority over the Project, could rely on this EIR as part of their own permitting processes. See Section 2.6, *Permits and Approvals* (at page 2-41), which identifies the approvals that could be required for site preparation, construction, operation, maintenance, and decommissioning of the Project.
- P40-3 The commenter is correct that one or more new onsite water supply wells may be drilled at the O&M facility location (Draft EIR at page 2-24). Any wells installed onsite would be constructed in accordance with the rules and regulations of the Shasta County Department of Resource Management’s Environmental Health Division (see Table 2-8, *Permits and Approvals* (at page 2-41). While the Burney Water District would supply water, new wells would not be required or supplied by BWD. The request for greater specificity is acknowledged; however, compliance with permit requirements would be sufficient to safeguard the well installation process.
- It is not clear what “additional housing” is of concern to the commenter. The Project does not propose homes. To clarify, the Applicant’s project objectives identify a number of homes that houses that could be powered by the Project to illustrate how much power would be replaced that might otherwise be obtained from nonrenewable sources – it is an illustration of a potential emissions offset, not a proposal of new residences. Details about community need for power and where power generated by the Project could be used once it reaches the grid are beyond the scope of the EIR.
- P40-4 PG&E, as an investor-owned utility, is subject to regulatory by the California Public Utilities Commission, and would not be subject to the County’s use permit requirements. See Draft EIR Section 3.1.2.4, *PG&E Interconnection Infrastructure* (at page 3.1-3) for more information. The CPUC is a “responsible agency” for purposes of this Project’s CEQA process because it would have permitting authority over activities needed for the Project (i.e., the work that PG&E would do to interconnect the Project to

the grid). As such, the CPUC would rely on the EIR as part of its decision-making process.

To clarify, “project operator” is the Applicant. The “timber operator” is the landowner. To further clarify, it says at the top of page 2 of this comment letter that “The Project is affiliated with the Pit River Tribe.” This is not true.

- P40-5 See Response P20-15, which explains the relationship between the numbers, heights and locations of the proposed turbines. See Response P20-15 regarding the adequacy of the project description, including the figures provided. The county acknowledges the request for a list of parcel numbers and legal descriptions. The requested information can be provided separate from the EIR process, as this information does not bear on the sufficiency of the EIR.
- P40-6 The County acknowledges the commenter’s perspective that project objectives 4 and 6-9 are too broad. See Response T2-3 for information about the project objectives and the purpose they serve in the EIR process. As noted above, the Project does not propose to construct any housing.
- P40-7 The Hatchet Ridge Wind Project has the capacity to generate 101.2 MW of electricity. It is an existing generation source described in the *Other Wind Projects* discussion in Draft EIR Section 3.1.3.1, *Cumulative Scenario*, that already taps into a PG&E transmission line that crosses the site. PG&E currently purchases 100 percent of the electricity generated by the Hatchet Ridge Wind Project (see Draft EIR at page 3.1-7).
- P40-8 CEQA instructs that an EIR shall be prepared as early enough in the process as possible to allow for alternatives or mitigation measures to reasonably inform the project development. Waiting until to determine all project details that could be known are known with certainty before initiating the environmental review would reduce the County’s and other agencies’ ability to modify the Project in ways that could avoid or reduce potential significant impacts to the environment. The analysis in the Draft EIR analyzes the impacts of the Project as if a microwave tower or overhead fiber optic communications circuits were to be constructed, operated, maintained and ultimately decommissioned. See, e.g., Draft EIR at pages 3.1-26 and 3.1-27, and page 3.12-17).
- P40-9 The commenter’s questions about the other wind projects are addressed below.
- P40-10 An average capacity factor of 32 percent per turbine is assumed for the Project, which accounts for periods when wind speed is not sufficient to generate electricity and for periods of maintenance. As described in the Draft EIR (p. 3.7-12), average capacity factors for wind projects has improved over the years. The 32 percent average capacity factor is conservative given that the average 2018 capacity factor among projects built from 2014 to 2017 was 41.9 percent, compared to an average of 30.8 percent among all projects built from 2004 to 2011, and 23.8 percent among all projects built from 1998 to 2001. The county declines the requested conversion from MW to KV.

- P40-11 The Project would provide wind-generated energy at the proposed point of interconnection to the Northern California electrical grid (NP15), which corresponds to PG&E's electric service territory. See Response P40-3, which clarifies that no homes are proposed and that comments about where the power generated could be used once it reaches the grid are beyond the scope of the EIR.
- P40-12 See Response P20-15, which explains the relationship between the numbers, heights and locations of the proposed turbines. The distance between the turbines would be identified based on which turbine option is selected and other details of final design.
- P40-13 The information provided in the project description about the proposed junction boxes is sufficient to inform the analysis of potential significant impacts. No more is needed to provide a reasonable good faith effort to disclose the potential adverse impacts of the Project as a whole.
- P40-14 The Draft EIR analyzes the impacts of the Project, including the decommissioning activities, on a resource-by-resource basis in Chapter 3, *Environmental Analysis*. Without some indication of what the commenter may believe has not sufficiently been addressed, the County does not have enough information to provide a more specific response.
- P40-15 Potential impacts of the Project, including during decommissioning, are analyzed in Section 3.15, *Utilities and Service Systems*. See Impact 3.15-3 (at page 3.15-9 et seq.). See Comment P27-27 and Response P27-27, which address decommissioning-related generation of solid waste.
- P40-16 Potential impacts to state or federally protected wetlands and waters are described in Impact 3.4-16. As described in the Draft EIR (Draft EIR at page 3.4-64), jurisdictional areas will be permanently or temporarily filled during ground disturbing activities such as grading during road construction to accommodate the Project. These impacts would be mitigated by Mitigation Measure 3.4-16a (*Water Quality Best Management Practices during Activities in and near Water*), Mitigation Measure 3.4-16b (*Avoid and Minimize Impacts to Wetlands and Other Waters*), and Mitigation Measure 3.4-16c (*Compensate for Impacts to Wetlands and other Waters*) consistent with state and federal regulatory requirements. The suggestion to discuss evaporation and turbine use of cloud seeding is not incorporated into the Draft EIR, as no such actions are proposed by the Project. Water quality will be maintained through measures discussed in Draft EIR Section 3.12, *Hydrology and Water Quality* analysis (at page 3.12-1 et seq.) and though the implementation of Mitigation Measure 3.4-16a (Draft EIR at page 3.4-65).
- P40-17 Draft EIR Section 2.4.8 (at page 2-24) says, "Project construction would require up to 49 acre-feet of water for dust control, soils compaction, and concrete manufacture, emergency fire suppression, and other activities." The comment does not question the sufficiency of the EIR. See Final EIR Section 2.1.1, *Input Received*.

- P40-18 Draft EIR Section 2.4.8 (at page 2-24) says, “Operation and maintenance of the Project would require up to 5.6 acre-feet of water per year (approximately 5,000 gallons per day).” In Section 3.15.3.2, *Direct and Indirect Effects of the Project*, Impact 3.15-1 evaluates potential impacts relating to water supply. It says, “Decommissioning requirements are assumed to be comparable to construction requirements.”
- P40-19 The commenter is correct that the No Project Alternative and other potential alternatives were discussed during the scoping meeting on January 24, 2019. Information was presented at the meeting about potential alternatives, including CEQA’s requirements that they be “reasonable or feasible alternatives to the proposed project or its location” and “capable of avoiding or substantially lessening any significant project impacts.” This information is consistent with the discussion in Draft EIR Section 2.5.1, *Alternatives Development and Screening* (at page 2-27). The commenter is correct that potential off-site alternatives did not pass the screening criteria, and neither did potential alternative technologies. See Section 2.5.2.1 (at page 29 and Response T2-4 regarding off-site alternatives). See Section 2.5.2.3 (at page 2-30) regarding alternative technologies.
- P40-20 See Response P26-4 regarding why a repowering alternative was not carried forward for more detailed review. The request for additional detail about the potential repowering locations initially considered is acknowledged, but has not been provided because it would not change the rationale for not carrying the potential forward for more detailed review. See Response P17-5 regarding consistency with the County’s General Plan and Zoning Plan for additional details.
- P40-21 The comment correctly states that a potential hydroelectric power alternative initially was considered but, for the rationale summarized in Section 2.5.2.3 (at page 2-30 et seq.) was not carried forward for more detailed review. The request for additional information about the potential to pair wind turbines with hydroelectric power is acknowledged, but has been provided because it would not change the rationale for not carrying the potential forward for more detailed review.
- P40-22 The request for additional information about the potential to pair wind turbines with power generated by cogeneration is acknowledged, but has not been provided because it would not change the rationale for not carrying the potential forward for more detailed review.
- P40-23 See Response P20-15, which explains the relationship between the numbers, heights and locations of the proposed turbines. As explained, the Project as described includes the flexibility to construct as few as 34 turbines on the Project Site.

The status of eagles as a fully-protected species is disclosed in Draft EIR Table 3.4-3, *Special-status Wildlife Species with Potential to Occur within the Project Site*. See page 3.4-11 (bald eagle) and page 3.4-12 (golden eagle). Potential impacts to these species are analyzed in Section 3.4, *Biological Resources*. The comment does not question the sufficiency of the EIR.

- P40-24 For air quality conditions prior to the Project, please refer to the discussion of *Existing Air Quality* on Draft EIR pages 3.3-5 and 3.3-6. Regarding the estimated amount of air pollutant emissions that would be generated during construction of the Project, please refer to Draft EIR Tables 3.3-4 through 3.3-6 (at pages 3.3-18, 3.3-19, and 3.3-22, respectively).
- P40-25 The commenter is correct that a conservation and demand-side management approach initially was considered as a potential alternative to the Project. The rationale for why it was determined not to pass the screening criteria is summarized in Section 2.5.2.4 (at page 2-32).
- P40-26 Ozone is discussed on Draft EIR page 3.3-3 in the context of ground-level ozone, which, unlike the stratospheric ozone layer that is high in the atmosphere, has the potential to be affected by the Project. The discussion focuses on ground-level ozone because the Project would result in the generation of ozone precursors, which tend to be unstable and in the presence of strong sunlight and a stable atmosphere, can be converted to ground-level ozone where it can be hazardous to human health. Damage to the stratospheric ozone layer is caused by ozone depleting substances such as hydrochlorofluorocarbons and halons that are much more stable in the atmosphere. These substances would not be produced by the Project. Therefore, damage to the stratospheric ozone layer is not addressed in the Draft EIR.
- P40-27 As the Draft EIR describes, the Project may impact several fully protected species, including golden eagle, bald eagle, and possibly greater sandhill crane. The list of special-status species considered in the Draft EIR analysis included all plants and wildlife that met the standards for protection identified on Draft EIR page 3.3-15, *Special-Status Species*. No additional endangered or fully protected species were identified during coordination with or comment letters from federal or state resource agencies, and the comment does not identify any potentially missing species by name. Potential impacts to special-status species are disclosed in the Draft EIR. The comment does not identify a deficiency in the Draft EIR analysis, hence, no associated changes to the analysis are warranted.
- P40-28 The context for the comment is unclear, but appears to relate to the distribution of wetlands and waters of the U.S. on the Project Site. As identified in Draft EIR Impact 3.4-16 (at page 3.4-64), permanent impacts to wetlands and other waters would occur to 2.22 acres of wetlands and 1.2 acres of other waters; not 38 acres, as noted in the comment. The size and configuration of such jurisdictional features is subject to verification by the U.S. Army Corps of Engineers, and does not change daily.
- P40-29 Extremely stable atmospheric conditions referred to as “inversions” act as barriers to vertical and horizontal transport of pollutants. Wind turbines would be expected to cause some level of local atmospheric surface mixing at the Project Site that could have the opposite effect of an inversion causing pollutants to locally disperse more

effectively in the atmosphere, which could result in lower surface concentrations of pollutants compared to conditions under an inversion.

Mining projects are identified as part of the cumulative scenario in section 3.1.3.1 (at page 3.1-8 et seq.). Draft EIR Section 3.3, *Air Quality*, evaluates the potential for the Project as a whole (including road use and other activities as well as operation of the turbines) to cause direct or indirect impacts relating to dust in Section 3.3.3 (see, e.g., page 3.3-14 et seq.) and to cause or contribute to cumulative effects in Section 3.3.4. The cumulative analysis identifies an existing significant cumulative impact based on the region's non-attainment status relative to PM₁₀ ambient air quality standards and that the Project would have a significant unavoidable cumulative effect relating to PM₁₀ during construction and decommissioning. During Project operation, however, the Project would not cause a cumulatively considerable contribution to existing conditions. Cumulative effects to waterways are analyzed in Draft EIR Section 3.12.4 (at page 3.12-23 et seq.). The analysis concludes, "when considered in combination with the effects of other projects, including presumed projects that employ unregulated hydrology and water quality practices, the Project's incremental contribution to potential significant cumulative effect would not be cumulatively considerable."

- P40-30 As explained in Draft EIR Section 3.1.4.13, *Population and Growth Inducement* (at page 3.1-20 et seq.), the Project would not induce substantial unplanned population growth directly (e.g., by proposing new homes and businesses) or indirectly (e.g., by extending public roads or other infrastructure) either in the short term (during the construction and decommissioning phases) or long term (during the operations and maintenance phase). The Project would require up to 400 on-site personnel, comprised of a combination of local and specialized (non-local) workers, during the projected 18- to 24-month construction period. As analyzed in the draft EIR, the existing construction labor pool in Shasta County is sufficient to meet the Project's non-specialized labor needs. Non-local workers would stay at local hotels and commute to the Project Site from Redding, Burney, Fall River Mills, or McArthur. Operation and maintenance of the Project would require up to 12 full-time employees. The County acknowledges that the commenter may disagree with conclusions reached in the Draft EIR, but has not provided any evidence in support of the opinion. Concerns about potential future requests to change zoning or add housing are speculative and beyond the scope of the CEQA process for this Project.

Comment Letter P41

Dear Mr. Salazar,

I am writing in support of objections to the Fountain Wind Project DEIR made by my sisters Barbara Boyan and Susan McVey, and other relatives.

I support the development of clean energy, but object to locating this particular project on high ground in this part of NE California, where the environment itself, and experience of it, is an important economic resource.

But if it is going to be pursued, then mitigation is needed in several regards.

As Susan mentioned, the protection of water and wetlands is only examined in the context of preserving wildlife (section 3.4-16), but it has serious importance to humans as well.

┌ P41-1
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Here's the relevance to our situation. The Buffum Homestead, located north of 299 – most of it north of Hatchet Creek, and including Buffum Creek -- is 120-plus years old. It was homesteaded as a summer range for goats being raised in Anderson, near Redding. The flock would be herded up every spring, and back down every fall. Riparian rights are included in the deed to the land. Our ancestor Frank Buffum and Con Cook (the only other homesteader in the area, whose land was adjacent) worked together and built a ditch from a spring on Hatchet Mountain down, to supplement the flow of Buffum Creek. Frank also built a perfectly engineered ditch to bring the water down from Buffum Creek to the 10-acre meadow he'd cleared on the Homestead. There was a large cabin there (it blew down in a blizzard in the '30s; the smaller cabin built from the wreckage burned in the Fountain Fire). The meadow was fenced, and extensive gardens and fruit trees maintained for years, watered by a further system of ditches. Horses would sometimes be brought up for the summer, up into the 1970s.

Frank and Florence left the Homestead to their four children, with the explicit hope that it would keep the family together, and that has proved to be the case. Though various family members own pieces, there has always been a shared understanding that it would stay within the family. Five generations have now been part of the Homestead. Family members have used stream water every year, and water from springs on the Homestead as well. Some water is always brought down to the meadow.

So back to Barbara and Susan's concern; it important that this water supply not be disrupted or damaged by any of the activities connected to the Fountain Wind

┌ P41-2
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Comment Letter P41

Project. The water has made our ongoing use of the land in summers possible, and maintaining the water supply by manual labor has been a unifying project over many years.

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P41-2
cont.

The seven towers that are proposed to be situated north of Route 299 are on a ridge above the Homestead and will tower over it, much closer than the windmills in the initial set, that run along the higher east-west ridge. The concerns raised about noise pollution and light pollution are relevant here. And basic safety. Anyone who has looked on YouTube at footage showing the many varieties of windmill disaster, will not have trouble imagining how dangerous it will be to be camping in the vicinity. When one of those towers, up on a ridge, catches on fire and goes down, or is blown apart in a windstorm, or fails through internal malfunction, the physical event can be explosive and terrifying -- not to mention that the unleashing of fire, in these times, in this area, could be deadly.

P41-3

The factors of nighttime light glare (Impact 3.2-3) and noise (3.13-1) are also relevant to our ability to continue to use the Homestead as a family camp.

The land and quality of life of many local residents also stand to also be adversely affected by the project as described. I would think it simple good citizenship for the developer to minimize the impact on those already living in the area around the project. As my sister Susan mentioned, the choice of alternative E.7.2.3 – the use of increased setbacks – would seem correct in regard to the many people who live at Moose Camp, and other property owners who live near any part of the project.

P41-4

So personally, I object to the seven towers planned for north of 299. Everyone understands that people can have a relationship with a place. It may not be protected by law, but it is worth consideration. In the case of our extended family, a 120-year of relationship with the Homestead is at stake. We would not have remained connected the way we are without the Homestead. At present some of us have well-developed campsites, others pitch tents. One beloved cousin was hoping to settle there permanently, before his untimely passing interrupted that intent. It is impossible to know what role the Homestead will play for our kids and descendants, but that unwritten future is based on innumerable strands of experience and story – Aunt Trett’s published account of visiting from Nebraska via stage coach, the fire that took out a sawmill, multi-generational campfires with storytelling late into the night, my great aunt’s cowboy friend waking up in the night and shooting up the potbelly stove, mistaking it for an attacking bear. During the Depression, many families (among whom were many teachers) spent entire summers at the Homestead, and others sent kids up. Living inexpensively was

P41-5
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Comment Letter P41

possible – and who knows in what ways this place might serve our descendants? It is significant that the addition of these seven windmills may preclude the possibility of camping, or living, there safely in future.

Most of the Homestead was burned in the Fountain Fire. Gene, Charlene, and Karl Buffum of Redding led a decade-long effort to recover, with over 10,000 trees planted by hand and hand-watered, and campsites restored. It would be tragic if this tremendous effort of restoration and forest nurturing were to ultimately to be negated by the windmills north of 299.

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P41-5
cont.

I appreciate the opportunity to weigh in.

With best wishes,

David Stanford

163 Beilke Rd.
Millerton, NY 12546
dstanford@uclick.com

Letter P41: David Stanford

- P41-1 Responses to comments received from Barbara Boyan are provided in the context of Letter P1. Responses to comments received from Susan McVey are provided in the context of Letter P13. Regarding where responses to other family members' comments may be found, see Final EIR Table 2-1, *Commenting Parties*. As noted, the Draft EIR analyzes potential impacts to waters and wetlands. See Response P40-16. See also, Draft EIR Section 3.12, which documents the County's analysis of potential impacts to hydrology and water quality. The analysis was performed using the methodology described in Draft EIR Section 3.12.3.1 (at page 3.12-11) and environmental standards. It considers input received during scoping from the Regional Water Quality Control Board and members of the public (Draft EIR at page 3.12-1, Appendix J, *Scoping Report*), reference materials cited in Section 3.12.5 (at page 3.12-24 et seq.), and the professional technical resource expertise of the preparers of the EIR (Draft EIR Chapter 5).
- P41-2 The Draft EIR analyzes the potential impacts to both groundwater and surface water in Section 3.12, specifically in Impact 3.12-3 (at page 3.12-17 et seq.) and also Impact 3.12-4 (at page 3.12-19 et seq.). Surface water drainages in the Project Site and vicinity are fed by stormwater runoff and any areas where the drainages are receiving inflow from groundwater, also known as a gaining condition, and in some isolated areas by springs. While the Project would add impervious surfaces, they would be distributed in disperse locations throughout the Project Site such that they would not be expected to alter the amount of runoff that ultimately flows into existing drainages or the amount of water entering spring-fed drainages. Impact 3.12-4 analyzed whether project construction, operation, or decommissioning would adversely affect drainage patterns including through alteration of a stream or river. Other than requiring mitigation for potential water quality impacts, the impacts related to changes in the course of a stream or river were determined to be less than significant. As determined in Impact 3.12-3, based on existing groundwater characteristics and proposed use of groundwater for the project construction and operation, the potential impact to groundwater resources, and as a result also springs which are generally directly affected by groundwater levels, was determined to be less than significant. Thus, there would no significant impact to any areas where groundwater is contributing to surface water flow. Therefore, the effects on surface water hydrology was evaluated in the Draft EIR and found to be less than significant. See also Response P4-7 regarding potential impacts to surface waters and groundwater, including from blasting, if it occurs. See Response T3-4 regarding water rights.
- P41-3 The County acknowledges the stated concerns about potential impacts to Moose Camp residents. See Response P4-1 and P4-3 regarding visual impacts, see Response P4-6 regarding noise and shadow flicker, Response P4-8 regarding the number of trips and vehicle types that could use local roads to access the Project Site, and Response P11-2 regarding potential impacts on use of the Moose Camp helipad. Impacts to land are addressed in the Draft EIR, as summarized in these responses.

Regarding the general concern about safety, see, e.g., Draft EIR Section 3.11, *Hazards and Hazardous Materials*, which analyzes the potential for the Project to create a significant hazard to the public or the environment. See, e.g., Impact 3.11-2, involving a release of hazardous materials into the environment (at page 3.11-10 et seq.), Impact 3.11-3, involving tower failure or rotor failure (at page 3.11-12 et seq.), Impact 3.11-4, involving ice shed (at page 3.11-14 et seq.), Impact 3.11-5, involving pesticide application (at page 3.11-15 et seq.), and Impact 3.11-6, involving shadow flicker (at page 3.11-16). Impacts would be less than significant, or less than significant with mitigation incorporated, in each instance.

See Final EIR Section 2.1.1, *Input Received*, which explains that questions about changes to quality of life are beyond the scope of the EIR. Accordingly, while they are not considered in the EIR, they may be considered by decision-makers in deliberations about the requested use permit,

- P41-4 The County acknowledges the stated preference for increased setbacks.
- P41-5 The County acknowledges the stated opposition to the construction of turbines north of SR 299. This could be accomplished via Alternative 1, South of SR 299 (described in the Draft EIR at page 2-35).

Comment Letter P42

Lio Salazar

From: Kathy Willett <kbwillett@gmail.com>
Sent: Wednesday, October 21, 2020 11:48 AM
To: Fountain Wind Project
Subject: Fountain Wind Comments
Attachments: Video.mov

To All Parties Concerned:

Where does one begin to respond to this ridiculous and vague DEIR which was supposed to address the hazards and mitigation plans related to this project when it is totally incomplete in many areas of discussion. That being said, how could anyone kindly respond when just the mention of the word "Fountain" brings forth the horrid remembrances of the Fountain Fire and all of the destruction done to our beloved pristine wilderness which is still in the process of recovering what it once was.

I, Kathleen Buffington Willett, am the owner of 160 acres of property adjoining the proposed Fountain Wind Project in Round Mountain and Montgomery Creek that my family has owned for the last 90 years. I have enjoyed my time there for nearly 70 years and to think of damaging any part of the tranquility and beauty that I am surrounded by there is actually unthinkable!

After almost 2 years of waiting for various steps to be made in order to make a decision as to whether this project should go forward, I have had enough! Enough has happened in this state and county in the past 2 years to demonstrate how damaging and ridiculous this whole project would be. How much more destruction would you like to deal with and pay damages for when no amount of money can revert the area, it's people and it's resources back to it's current state? There is no mitigation that is sufficient to make this project worthwhile.

I have stressed over all the many hazards and adverse affects that threaten both my property and my family and I have observed how Shasta County, California and PG&E as a whole have dealt with the problems they have already been dealing with and it has been unsatisfactory. You have given more than enough time to the project planners to address each issue which must be addressed and even with extra time, they have not presented the county or we, it's owners and residents, with sufficient response or mitigation plans for the problems this project would surely cause, even prior to the beginning of the project. Some of the DEIR explanations omit the many problems that will be encountered, some problems are completely ignored and therefore claim no mitigation is needed and other facts have been completely distorted or left out.

My daughter, Kelly Willett Tanner, has done extensive research on each section of this DEIR and I have gone through them with her. I do not intend to duplicate her work as she is probably more equipped and qualified to shred your DEIR to pieces with her Masters Degree in Emergency Management and her expertise in the subject of wildfires as well as her work with the state of Texas and county of Salt Lake in Utah.

I would ask that you read her comments and then read them again because they also speak for me and I will not be including all of the references that she will supply you with.

I will comment on a few of the many problems associated with this DEIR beginning with our source of underground artesian springs that I own the water rights to and which supplies many other residents further down the line with. In fact, the delicious water that flowed into the now infamous Fountain which no longer stands on 299E, west of Round Mountain, was probably supplied by my springs or another like it. We have never been without a water supply in the 90 years that our family has owned the property. It is easily maintained by my family at little to no cost and what is not used eventually enters into the Pit River and eventually the Sacramento River. Your DEIR does not even mention my springs or any of the other springs providing water to this area and claims they could not find any other water sources to inspect excepting 33 wells. I see that they made no attempt at trying to discover any other water sources, they couldn't even approach a resident's door to ask! Obviously 33 wells would not provide all the water needed by the area in question and any mitigation they have suggested would not be adequate. Any work near our springs could literally destroy them or the quality of the water, even as far as the Sacramento River.

P42-1

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P42-3

P42-4

Comment Letter P42

Besides all of the damage which would be caused by evaluating different conditions and if the project would therefore be feasible to continue with, just the experimentation and observation would have the ability to cause irreparable damage to the area, it's water supply and most probably fire before the actual project even began.

Speaking of fire, hasn't this county had enough wildfires to deal with without allowing further conditions to destroy what is left? Half of our beautiful county has been completely destroyed by fire, isn't that enough for you and why on earth would you entertain more of the same? It is beyond my reasoning to think that this project which would include the largest turbines in the US be placed in our little old ravaged county. The damage caused by the numerous points that are brought out by my daughter in her comments are bound to happen and I hope you are well insured because we owners are having a hard enough time getting insurance coverage because of the many threats that already exist. If Shasta County let's this completely insane project go one step further, the blame will sit on your shoulders and you will be held accountable as we are providing you with the facts that you need to end this plan.

The DEIR even mentioned that biomass could be a feasible way of providing the needed energy but failed to mention that it would clean up our forests at the same time but that was taken off the table. WHY? This would be a much safer endeavor in every way.

P42-5

Below I am attaching a one minute clip from the 10 PM KSL News in Salt Lake City where I happened to be on September 28, 2020. It discusses the fires coming from California and the major statistics. This was just as the Zogg Fire was beginning to spread so those statistics are not included. The way the state of California, their counties and PG&E are handling the problems they already have in controlling fires, how could you even think about taking more chances? When we don't mow our fields or use any power tools during hot, dry or windy weather, how could you allow a company to come in with their equipment and drill? When a spark from a flat tire burns half of the county down, learn your lesson! Shasta County has already been declared a disaster area needing federal aid, decisions like allowing this project to even touch our county should disqualify the county because you can't even handle what's already on your plate. In addition, the smoke that is generated by these fires is pushed east and severely affects the air quality as the smoke moves east. How irresponsible can Shasta County be than to take chances with the health of not just local residents but millions of others where the smoke will travel?

P42-6

As I complete these comments, there is so much more I could add but I think my daughter has just about covered it all. When a county can't even provide electricity to it's customers and turns the power off for at least 3 times during the time we have had to make our comments, I would highly suggest that you get the county back under control, including the handling of Covid-19, before starting any new projects and please, do not ever entertain the idea of a wind turbine project again. That is just not safe or practical and if it keeps being pushed forward, I would have to question why. Who is profiting from this and why aren't you placing the safety and needs of our county and it's residents first? Isn't it your responsibility to your constituents to speak for us? We are speaking and the country is watching.

P42-7

Kathleen Buffington Willett
kbwillett@gmail.com

Public Safety Power Shutoff expected affect more customers in Shasta County
<https://krcrtv.com/news/local/public-safety-power-shutoff-expected-affect-more-customers-in-shasta-county>

P42-8

Letter P42: Kathy Willett

P42-1 The stated opposition to the Project and concerns generally expressed about safety are acknowledged. Regarding the general concern about safety, see, e.g., Draft EIR Section 3.11, *Hazards and Hazardous Materials*, which analyzes the potential for the Project to create a significant hazard to the public or the environment. See, e.g., Impact 3.11-2, involving a release of hazardous materials into the environment (at page 3.11-10 et seq.), Impact 3.11-3, involving tower failure or rotor failure (at page 3.11-12 et seq.), Impact 3.11-4, involving ice shed (at page 3.11-14 et seq.), Impact 3.11-5, involving pesticide application (at page 3.11-15 et seq.), and Impact 3.11-6, involving shadow flicker (at page 3.11-16).

Impacts would be less than significant, or less than significant with mitigation incorporated, in each instance.

The area's relationship with fire is acknowledged and considered as part of the cumulative scenario (see Draft EIR at 3.1-5 et seq.) on a resource by resource basis in Chapter 3, *Environmental Analysis*. See, e.g., Section 3.16, *Wildfire* (at page 3.16-1 et seq.) and the wildfire-specific discussion of cumulative effects (at page 3.16-27).

P42-2 The County acknowledges the stated opinion that the Draft EIR is insufficiently comprehensive. However, without specific examples, the comment does not provide enough information for the County to provide a detailed response. Contrary to the suggestion in the comment, the County believes the EIR to be sufficient under CEQA.

P42-3 Responses to comments received from Kelly Willett Tanner are provided in the context of Letter P45.

P42-4 As described on page 3.12-18 of the Draft EIR, the Project would source water supply from either onsite wells or through a contract with Burney Water District using off-site sources. Water supply demand for the Project would be heaviest during construction and decommissioning (estimated at 49 acre-feet over an approximate 2-year period) compared to operations (estimated at 5.6 acre-feet per year). The Project-specific water supply assessment (Draft EIR Appendix I) considered the proposed water demand, the existing groundwater storage, and the existing demands. Underlying groundwater resources are characterized by a fractured bedrock system and discontinuous layers of weathered volcanic rocks or debris flows. According to the assessment, inflows are largely derived from the "infiltration of direct precipitation and snowmelt, and infiltration along creeks and downstream flow of spring discharges." The assessment determined that the potential impact of the Project's water demand (with respect to groundwater supply) would be negligible and represents a *de minimis* use of groundwater compared to existing production capacity. Artesian springs are created by geologic conditions that create pressure to bring groundwater to the surface. The comment's assertion that the springs have consistently produced for 90 years is an indication of substantive resources and enduring geologic forces to have withstood numerous periods of drought that have occurred over that time period. The Project

would not alter those conditions and would require *de minimis* use of groundwater. In addition, as discussed in Impact 3.12-1 (at page 3.12-11 et seq.), regulatory requirements for construction and the best management practices required by Mitigation Measure 3.12-1 and 3.12-2 would protect existing surface water and groundwater as well as springs from adverse effects related to Project activities. Thus, there would be a negligible effect on all existing springs in the Project Site.

- P42-5 The rationale for not carrying a potential biomass alternative forward is summarized in Draft EIR Section 2.5.2.3, Alternative Technologies (at page 2-31 et seq.). As explained there, “A cogeneration alternative to the Project was not carried forward for more detailed consideration because it would not result in a commercial wind energy generation facility capable of generating up to 216 MW of wind energy and would not provide emissions-free energy for approximately 86,000 households, since there is no basis to assume that the energy it would generate would even offset the power required to operate the associated biomass facility much less contribute to other PG&E ratepayers.”
- P42-6 As noted in Response P42-1, the area’s relationship with fire is acknowledged and considered as part of the cumulative scenario for all environmental resource considerations evaluated in the EIR, and specifically in Section 3.16, *Wildfire* (at page 3.16-1 et seq.). The suggested preference that additional potential ignition sources not be added is acknowledged.
- P42-7 The County is not an electricity service provider, and does not have authority or control over PG&E, which is. Regarding the County’s consideration of COVID-19 in the context of this Project, see Response P6-2.
- P42-8 The stated opposition to wind development within the County is acknowledged.



Wintu Audubon Society

Birding in Northern California

PO Box 994533
Redding, CA 96099-4533
wintuaudubon.org

October 21, 2020

Lio Salazar, Senior Planner
Shasta County Department of Resource Management
1855 Placer St., Suite 103
Redding, CA 96001

Subject: Comments on the Draft Environmental Impact Report for the Fountain Wind Project
State Clearinghouse No. 2019012029

Dear Mr. Salazar:

Wintu Audubon is pleased to provide the following comments on the Draft Environmental Impact Report (DEIR) for the Fountain Wind Project. The Fountain Wind Project proposes to construct and operate up to 72 wind turbines of various heights within an approximately 29,500 acre leasehold area, located east of Round Mountain and north and south of SR299 in Shasta County.

Wintu Audubon has approximately 450 members in Shasta County. Wintu Audubon has an active Board of Directors and Conservation Committee engaged in the conservation and restoration of natural ecosystems, focusing on birds, other wildlife, and their habitats. Wintu Audubon also promotes the enjoyment of the natural environment through education and interactive programs.

Both the National Audubon Society and its California Chapter are on record in support of renewable energy alternatives to combat global warming and climate change resulting from use of fossil fuels. The National Audubon states on its website: *"...renewable energy is critical to reducing pollution, lowering global temperatures, and preserving the places that birds need to survive"* and *"[Audubon] strongly supports...wind power...that is properly sited in ways that avoid, minimize, and mitigate negative impacts on birds and other wildlife."* California Audubon states on its website that it *"[Supports] expanding...California's renewable energy portfolio and the smart siting of renewable projects to reduce impacts to wildlife and habitats."* Wintu Audubon's Board concurs with these policies.

Comment Letter P43

Wintu Audubon

October 21, 2020

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Our comments focus on the adequacy of the DEIR's analysis of the project's potential impacts on birds and bats and the selection of effective, feasible mitigation for those impacts. We further comment on the need for a multi-tiered mitigation framework to properly address potential impacts on birds and bats.

WINDPOWER BIRD AND BAT GUIDELINES

The CALIFORNIA GUIDELINES FOR REDUCING IMPACTS TO BIRDS AND BATS FROM WIND ENERGY DEVELOPMENT (CEC Guidelines) (<https://wildlife.ca.gov/Conservation/Renewable-Energy/Activities/Wind>), developed by the California Energy Commission (CEC) and the California Department of Fish and Wildlife (CDFW) in 2007, make special mention of the role that should be played by conservation organizations such as Wintu Audubon in wind power development projects in California. The CEC Guidelines strongly recommend (at pages 27-29) that windfarm developers consult with appropriate conservation organization stakeholders to design surveys appropriate to the landscapes and habitats affected prior to public release of draft CEQA documents. On two previous occasions, in two previous comment letters regarding the project (February 14, 2018 and February 14, 2019), Wintu Audubon offered its services as a local conservation organization with special knowledge of and concern for bird and bat species potentially impacted by the project. We were not contacted by County staff nor the developer or its consultants to obtain our input on various bird and bat survey designs that can assist with adequate analysis of project impacts or project designs that can avert impacts. In previous written communication to you, we asserted that nocturnal owl surveys and nocturnal searches for migrating greater sandhill crane should be undertaken. We note that since these were not done as recommended by the CEC Guidelines, the DEIR's analysis is relying almost exclusively on the three year Hatchet Ridge Mortality study in assessing the likelihood of mortality to greater and lesser sandhill cranes. (Please see further discussion below on adequacy of mitigation for mortality to cranes.) This forces the DEIR preparers to craft mitigation imposed only if mortality to these species is subsequently documented, and in the case of Impact 3.4-5 and Impact 3.4-10, to postulate additional non-mandatory measures should impacts be greater than assumed by the limited analysis, or increase later in the project, which is contrary to CEQA Guidelines § 15126.4(B). We do appreciate that we were contacted (May, 2020) by the project developer to discuss the completed bird and bat studies.

The CEC Guidelines further expressly counsel (pages 72 and 73) for the involvement of stakeholder organizations such as Wintu Audubon in designing post-construction bird count studies and fatality monitoring efforts as components of a bird and bat fatality mitigation scheme, in addition to input from CDFW and US Fish and Wildlife Service (USFWS). The DEIR's mitigation measures assign these roles solely to USFWS and CDFW (without apparent regard to which of these agencies may ascribe special status to a particular species), and do not call for any input from or involvement by a conservation organization such as Wintu Audubon. (Please see **Mitigation Measures 3.4-3a** and **3.4-3b** and **3.4-6**, and **Conservation Measure for Willow Flycatcher and Yellow Warbler** (pp 3.4-57 and 58)). Wintu Audubon believes it should be assigned this role as suggested by the CEC Guidelines.

With regard to the Project's apparent non-reliance on or consideration of the CEC Guidelines, the CDFW makes special mention of the applicability and recommended use of the CEC Guidelines on its website at <https://wildlife.ca.gov/Conservation/Renewable-Energy/Activities/Wind>. Although consideration of and adherence to the CEC Guidelines is not mandated by any law or regulation protecting special status birds or bats (eg California Endangered Species Act (CESA)), the CEQA analysis lacks any explanation of why the CEC Guidelines are not reviewed by the DEIR, are not used to assist with minimizing bird and bat impacts, and to what extent the CEQA analysis and project design are or are not in conformance with

P43-1

their recommendations. Additionally, the bird count studies (Appendices 6 and 7) used to inform the analysis of impacts to birds are based primarily on USFWS’s *Land-Based Wind Energy Guidelines* (WEG) (https://www.fws.gov/ecological-services/es-library/pdfs/WEG_final.pdf) while the bat use study (Appendix 9) is based on the CEC Guidelines.).

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P43-1
cont.

Mitigation Measure 3.4-3a and **Mitigation Measure 3.4-3b** call for adherence to the WEG to address avoidance of operational impacts to birds and bats and monitor avian and bat mortality rates. There is no discussion regarding the merits of following these guidelines rather than or in addition to the CEC Guidelines. Although the WEG have been more recently prepared and implemented (2012 vs 2007), the WEG generally address coordination to satisfy federal laws and processes (such as MBTA, BGEPA and NEPA) and therefore do not focus on non-federal agencies or other stakeholders, as do the CEC Guidelines. Both the CEC and WEG Guidelines should be used to implement these mitigation measures.

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P43-2

SIGNIFICANT AND UNAVOIDABLE BIRD AND BAT IMPACTS

The DEIR concludes in the discussions following **Impacts 3.4-3, 3.4-8, and 3.4-13**, that the effect on the relevant species due to operations phase mortality (turbine strikes) is significant and unavoidable after mitigation. These impacts address the potential for mortality to bald and golden eagle, other raptors and special status bats. We agree that these impacts are significant, and indeed may ultimately be unavoidable after all available mitigation options are fully implemented. However, in each of these instances, there is either inadequate or incomplete analysis of options for adaptive management to avoid mortality, or inadequate or incomplete options identified for compensatory mitigation, or both. Thus the conclusion that the impact is unavoidable is unsupported, and does not satisfy CEQA’s requirement to mitigate significant impacts to the fullest extent feasible (CEQA Guidelines, § 15126.4).

Adaptive management options that could be added to those suggested in the Mitigation Measures proposed for these impacts might include relocation of one or more turbines, turbine brakes responsive to monitors that detect the flight of a raptor nearing a rotor, specialized lighting schemes, silencing one or more turbines which are identified as having higher mortality rates, and painting one rotor black (see <https://onlinelibrary.wiley.com/doi/10.1002/ece3.6592>).

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P43-3

The CEC Guidelines provide that compensatory mitigation for operations mortality at wind farms can include onsite or offsite conservation, protection, restoration, or enhancement of essential habitat, or an appropriate combination. In addition to those compensatory measures described in the Conservation Measures for these impacts, (which as presented have no assurance of implementation as described), compensatory mitigation for these impacts should also include funding of studies which can enhance the species habitat or purchase of land or conservation easements which can add to habitat protection, conservation or enhancement, such as purchase of conservation easements for breeding habitat.

For each of these impacts, a mitigation measure should be developed that includes a comprehensive mitigation and fatality monitoring framework including 1) an operations phase fatality monitoring program, advised by additional bird use surveys reflecting post-construction habitat conditions, 2) effective adaptive management options, such as selective temporary turbine shutdowns, speed braking when raptors are detected, funding studies that can lead to reduced mortality at certain project turbines and lighting and blade color alterations, and 3) a full component of compensatory mitigation options, including the on- and/or off-site conservation, protection or improvement of habitat for the impacted species through purchase or easement, that display the proper nexus and rough proportionality to the impact (CEQA Guidelines § 15126.4(a)(4)).

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Over the 40-year life of the project, significant changes to bird and bat habitat or species rarity within the region, the leasehold area and the Project Site may likely occur. These changes will cause uncertainty that mortality levels to special status birds and bats observed during the first three years will remain unchanged over the 40-year life of the project. Consequently, the operations phase fatality monitoring program (referred to in the DEIR as a post construction mortality monitoring program or PCMM) should require options for reexamination at appropriate intervals such as once every five years, or sooner should mortality levels exceed adopted thresholds.

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P43-3
cont.

OPERATIONS PHASE IMPACTS TO SANDHILL CRANE

The DEIR asserts that impacts to sandhill crane (apparently both greater and lesser sandhill crane since they were not differentiated during bird use counts) are less than significant, because fatality monitoring at Hatchet Ridge Windfarm did not detect mortality and sandhill crane usually avoid turbines at other windfarms, and migrations are typically above the rotor-swept area. We believe these are weak arguments, particularly inasmuch as **Impact 3.4-10** states impacts would increase when: a) flocks are large, b) visibility is hampered, c) wind speeds are excessive, and d) flight occurs at night. The Impact also states: *“Further, the timing of migration late in the fall season and well into winter increases the probability of birds encountering unfavorable weather such as low cloud ceiling, storm winds, or fog over the ridge. There are no available data on the behavior of birds under poor visibility conditions at the Project’s ridgetops.”* All of these conditions can indeed apply to sandhill crane migrations over this area. Also note that in the second year of large bird surveys five groups of sandhill crane comprising a total of 316 birds, passed over the Fountain Wind site in spring, indicating that spring (east-bound) migration routes over the site may be as common as fall (west-bound) migrations. Inclement weather and poor visibility that may force cranes into lower flight paths may be just as likely in spring as in fall. In Year 2 bird use counts, 25% of migrating waterbirds were observed within the rotor-swept area, however, the Fountain Wind turbines may be 23 feet higher, with a resulting larger rotor-swept area, than the assumption used for the Year 2 Bird Count data.

P43-4

The Draft Environmental Impact Report for the Hatchet Ridge Project observed (at page 3.4-20): *“One flight of 30 sandhill cranes was documented flying over the project area within the rotor-swept area of the proposed turbines (Appendix C-1); based on this observation, the relative exposure risk calculated for sandhill crane was the eleventh largest risk of all birds observed using the project area... It is therefore possible that flocks of cranes could regularly be exposed to turbine collision impacts during migration between breeding grounds in northeastern California and wintering grounds in the Central Valley and Sacramento–San Joaquin River Delta.”* (Shasta County, December, 2007) This bird survey observation does not indicate whether it occurred in bad weather (wind, rain, low clouds or fog). The conclusion in the DEIR that impacts to sandhill crane are less than significant arguably relies solely on the lack of collision data from Hatchet Ridge. It is possible that mortality has occurred and has simply been missed, or may in future occur under the right conditions. Furthermore, the turbines at Fountain Wind will be up to 62% higher than Hatchet Ridge (679 feet to rotor tip vs 420 feet), and will have a rotor-swept area up to 39% larger (1,360 sq ft vs 980 sq ft). We assert the impact on sandhill crane must be characterized as potentially significant, and subject to the same operations phase mitigation framework discussed above in SIGNIFICANT AND UNAVOIDABLE BIRD AND BAT IMPACTS.

OTHER SIGNIFICANT IMPACTS TO BIRDS FROM TURBINE OPERATIONS

Impact 3.4-11 addresses impacts to nesting Cassin’s finch, olive flycatcher and Lewis’s woodpecker (and other songbirds). There is no analysis or discussion about operational impacts to these species from turbine strikes. Inasmuch as these species are known to frequent flight elevations within rotor-swept area, the risk of mortality due to operations must be analyzed. The analysis further states: *“Because the potential effect on any individual songbird species population would not be substantial, the impact on most songbird species including olive-sided flycatcher, Cassin’s finch, and Lewis’ woodpecker from construction and operation of the project would be less than significant.”* With respect to any operational impact, this is a conclusory statement (not supported by any presented evidence). Moreover, as State Species of Special Concern (SSC), mortality of any of these species in numbers deemed an adverse impact on the local population must be considered significant. (Note that Lewis’s woodpecker and Cassin’s finch are not in fact designated SSC by CDFW, but rather designated BCC by USFWS.)

P43-5

The analysis following **Impact 3.4-11** states on page 3.4-56: *“Although the impact on Vaux’s swift from Project construction, operation and decommissioning is less than significant, if communal roosts, previously undetected are present and active impacts could occur.”* (We assume a comma after “active” must be added for clarity.) This relies on a discussion of the leasehold area being used exclusively for timber harvest. However, there are many areas within the leasehold area, including several private inholdings comprising up to 100 acres, that may have nesting habitat as many of these acreages have stands of older “second growth” timber that survived the Fountain Fire. Furthermore, the discussion preceding this conclusion discusses construction and decommissioning impacts, not the risk of mortality due to turbine operations. Finally, bird surveys only documented species present within viewable distances from count points which were primarily located in or adjacent to the Project Area (planned turbine sites and roads). Many large tracts within the leasehold area were not surveyed. Consequently, the finding that operations impacts are less than significant is conclusory and not fully based on data in the record. Due to the uncertainty of the presence of Vaux’s swift and risk of collision due to their flight habits within rotor-swept area, the impact should be listed as potentially significant, and subject to mitigation measures requiring a comprehensive monitoring, adaptive management, and compensatory mitigation plan as described above for **Impacts 3.4-3, 3.4-8, and 3.4-13.**

NEED FOR A TECHNICAL ADVISORY COMMITTEE

The DEIR does not discuss the Technical Advisory Committee (TAC) of the Hatchet Ridge Windfarm as a component of a successful mitigation scheme for possible operational impacts to birds and bats from this project. The operational bird and bat mitigation plan for Hatchet Ridge Windfarm was successful in part due to the formation of its TAC and its resulting collaboration between the County, the windfarm operator, Wintu Audubon, CDFW and USFWS. We believe its success in obtaining usable information to advise the need for additional adaptive management and compensatory mitigation for that windfarm, as well as other future windfarms, in part resulted from its multi-stakeholder design, which argues for repeating and enhancing the structure of this organizational mitigation model. Furthermore, no explanation is afforded in the DEIR on why such involvement from Wintu Audubon, and post-construction collaboration among trustee agencies and stakeholders in the form of a TAC, would not be effective and prudent. We maintain that a TAC should be formed to address operations phase mortality studies, adaptive management actions, and compensatory mitigation options. A conservation organization with special knowledge of and focus on avian conservation, such as Wintu Audubon, should be named as a co-equal member of any TAC formed for these purposes.

P43-6

Comment Letter P43

Wintu Audubon

October 21, 2020

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The discussion of the Migratory Bird Treaty Act (MBTA) on page 3.4-32 states *“The current interpretation of the MBTA’s definition of “take” does not prohibit or penalize take of migratory birds that results from actions that are not intentional.”* The discussion fails to include the recent ruling of a Federal Court which invalidated this new, extremely limiting, definition of “take”. The court found that the new definition reverses the intent of the law and thus the new definition as stated in the DEIR is unlikely to stand. The discussion in the DEIR should note that the applicable definition of take is at best uncertain. The DEIR’s analysis of the potential for take under the MBTA should reflect that uncertainty, and error on the side of protection of migratory birds.

P43-7

TABLE 3.4-3

Regarding **Table 3.4-3**, please note that olive sided flycatcher, Cassin’s finch and Lewis’s woodpecker are incorrectly listed as State BCC. BCC (Bird of Conservation Concern) is a Federal category (USFWS). Large bird surveys for the project counted lesser and greater sandhill cranes in combination, as the two subspecies could not be differentiated at altitudes of observation, however, the table does not list or describe lesser sandhill crane, which is SCC. <https://wildlife.ca.gov/Conservation/SSC/Birds> Finally, the table’s key does not define BCC.

P43-8

Should you have any questions about the issues raised in this letter or the role that Wintu Audubon is prepared to fulfill during project operations please feel free to contact us.

Sincerely,

Bruce Webb

Bruce Webb and Janet Wall
Co-Chairs, Conservation
Wintu Audubon Society

Cc: Wintu Audubon Board of Directors
Jon Belak, Field Manager, Clean Energy Initiative, National Audubon Society
Garry George, Clean Energy Director, National Audubon Society
Henry Woltag, Project Manager, ConnectGEN
John Kuba, Director of Environmental Affairs, ConnectGEN
Angela Moskow, California Oaks Information Network Manager, California Wildlife Foundation/California Oaks
John Livingstone, Shasta Club, Mother Lode Chapter, Sierra Club
David Ledger, Shasta Environmental Alliance

Wintu Audubon

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REFERENCES

Shasta County. *Hatchet Ridge Wind Final Environmental Impact Report*, Mitigation Measure BIO-6: Monitor Avian and Bat Mortality Rates and Implement Adaptive Management Measures. June, 2008.

Shasta County. *Hatchet Ridge Wind Project, Draft Environmental Impact Report*. December, 2007.

WEST. *Ecological Baseline Studies for the Hatchet Ridge Wind Energy Project, Shasta County, California*. August, 2007.

Tetra Tech. *Hatchet Ridge Wind Farm Post-Construction Mortality Monitoring Comprehensive Three Year Report*. May, 2014.

Association of Environmental Professionals. *CEQA Portal*.
<https://ceqaportal.org/tp/CEQA%20Mitigation%202020.pdf> February, 2020

P43-9

Letter P43: Wintu Audubon Society, Bruce Webb and Janet Wall

P43-1 As described in Response A3-8, the County recognizes that the voluntary CEC Guidelines for Reducing Impacts to Birds and Bats from Wind Energy Development encourage consultation with the USFWS, CDFG, raptor biologists, and appropriate stakeholders to establish the site-specific avian and bat survey protocol. The County appreciates the outreach by Wintu Audubon in February 14, 2018 and February 14, 2019. We note that most of the avian use surveys and other biological studies were either under contract, underway, or completed by avian experts in February 2018; and just a few studies remained outstanding. It is encouraging to hear that that the Applicant contacted Wintu Audubon in May 2020 to discuss completed bird and bat studies.

The comment states that written outreach to the County was not returned regarding nocturnal owl surveys and nocturnal searches for migrating greater sandhill crane. Based on a review of current literature, characteristics of the site, and known species use of the area, it was determined that nocturnal owl survey and nocturnal migrant studies were not required to characterize risk to these species; therefore, such studies were not performed for the Project. See Appendix C14 for more information regarding the application of these survey methods for the Project. Such studies were not requested or required by the CDFW or USFWS.

With regard to request for Wintu Audubon's involvement in designing post-construction bird count studies and fatality monitoring efforts as components of a bird and bat fatality mitigation strategy, the County and Applicant will seek input from the USFWS and CDFW for post-construction monitoring studies, as the Draft EIR identifies. The County appreciates the offer from Wintu Audubon to assist in developing the PCMM study protocol; however, at this time no assistance is needed.

P43-2 The comment states that Draft EIR Mitigation Measure 3.4-3a and Mitigation Measure 3.4-3b, should follow both the USFWS Land-Based Wind Energy Guidelines (USFWS, 2012) and the voluntary CEC Guidelines for Reducing Impacts to Birds and Bats from Wind Energy Development developed in 2007. These measures presently require adherence to the USFWS guidelines. As drafted, the Draft EIR mitigation measures satisfy all federal and state requirements for facility design and monitoring. No changes are proposed to the measures.

P43-3 The comment describes several measures that are already included within the Project's adaptive management strategy to minimize impacts to avian species including selective temporary turbine shutdowns (i.e., turbine curtailment, described in Mitigation Measure 3.4-3b), specialized lighting schemes (required by Mitigation Measure 3.4-3b, as refined in response to comment 3-39). As an example of the adaptive management approach, based on baseline avian surveys, the Applicant has refined the project description since circulation of the Draft EIR to eliminate turbine M03 from the project due to potential for higher collision risk for raptors at this location (see Final EIR Section 1.2.3, *Changes to the Project Since Issuance of the Draft EIR*). Other suggestions in the comment will be considered on a case-by-case basis during the adaptive management program to reduce

avian and bat fatalities. These may include the additional strategies suggested the comment (i.e., decommissioning turbines with high mortality rates, turbine brakes that are responsive to the presence of raptors, or painting one rotor black); however, the adopted strategies will depend upon the technical feasibility of refitting equipment and the magnitude of the identified problem. No compensatory mitigation programs are required or are being considered by the County other than those proposed in Mitigation Measure 3.4-3c (Offset operational impacts on eagles through compensatory mitigation, if necessary). In addition, the PCMM is not planned to extend beyond the time frame described in the Draft EIR, which extends for three years. The CEC and CDFW⁸⁶ find that, “[f]or most projects, one year of pre-permitting surveys and two years of carcass searches during operations are recommended.” Baseline surveys performed in 2017 and 2018, included as Draft EIR Appendices C6 and C7, provided a robust baseline assessment consistent with CEC recommendations, and the proposed three-year monitoring period fully meets CEC guidance.

- P43-4 The comment suggests that the impacts to sandhill cranes should be significant and unavoidable based on the observation that turbines at the Project are taller and have a larger rotor swept area than those at the Hatchet Ridge Wind Project, and because sandhill cranes have been observed over the Project area. While sandhill cranes have been observed flying over the Project Site, as the Draft EIR (pg. 3.4-53) identifies, sandhill crane interactions with wind turbines suggest sandhill crane collisions with wind turbines are rare. As stated in Draft EIR Appendix C6, no sandhill crane fatalities were documented during the 3-year fatality monitoring study at Hatchet Ridge, despite both species recorded flying over the site during pre-construction avian use surveys. Presumably, no fatalities have been incidentally identified at this facility during operations. Researchers at WEST, as cited in the Year 1 Avian Use Report (Draft EIR Appendix C6), monitored migrating sandhill cranes at five wind energy facilities in North and South Dakota from 2009 to 2013 for three years at each site. Cumulatively, observers spent about 13,182 hours recording crane use over 1,305 days, and even though 42,727 sandhill crane observations were recorded, no fatalities of cranes were found beneath turbines. From these monitoring efforts, it is evident that the observation of sandhill cranes near wind facilities does not correlate with potential impacts to this species. As stated in Draft EIR Appendix C6, given the absence of suitable breeding and stopover habitat within the Project area and the available data regarding this species’ interactions with wind turbines, impacts to sandhill crane from Project development and operation are anticipated to be low. No change is made to the Impact 3.4-10 “less than significant” impact conclusion based on the comment.

See Final EIR Table 1-1, *Comparison of Turbine Options*, which identifies a new, higher capacity output turbine option included as part of the proposed Project. The new option would increase the rotor swept area relative to the largest rotor swept area

⁸⁶ California Energy Commission (CEC) and California Department of Fish and Game (CDFG). 2007. California Guidelines for Reducing Impacts to Birds and Bats from Wind Energy Development. Commission Final Report. CEC, Renewables Committee, and Energy Facilities Siting Division, and CDFG, Resources Management and Policy Division. CEC-700-2007-008-CMF.

analyzed in the Draft EIR; however, since fewer turbines would be required to generate 216 MW, the Project's overall rotor-swept area would be reduced (see Final EIR Section 1.2.3.2 under "Biological Resources").

- P43-5 As described in Response A3-15, construction impacts to nesting songbirds are analyzed in Draft EIR Impact 3.4-11. Operational impacts from facilities to migratory songbirds (including Cassin's finch, olive flycatcher and Lewis's woodpecker) were considered during analysis of the Project and a robust discussion was provided in the appendices; however, this discussion was inadvertently omitted from Section 3.4, Biological Resources. See Response A3-15, which updates the songbird setting and impact discussion from Draft EIR Appendix C6. As described in revised Draft EIR Impact 3.4-9, potential impacts to passerines and other small birds at the Project Site (which includes Cassin's finch, olive flycatcher and Lewis's woodpecker), are expected to be low and less than significant. As such the suggested comprehensive monitoring, adaptive management, and compensatory mitigation plan for this species is not warranted. The commenter notes the occurrence of private inholdings comprising up to 100 acres within the leasehold area that may additionally provide nesting habitat. With regard to potential construction and operational impacts, preconstruction avian surveys are not warranted for portions of the leasehold that would not be directly or indirectly affected by the Project. Songbirds such as those identified above are expected to continue using non-project portions of the approximately 32,000-acre leasehold area.
- P43-6 As noted in Response A3-7, the County has opted not to convene a TAC for this Project.
- P43-7 The commenter is correct that after the Draft EIR was published, a federal judge overturned the Department of the Interior's memorandum M-37050, which outlined the Trump administration's interpretation of the Migratory Bird Treaty Act. The following changes to Draft EIR page 3.4-32 reflect this update:

Federal Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (MBTA) (16 U.S.C. §703 et seq.) is the domestic law that affirms and implements a commitment by the United States for the protection of shared migratory bird resources. Except as permitted by regulations, the MBTA makes it unlawful to intentionally pursue, hunt, take, capture, or kill migratory birds anywhere in the United States. The law also applies to the intentional disturbance and removal of nests occupied by migratory birds or their eggs during the breeding season. The MBTA liability rule, published as a final rule on January 7, 2021, interpreted the MBTA's prohibitions as applying only to actions that are "directed" at migratory birds, and not to actions that "incidentally take" them. On February 5, 2021, the USFWS delayed the effective date of the rule until March 8, 2021, and re-opened the public comment period on whether the rule should be amended, rescinded, further delayed, or allowed to go into effect. On March 8, 2021, the Department of the Interior (DOI) rescinded Solicitor's Opinion M-37050 on the MBTA, which preceded and formed the basis of the MBTA liability rule. At the time of this publication, DOI has yet to issue a replacement rule. In December 2017, the U.S.

~~Department of the Interior issued memorandum M-37050, which redefined “incidental take” under the MBTA such that, “the MBTA’s prohibition on pursuing, hunting, taking, capturing, killing, or attempting to do the same applies only to direct and affirmative purposeful actions that reduce migratory birds, their eggs, or their nests, by killing or capturing, to human control.” The current interpretation of the MBTA’s definition of “take” does not prohibit or penalize take of migratory birds that results from actions that are not intentional.~~

P43-8 The commenter is correct that the status of three non-listed birds was unclear in the Draft EIR. The following statements on Draft EIR page 3.4-12 are revised to reflect this update:

Lewis' Woodpecker <i>Melanerpes lewis</i>	-BCC, SSC <u>BCC/SSC</u>
Olive-sided flycatcher <i>Contopus cooperi</i>	-BCC, SSC <u>BCC/SSC</u>

The following statement on Draft EIR page 3.4-13 is revised to reflect this update:

Cassin's finch <i>Haemorhous cassinii</i>	-BCC, SSC <u>BCC/SSC</u>
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The commenter is also correct that the discussion of the non-listed lesser sandhill crane was presented in combination with greater sandhill crane. This species is discussed in Appendix C6 (Results of the Year 2 Avian Use Study Report and Risk Assessment) and Appendix C7 (Year 1 Avian Use Study Report and Risk Assessment). The comment requests inclusion of lesser sandhill crane in Table 3.4-3, which is appropriate to include. The following addition to Draft EIR page 3.4-12 reflects this update:

<u>Lesser sandhill crane</u> <u><i>Grus canadensis</i></u>	<u>-/CSC</u>	<u>The summer breeding grounds for the Pacific Flyway population is southcentral Alaska. Population overwinters in California's Central Valley near shallow lakes or freshwater marshes.</u>	<u>Moderate. May pass through the Project Site during migration but does not nest there.</u>
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In addition, the following definition is added to the notes at the bottom of Table 3.4-3 on Draft EIR page 3.4-14:

BCC: Bird Species of Conservation Concern

P43-9 The County acknowledges receipt of these materials regarding the Hatchet Wind Project and the February 2020 CEQA Portal Topic Paper regarding Mitigation Measures.

Comment Letter P44

Lio Salazar

From: Brianna Pressey <briannapressey@gmail.com>
Sent: Thursday, October 22, 2020 11:45 AM
To: Fountain Wind Project
Cc: Shasta County BOS
Subject: Wind Turbines

Shasta County Planning Commissioners,

This email is in regards to the Fountain Wind Project’s Environmental Impact Report. As a resident of Montgomery Creek in Shasta County, I am concerned about several issues that I feel were not adequately addressed.

First and foremost, the EIR does not address how the 650 foot tall wind turbines will affect fire protection, should the need arise. Is it the understanding of the Planning Commissioners that these 33,000+ acres will not ever need helicopters or air tankers to help battle a future fire in the area? What is the alternative that the US Forest Service is able to put into place?

Secondly, the EIR does not address the potential pollution both to the land and air if the turbines were to burn in a wildfire. Did Shasta County require a bond upfront to make sure that in the case of a fire or when the turbines become obsolete the company is responsible for returning the land to how it was before the wind farm was created?

Third, the EIR did not include photo simulations of how the turbines will impact the residences of Moose Camp, of which I am one. It does not address the actual distance from the turbines to each of the homes in the region. Will noise be an issue? What decibel level will be perceived at each of the homes in the area? Will light flicker hinder the view? How much vibration will the turbines cause on the volcanic earth and to our homes?

Fourth, the EIR does not address our water wells and the existing water table in which we rely. Will construction and maintenance of the turbines cause any contamination or change in the level of the water?

Fifth, the EIR has not specifically said how many trips will be made through our neighborhood on Moose Camp Road. How large of vehicles will be traversing on Moose Camp Road? What fuel type will the vehicles use? Will they add pollution to the homes that line Moose Camp Road? Will they vibrate the area? What decibel level will the vehicles emit?

Finally, given our fragile ecosystem in the area, I do not believe the Fountain Wind Project needs the large number of turbines or even the enormous size of these turbines in order to produce energy.

I believe a more thorough EIR is necessary before our Shasta County Planning Division can make a decision on the next step in the process.

Thank you,

Brianna Pressey
19614 Sycamore St.
Montgomery Creek, CA 96065-9632

P44-1

Letter P44: Brianna Pressey

P44-1 See the responses provided to comments made in Letter P36, which was received from Lee Mahoney. The comments here raise the same issues as those.

Comment Letter P45

Comments to the Fountain Wind DEIR

First, I apologize for the length of my comments, I initially was only going to address wildfire and some other minor concerns I had. However, the analysis and mitigation provided there concerned me. It was the Lead Agency’s job to require this report meet the standards of CEQA – it is questionable that was done here (Public Resource Code 21005(a)).

P45-1

California’s goal of attaining all green energy by the year 2045 has hastened various green projects to reach this goal. For the first time in 20 years California saw their first rolling blackouts as a result of a heatwave and the inability to supply the proper power during this time though energy production capacity existed and California failed to implement backup storage for times when renewable energy was not sufficient. This problem demonstrates the importance to recognize that due to the fact that some of these energy sources are still in the early stages of development much of their impacts have yet to be thoroughly studied or peer-reviewed. In 1969, Dr. Chauncey Starr, Dean of the School of Engineering and Applied Science, of the University of California, Los Angeles wrote a paper discussing rapid adoption of new technology. He stated “Engineering developments involving new technology are likely to appear in many places simultaneously and to become deeply ingrained into the systems of our society before their impact is evident or measurable... Thus, we now face a general situation in which widespread use of a new technological development may occur before its societal impact can be properly addressed” (as quoted by Palmer, 2018). In this case, no thought was given to power storage or at least it was not adequately addressed. Unfortunately, once projects are undertaken that are this large and impactful, they already have altered the environment forever regardless of what steps are taken to restore nature back to the way it was before the project began.

P45-2

Starr’s warning is particularly important when considering a new project such as the Fountain Wind Project since the height of the turbines are significantly larger than past turbines and because the impacts of them in highly forested/severe wildfire hazard areas that are prone to worsening conditions under climate change has not been thoroughly studied or addressed for their impact. Project that help reduce the carbon footprint and incorporate vital renewable energy is important but replacing forests that are better at reducing the impact of carbon emissions and replacing them with less reliable/predictable sources of reducing such impacts such as wind turbines is counterintuitive (as discussed later). Unfortunately, due to how recently wind energy production at a large scale has been adopted, it is difficult to find appropriate research addressing the issues that is needed in the decision making process. Also, simply comparing it to other wind projects that are located in areas that vastly differ in terrain, vegetation and climate than where the project is located will ineffectively explain the true impacts since differences in geographic features and climate can drastically differ the effectiveness, reliability and durability of turbines. These turbines are much larger than past turbines and the reliability, safety and function of them are not known. We will be the beta-testers.

P45-3

P45-4

Also, since Wind Energy is not a “mature industry” such as the nuclear industry it has yet to adopt a safety culture. In mature industries a safety culture recognizes the importance of sharing information to learn from accidents and learn more about best practices. The wind industry has yet to adopt such a safety culture and for the most part accidents and incidents are kept commercially confidential making it difficult for those considering wind energy to

P45-5

understand the full nature of accidents and problems with wind energy and turbines (Palmer 2018). Also, it is important to understand that due to the fact that it is not a mature industry and that accidents and incidents are not being shared publicly or as completely with competitors within the industry it is difficult to find reliable or accurate information regarding such accidents and to find substantial peer review material regarding both accidents and possible adverse impacts on the health of the public and environment.

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P45-5
cont.

One article written about fire and wind turbines along with other researchers has pointed out the lack of central data on accidents. However, they cite a study reported in the British Newspaper, *The Telegraph*, which was independently confirmed by Renewable UK that reported that between 2006 and 2010, 1500 wind turbine accidents occurred within the United Kingdom alone which means that amount actually reported represents only 10 percent of accidents/fires reported (Uadiale, Urban, Cavel, Lange and Rein, 2014). These accidents will be presented in more context later.

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P45-6

Due Diligence

Furthermore, it is important for the county to do its due diligence in fully understanding the complete risks to the environment this project presents as the Supreme Court decisions in 1961 and 1965 from the Noerr-Pennington cases has set precedent in what is known as “The Right to Lie” when involving DEIR’s. This “Right to Lie” is considered to be a part of Freedom of Speech under the First Amendment. “The theory is that decision-making bodies and concerned public, aware of the potential for misinformation and deceit, will exercise corresponding diligence to ferreting out the truth (Miller 2019). The precedent set in these cases makes it nearly impossible to sue a company for not accurately reporting all environmental impacts in a DEIR. Thus, due diligence is required by the county to make sure the information is sufficient and as accurate as possible before accepting and reaching any conclusions pertaining to the EIR and approving a project. For example, in 2008 a Humboldt County District attorney was not able to sue Pacific Lumber Company (in *People v. The Pacific Lumber Company*) for allegedly submitting false information during the EIR process and the ensuing sustainable logging plan due to the above precedence set.

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P45-7
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In this DEIR it has become evident that certain evidence was withheld from the public including one important piece of information which included a landslide scar (undermining any conclusion that landslides are not a problem in the area) and it was known by the lead agency leaving me with questions of what else the lead agency may have withheld. It also seems that the agency did not fully try to do its due diligence in understanding the true environmental impacts. While it does not have to be completely exhaustive after reading the DEIR the public should have a fairly good understanding of the project and its impacts. In *Rural Landowners Assn v. City Council* (1983) the court said, “CEQA is essentially an environmental full disclosure statute, and the EIR is the method by which this disclosure is made.” *County of Inyo v. Yorty* (1973) refers to an EIR as “an environmental alarm bell whose purpose is to alert the public and its responsible officials to environmental changes before they have reached ecological points of no return.” As I noted a reason to rush acceptance of such large turbines without truly understanding their impacts. *Rural Landowners Assn v. City Council* (1983) also notes that “a good faith effort to comply with a statute resulting in the production of information is not the same, however, as an absolute failure to comply resulting in the omission of relevant information. While the guidelines allow for flexibility of action within their outlines, they are not to be ignored. They are entitled to great weight and should be respected by the courts unless they are clearly

Comment Letter P45

erroneous or unauthorized.” *Concerned Citizens of Costa Mesa, Inc. v. 32nd Distr. Agricultural Assn.* (1986) continues “...the primary duty to comply with CEQA's requirements must be placed on the public agency. "To make faithful execution of this duty contingent upon the vigilance and diligence of particular environmental plaintiffs would encourage attempts by agencies to evade their important responsibilities. It is up to the agency, not the public, to ensure compliance with [CEQA] in the first instance." (*County of Inyo v. City of Los Angeles*, supra, 71 Cal.App.3d at p. 205.). In this document, it appears that perhaps the agency may have been influenced in some way to evade these responsibilities and the burden was placed upon the public.

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P45-7
cont.

I, along with others I have communicated with in the affected area, have felt that that the responsible agency has left us to do what the responsible agency did not. We have had to become familiar with CEQA requirements, gain expertise in multiple areas (which a county has different departments that can help them with this) and then be burdened with proving that our concerns about environmental impacts are in fact valid and supported with sufficient factual evidence – in a much shorter time than the agency, other participants and the applicants had to do this report to begin with. This is a tremendous burden placed on this particular community as internet is limited in the area, no libraries exist within at least 25 miles of the project site, we are located far from any substantial public resource and even those able to travel to libraries have been restricted due to the unprecedented circumstances of public shutdowns due to COVID-19. This is not including 2 Public Safety Shutoffs that already occurred during the response timeframe from our “reliable, safe” utility system that has to shut down because of the safety hazards and negligence to maintain the regulatory standards that had been set. We are on the eve of yet a third shut-off expected to start the day comments are due. Hopefully, those writing the final EIR will be more forthcoming, submit any substantial new evidence for public review again (as is required by CEQA law if new substantial information is given) and remember how much effort was required by this community when it seems so much was overlooked or inadequately addressed.

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P45-8

The document rarely looks outside of Appendix G of CEQA for impacts. However, Appendix G also states “Substantial Evidence of potential impacts that are not listed on this form must also be considered. The sample questions in this form are intended to encourage thoughtful assessment of impacts, and do not necessarily represent thresholds of significance.” With the exception of adding the issue of communications it does not seem that any “thoughtful assessment of impacts” outside of the samples given were taken into consideration. Were other impacts thought of or discussed outside of these “sample questions” or was it thought that this was adequate enough? Since every single locale and every single project are unique could possible impacts also be unique? CEQA acknowledges this in 15064 (b)(1) “...the significance of an activity may vary with the setting. For example, an activity which may not be significant in an urban area may be significant in a rural area.”

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P45-9

Companies Involved In Surveys and Information Gathering

The dependence on Stantec Consulting services mentioned 76 times in the document itself, responsible for carrying out many of the studies and preparing multiple appendixes creates some concern. Though they are not listed as consultants or sub consultants in the document nor are they considered the project applicant within the document they are noted as participants in a Multi-Agency Scoping Meeting on January 24, 2019 and listed as being there with/or representing the Applicant (who differs from the original applicant). It is unclear why they

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P45-10
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would represent or attend with the applicant if they themselves are not the applicant. Nor does it seem to satisfy the requirements of CEQA 15129 that states all those who were consulted in preparing the draft EIR should be identified. Some biographies of random contributors to studies are found within the Appendixes, if one looks hard enough, but no definitive area under project consultants, does it least the majority of people are companies that contributed to the studies or the preparing of this report. I could not find one reference to Stantec itself being a contributor to this DEIR. Considering how large Stantec is and their involvement in the studies and information attained in this document it seems their contribution would apply to CEQA 15129. The county itself explained to me when I asked why Stantec was not considered a consultant or sub consultant, despite their vast involvement in almost every aspect of this project that it was due to the fact that the company was hired by the project applicant (I see no language in the CEQA requirement that implies this is unnecessary). It would seem fully appropriate to ask for some further information as to transparency in regards to Stantec or its subsidiaries involvement – not necessarily with the company itself but of any of the decision makers which may have worked with them and been hired by them on multiple other projects such has the Hatchet Ridge Wind project. If so, it would seem appropriate that full disclosure is made known as it could demonstrate a conflict of interest.

P45-10
cont.

Listed under the Lead Agency as part of the staff as a consultant is Bruce R. Grove of SHN Engineers and Geologists. His work history is full of companies that were involved directly or at least indirectly with Stantec. Furthermore, it appears the owner or principal of the company he works for also worked for a company that Stantec once owned. Why is this company a consultant listed as staff for the county on this project when it seems an apparent conflict of interest could be established. Why not just hire someone from Stantec? I believe it is the Lead Agency’s responsibility under 15084(e) “The draft EIR which is sent out for public review must reflect the independent judgment of the Lead Agency. The Lead Agency is responsible for the adequacy and objectivity of the draft EIR.” I can only hope that was done here and that the consultant listed under the Lead Agency was also objective if he was included in this process.

P45-11

Perhaps this conflict of interest is already more apparent. For example, in October 2017 Stantec bought the Redding based company North State Resources and merged most of their employees under the larger company. At first thought this does not seem to warrant suspicious but further thought indicates 60 local employees including founder Tim Reilly now work for Stantec. Reilly himself notes in an interview with the Sacramento Bee that they first met 5 years prior while working on another Wind Project that exists in Shasta County. Tim Reilly’s specialty is geology and soils and in fact on another project on Friant Water Authority he worked on as an employee of Stantec his role is listed as NEPA/CEQA Technical Advisor and the main reference under Geology and Mineral Resources (this reference can be found here <https://static1.squarespace.com/static/58c2eccc15d5db46200ea426/t/5b1597c688251b408d36a28f/1528141809371/Pak2+-+RFQ+BOD+June+6+2018+Meeting.pdf>) Geology also seems to be a specialty of SHN Engineers and Geologists). I am not trying to imply that intentional neglect was done because of either of these individuals but I find one of the most questionable sections in this report to be that of Geology as to the fact that it omits known landslides located underneath proposed turbines and prior pre-geotechnical studies, as well as soil studies that could have helped the document be more informational and instead left out impacts that could be significant. Since Stantec is not considered a consultant or sub consultant they conveniently can avoid the

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question of who exactly from North State Resources that now work for them participated in this process and if any links to anyone who may have a conflict of interest – though I could identify two formal employees in the Appendix of Biological Resources since they are listed at the end of the studies they participated on. However, I have no idea who worked on the geology section from any agency except the peer-reviewer. This now brings another red flag of what other possible conflicts of interests, if any, exist. I accidentally stumbled across this information when I saw that a rockslide on Big Bend Rd, that occurred in 2017 near the Project Site, was currently being worked on by North State Resources – again though Geology and landslides are concluded to not be a problem even with the necessity of road work on Big Bend Rd – also not included in this DEIR.

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P45-12
cont.

The short-cut of CEQA and reasoning behind somewhat misleading conclusions in Geology and elsewhere is acknowledged under the Wildfire Section found on 3.16-23 of the report. There it is admitted that certain factors were included in the project description and thus “... analyzed as part of the Project where applicable throughout this EIR.” Yet this seems to blatantly ignore the Court in *Lotus v. Department of Transportation (2014)*. Yes, in instances certain aspects of the construction are important to the project itself and thus not a separate mitigation factor but this seems to be a blanket response for any section that really need to be addressed. In *Lotus v. Transportation (2014)* the court stated “simply stating there will be no significant impacts because the project incorporates ‘special construction ‘techniques’ is not adequate or permissible.” The Court further states “this short-cutting of CEQA requirements subverts the purposes of CEQA by omitting material necessary to informed decision-making and informed public participation. It precludes both identification of potential environmental consequences arising from the project and also thoughtful analysis of predictable impacts from the project.” By doing so it can leave out how such codes will reduce an impact that is never regarded as significant.

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P45-13

Furthermore, at least 7 out of 10 of the Planning Commission or Board of Supervisors at the time of my comments have themselves own/owned or worked with businesses that do land consulting, engineering, were presidents of the Building Trade Associations in the area and or involved in other construction trades. It is known that some of these companies were involved in both the restoration after the Fountain Fire, Construction of the Hatchet Ridge Wind Project that involved both Stantec, Avangrid and North State Resources and at some point in the construction/decommission process and 40 years of operational period it is not unlikely that some of their companies may benefit from the Fountain Wind Project. I’d like to believe that they won’t somehow profit from this project but it does seem quite coincidental. They or at least their professional contacts and associates will surely benefit from the process. I’d like to think that they can remain unbiased but clearly there is a lack of transparency in this process and that opens up for reasonable suspicion. I can’t understand why they would approve this specific project knowing the true impact on the environment first hand both from the Fountain Fire and the Hatchet Ridge Wind Project and the knowledge that this project will never come close to meeting the “capacity” it can produce when numbers indicate wind projects on average (including Data from Hatchet Ridge Wind Project confirm) that indeed it only produces about 25 percent of its maximum capacity and problems exist much more frequently than acknowledged. If their professional background was not so heavily involved in Land Consulting I could understand impacts may not be well known but this is not the case here.

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P45-14

Initial Study, Preliminary Geotechnical Study, Soil Study

The DEIR contains no information that would inform the public of an initial study, preliminary geotechnical study or soil studies that in some cases point to differences between the initial study and the DEIR. The information included both in these documents in some instances provide more insight into the potential problems that could be presented when the final geotechnical study is done. I find the information that both the study and preliminary geotechnical survey to provide significantly more facts and findings that would have better informed me of impacts and the process that would be used in the final geotechnical study more informational than the DEIR. There was no reason some of the preliminary study and soil study could not have provided some information so that those reading could understand what was known and needed further investigation. Thus, this fails to meet CEQA standards of fully educating the public of potential impacts as these documents seem to contain potential impacts that are not addressed in this report. Recently in *Sierra Club v. Fresno County* (2019) the Court concluded that the EIR "must adequately explain what the agency does know and why, given existing scientific constraints, it cannot translate potential impacts further." This brings into question why was this information withheld and what else was possibly withheld?

P45-15

The increasingly destructive and devastating wildfires that are now taking place in California and throughout the West seem to be ignored in the course of this report. Though past wildfires are noted as possibly cumulative effects the discussion on their cumulative impact suggests that they merely were used to state baseline conditions and seemingly future wildfires and the evidence of how past wildfires behave were not considered in the Cumulative Impacts of this section. Given that wildfires are widely acknowledged be increasing in severity and size and will only going to be exasperated by Climate Change this seems like a foreseeable event that could impact the project during the course of all project stages including the long operational period. While it is noted that past impacts on the environment do not need to be analyzed to see how the environment impacts a project but instead the point is to see how a project impacts or exasperates directly or indirectly the environment, wildfires are very foreseeable and likely to add cumulatively to any impacts of this project. Thus, it is not appropriate to exclude them in the cumulative analysis discussion.

This particular issue is of extreme importance to me having a Master's Degree in Emergency Management and having written my thesis in 2016 on the Fountain Fire. My conclusion then was that while at the time the Fountain Fire seemed like an outlier in the way the fire behaved and in how destructive it was, that it was likely going to be the new norm in wildfires across the state (a copy of the thesis is available upon request and some of the findings will be used in my comments). Sadly, my conclusion seems to have become the reality. It is hard to imagine with the destructive wildfire season of 2018 and the now record precedent setting season this year, that is nowhere near over, that such a project would be considered in such a high risk fire area as the risk for fire will significantly be increased. This is especially true when considered with the cumulative effects of high power transmission lines already in the area (though also noted in the cumulative analysis as only establishing the existing baseline). The proposals set forth do not include mitigation that are backed with sufficient evidence to reduce the impacts of the project on wildfire to less than significant especially with how much fire behavior has changed in the almost 30 years that have passed since the Fountain Fire in 1992. Simply put it will create more ignition points and put more lives at risk in communities that are already extremely vulnerable and that have already faced the tragic impacts of wildfire.

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I urge decision-makers to take heed to the warning of Starr above, the comments in *County of Inyo v. Yorty* (1973) raising the alarm bell before the ecological point of no return and also to the words of a survivor of the Peshtigo Fire that occurred in 1871 in Wisconsin burning over 1 million acres and which became the deadliest wildfire in United States history killing over 2,000 people.

The area burned in the Peshtigo was similar to Shasta County and was being extensively logged in order to keep up with the demand for expanding the railroads and developments in the West. Logging seemed like the ideal way to make an easy profit and safety practices were not implemented. Isaac Stephen, owner of the lumber mill, years later recounted a lesson we should all learn and particularly policy makers as we encounter newer technology and decide land-use policies. ***“But in our efforts to better our position... we unwittingly paved the way for disaster...”*** (Gezz and Lutz 2002). I urge the county to examine closely the true impacts and if they are adequately addressed. I also encourage the county to not ignore the areas that the DEIR has indicated that there will be significant impact that are unavoidable. Wildfire should be considered a significant and unavoidable impact. Returning levels to baseline is the standard which, in this community means, already extremely vulnerable in the next 40 years to a potentially devastating wildfire due to fuel conditions that exist and the sheer amount of infrastructure and project’s like this that only make new and more ignition points. In the rush to satisfy the goals of the state and this project Stephen’s remarks should remain in everyone’s mind - we cannot in an attempt to better our position unwittingly pave the way for disaster.

One concerning aspect of the DEIR is the conflicting information it states for project objectives and the company that will be responsible for building the project’s own website on the Fountain Wind Project which gives values slightly lower than what the DEIR provided as part of the objectives of the project i.e. powering approximately 86,000 homes and not the 100,000 stated in project objectives. Some alternatives were even dismissed because they could not power 100,000 homes. A look at how much wind is actually produced compared to maximum output has proven that the number is consistently much less than the maximum output and is closer to 25-30% across all wind projects. In other words, we can expect between 21,500 and 25,000 homes to get energy from this project. This clearly demonstrates yet again a lack of transparency. The damage this project will do to cultural resources, aesthetics, the quality of life, the increase to wildlife ignitions and the damage to the avian community in the area wildfire cannot be justified by “project objectives” that are not even realistic and misleading. The project website also states the county will receive \$50 million in tax revenue over 30 years, \$1 million in community giving, and \$3.5 million in local sales tax revenues funded to the immediate community (<https://www.fountainwind.com/>). While this revenue may indeed go to the community it will not go to the community that has the risk instead it will go to the county again I ask that decision makers to truly evaluate the risk as this seems simply a way to entice decision makers into accepting a project whose risks are not completely known or downplayed, minimized and flat out lied about. Further, 1 wildfire or other indirect results of this project later discussed will easily wipe out any temporary economic benefit that the “county” and not the local community will receive.

The Connectgen company website states as part of their mission to benefit landowners through market-leading compensation (<https://www.connectgenllc.com/>). Does this mean they will be compensating those living near the project site and if so this is never stated or addressed nor have property owners been approached concerning this. Also, while their site does include



other projects it has undertaken only one other is a wind project and it is only beginning the EIR process meaning the company has yet to complete a project that creates wind energy. This is somewhat concerning in whether or not they understand the best practices and safety practices if they have no experience in this regard and warrants they likely will heavily rely on Stantec and Avangrid’s extensive knowledge to help them appropriately complete the project. Though it is remarkable a business founded in 2018 has successfully completed so many solar projects in just two years... or is this one of those transparency issues? How did they “complete” so many solar projects in such a short –time?

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Furthermore, the other proposed wind project is in Wyoming (the rail tie project) which vastly differs in terrain and environment. The project also drastically differs in that it works with multiple landowners and ranchers (or at least claims to) rather than just one landowner meaning they may have more community support than was expressed at least in the scoping period of this project. Meaning money is going into the pockets of the rural community that need it and therefore they are more willing to accept the risk. In this case, the surrounding community has no such benefit and if the project is approved residents nearby are forced to live with the risks the project will bring but without any benefit whatsoever. The power generated won’t be for local communities. The money the county Receives will not go to this community it will go to other parts of the county.

Further other inconsistencies can be found in the document when it states that while there are 72 proposed turbine sites now the actual siting of the turbines may be moved to different locations not proposed that will have unknown consequence particularly on communication until after construction. This is somewhat understandable given the fact that further studies need to be done but with information obtained from the initial study, soil reports and pre geo-technical studies how feasible it is to build in the area considering how common steep slopes and corrosive soils within the project area are as well as the landslides and erosion that are evident and have/will continue to occur. Why would a company go through such expensive efforts to build a wind farm in a place that is not even known to be a reliable source for wind energy and that presents real hazards to the wind farm itself?

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Environmental Justice and CEQA

Though CEQA and Environmental Impacts are not required to address issues such as Environmental Justice California and the United States has increasingly moved towards urging policy makers to consider the impacts of policy decisions in regards to specific projects considered in disadvantaged communities or that may bring an uneven distribution of risks to certain communities. In 2012, then District Attorney Kamala Harris, issued a memo relating how environmental justice is contained both in governmental code and CEQA. The memo describes considerations used by the Legislature in passing CEQA and can be found in Pub. Res. Code, 21000. It states the achievement of a healthy environment for all of California’s Residents. This includes “[M]ajor consideration [must be] given to preventing environmental damage, while providing a decent home and satisfying living environment for every Californian” and that “We must ‘[t]ake all action necessary to provide the people of this state with clean air and water, enjoyment of aesthetic, natural, scenic, and historic environmental qualities, and freedom from excessive noise.’” (Harris 2012). Harris continues noting the findings of County Farm Bureau v. City of Hanford (1990) that establishes that an activity’s significance depends upon the setting. She also notes CEQA Guidelines 15300.2 “... a project that is ordinarily insignificant in its impact on the environment may in a particularly sensitive environment be

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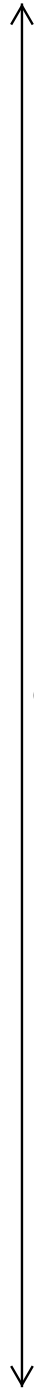
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significant” and that “A lead agency therefore should take special care to determine whether the project will expose “sensitive receptors” to pollution.” (Harris Ibid)

Throughout the DEIR it is clear that the only sensitive receptors considered are merely schools. Though schools are one sensitive receptor it fails to consider the overall population demographics of the area to consider other sensitive receptors such as how many children and elderly live within close proximity to the site. Nor does it consider the effects on other areas along the transportation route that are located near schools or hospitals where it is admitted most of the truck noise and pollution will be confined to. It is difficult to find exact data as the project site appears to possibly encompass two different census tracts and that the residents that will be most exposed to any significant impact are primarily located within census tract 6089012601. Of course, exposure within that census tract will not be distributed evenly. However, statistics derived from within those census tracts can reflect an overall idea or at least a possible average that can be applied to the area near the project site (and will be more reflective than the overall County Census Demographics the project relied on). According to block 2 of this census block (which appears to contain most if not all of the communities within close proximity to the site) and based on numbers from the American Community Survey 2018 the median age is 55.4. 19 percent of the population is between the ages of 0-19 and 41 percent of the population is between the ages of 60-80+. Since sensitive receptors include both children and the Elderly that would signify that approximately 60% of the population within close proximity to the project site would be considered sensitive receptors and would be more likely to be impacted by any impact of pollution. Even short term pollution caused by construction can significantly adversely impact these groups which, in some cases, is stated as significant and not mitigatable to reduce below less than significant levels. The age of those living within close proximity of this area would indicate that the even the short term of 2 years could have a significant impact on the health of these individuals and that does not include others who live in the area that have health problems who do not fall in these age groups.

General Plan Guidelines released by the Governor’s Office of Planning and Research Chapter 4 Concerning Environmental Justice in relation to Senate Bill 1000.

Under Government Code 65302(h) it describes disadvantaged communities are areas “...identified by the California Environmental Protection Agency pursuant to Section 39711 of the Health and Safety Code or and areas that is a low-income area that is disproportionately affected by environmental pollution and other hazards that can lead to negative health effects, exposure, or environmental degradation” with low income areas being areas with a household income below 80 percent of statewide income or below the threshold set by the Department of Housing and Community Development. The state developed a tool called CALENSVIRO screen that weighs a number of factors to help determine whether communities are considered disproportionately impacted by, or vulnerable to, environmental pollution and contaminants. Though the census track is the overall score and not by block these numbers for the communities within proximity to the site would under normal factors not initially be seen as disadvantaged. However, the guidance explains that though census tracts with scores defined at or above 75 percent are defined as a disadvantaged community, this number does not mean a community is not disadvantaged if it’s average number is not 75 percent. In fact, it states that communities that fall beneath the 75 percent level may still be a disadvantage community since “a low-income area may be considered disproportionately burdened if it has a high pollution burden for only one type of pollutant” and further explains that factors not considered in the score can also be taken



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into consideration as specific issues are unique to different communities. In this census block using the CalEnviroScreen 3.0 tool it appears the area does bear some significant burden. Ozone is scored at 40 while not a significantly high number, it also includes impaired water 76 and Solid waste 83 (the higher the number the worse the problem is). Certainly, this census tract already carry significant burdens. Another factor that can be considered is local climate vulnerability (p.11) which can create unique or compound human health effects such as high fire threat areas (p. 13). Considering that the average median income for the census tract is \$20,647 this would seem to meet the definition of low income households. The area also is in a Very High Risk Fire Zone and is identified as an area particularly vulnerable to changes resulting from climate change. Those that tend to have the hardest time getting information regarding fire and that have trouble evacuating are the elderly and disabled thus the hazard is enhanced.

In other words, this census tract could be considered disadvantaged based of its impaired water, solid waste, risk to fire hazards, low-income and a large number of older citizens. Water impairment can also be seen as a very significant problem since AB 685 Section 106.3 in the California Water Code states that “ every human being has the right to safe, clean affordable, and accessible water adequate for human consumption, cooking and sanitary purposes” and Senate Bill 88 even addresses disadvantaged communities dependent on private wells” (p.18).

This areas is highly dependent on wells and springs for its water supply. Given that the DEIR often states that since there is no public water system that no significant impact is expected it fails to address the reasoning for California Water Code and Senate Bill 88 and limits its study and impacts on water based on that. Climate change which will lead to temperature rise is expected to increase the risk of insect-borne diseases caused by mosquitos and the general guidelines thus consider mosquitos also a health hazard. However, since many bat fatalities are acknowledged as part of the projects wind turbines one could expect the mosquito population in the area to multiply since bats reduce the number of mosquitos in given areas exposing these communities to yet another health hazard as a result of the cumulative effect of climate change combined with the impact of this project and expose those living close to the project site to more exposure to mosquito borne illnesses.

Further aspects that are factors in the burden and vulnerabilities of disadvantaged communities include those “living in land islands that have limited access to resources and services due to conditions of geographic isolation” and “... the disinvestment and resource deprivation historically experienced by communities facing inequities or isolation leads to degrade living conditions and lack of power over decisions that affect their lives” (p.33) Further understanding the variables contributing to the disadvantages of this community can be found in California Healthy Places Index recommended to further assess the problems facing an area or help local jurisdictions find possible disadvantaged communities. This tool gives a Healthy Place Index percentile in relation to other census tracts within California. The numbers for this census tract (06089012601) is stark. Its overall percentile score is 37.1 meaning that this census tract is only healthier than 37.1 percent of other census tracts within the state in regards to the various variables that contribute to this score. Multiple areas are evaluated to obtain this score. According to the California Health Index it is healthier in the following areas:

- Economic conditions are only 20.9% healthier than other CA census tracks
- Education conditions are only 17.8% of other CA census tracts

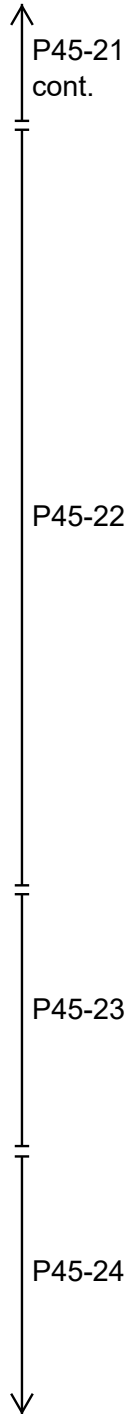
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- Supermarket Access percentile 10.6% better than other census tracts
- Safe Drinking Water – Contaminants 44.9 percentile

Also, the consideration of Native American Tribes living within this area (who have had their sacred sites already used by other projects) and the development of electric infrastructure such as Wind Turbines within 1 mile of the project site, miles of high voltage transmission lines and a power substation already located within this census tract and within the other turbine site indicate that this area already is significantly burdened by supporting services for other areas without a direct benefit to the community itself. The presence of the transmission lines and substation already increase the risk of fire in this very high risk fire area and would further cumulatively amplify this danger with new transmission lines and utility stations as well as the increased risk of fire as a result of lighting or accidents involved within the nacelle of the turbine and construction related impacts. With 1 small store, no gas station, no public utilities, no library, no high school, poor cell services, little fire or police protection, and no real access to broadband internet it would seem that this area is already bearing its fair share of burden. While the county itself may benefit from the promises made by the company bringing additional tax revenue and other money (especially land consultants and those in the construction trade) it should be clear there will be no economic, social, infrastructure or any other benefit to this area. There are no businesses that will serve the up to 400 temporary employees of the project (likely brought in from other places or include contracts with companies that already have employees (so kind of a false number), no direct tax income will be brought to this unincorporated area as there are no gas stations, stores or businesses to spend money at – the status quo of limited services and no public utilities will remain the same to those who bear the brunt of the impacts caused by the project. The significant impacts that cannot be impacted will only further degrade the conditions within the community.

While some may suggest people living in the area can just move the median income demonstrates that this is not an option even if people wanted to and the tribe within the vicinity whose ancestors have inhabited this land well before anyone else, have sacred ties to the land – it is their home. If the DEIR is approved and justifications are made to override the significant impacts on this disadvantaged community I hope that the reasons are clearly stated how the benefits will significantly outweigh the further exploitation and degrading of living conditions in this area, the cultural resources it will destroy and the risks to health and wildfire danger and that they acknowledge exactly this project does to those that live here and how there is any evidence that the project benefits outweigh these risks when those benefits are not clear-cut and the objectives will never be obtained. As Kamala Harris states in her memo “... this should be set out plainly in a statement of overriding considerations” (Harris 2012). It is also a requirement that CEQA has an overriding statement why the benefits outweigh the costs, though none was given when the Hatchet Wind Project was approved. As mitigation measures and compensations for any unexpected consequences do not create confidence that access to water or clean water will be unaffected, tribal resources will be lost, broadcast services might be interrupted, limited cell service may be reduced to none, emergency communications may be interrupted, wildfire risks will only increase, no additional measures to provide safety will override this risk, the changes brought by climate change will further be exasperated for at least this area, even if it may provide clean energy to a significantly small number of California residents the aesthetics and wildlife, which are about the only commodities this community has, will also be taken away. These commodities though don’t belong solely to this community they belong to the entire State.



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These natural resources are vital and considered vital to preserve! The environment will never be the same. Once humans change an environment there is no restoring it to its natural state regardless of whatever promises are made at the decommission of the project. There is no guarantee that measures suggested will return to the baseline. Wildlife may abandon the area never to return, bird migration paths will forever change, certain endangered species may be completely wiped out, and vegetation and plant life that is natural to the area may simply be replaced by invasive weed species as roads are abandoned and left to naturally return to their normal state (this rarely happens). Of course, I am sure there are not any peer reviewed research that confirm this one way or another – large scale windfarms have not had enough decommissioned yet to see their true impact. One might be left to ask how this could not adversely impact at least the mental health of those living in the area if not their health, and overall safety. With so few resources, services and other commodities that cities and suburbs are guaranteed those living near this project area do not have such services, how can one think significant mental stress and health will not be affected?

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Though CEQA no longer requires the effects of commuting times to be included what will the financial burden and time burden be for those who commute to Redding for work? Commute distance and time from Round Mountain center to Redding is approximately 30 miles or 36 minutes. The alternate route of using Oak Run Rd (if feasible) will increase travelled miles to 36 and travel time to 47 minutes each way. And in the worst case scenario that Oak Run Rd is not able to be used and traffic and cars would have to travel through Burney onto 89 and then use the 44 travel time would increase to 1 hr. and 58 minutes and would be 109 miles. Though this is not considered an environmental impact it certainly would be a substantial burden for those commuters who are required to do this or not make it to work. Though I suppose in this case, commute time could very well could be an environmental impact since anyone who normally travels that route and needs to add an extra 70 miles will increase the normal emissions they cause when commuting. It certainly would not meet with the County General Plan on level of service but this prospect is never addressed under traffic. It simply accounts for when the regular workers are traveling to the construction site and not when the heavy equipment that requires lane closures come through. When deciding whether to override the unavoidable significant impacts or accepting the short term risks that the community will have to live with remember Public Resource Code 21001 that policy makers must “[t]ake all action necessary to provide the people of this state with clean air and water, enjoyment of aesthetic, natural, scenic and historical environmental qualities, and freedom from excessive noise.” Though technically prolonged and significantly longer commuting routes could very well be an impact as they too would add to the overall GHG emissions as a result of the project.

P45-25

The purpose of CEQA and EIRs are to provide accurate and all the necessary information possible needed to make an informed decision regarding the project’s impacts. Unfortunately, this project fails to meet those purposes in many sections of the document, if not all of them. Surprisingly absent from the report is no specifications about the manufacturing materials of the turbines, the manufacturer or model and thus no real knowledge of the amount of oils and other materials stored in the nacelle of the turbine are known which educate me to their susceptible to fire or their hazardous impact if burned. In emergency management those are things that make it difficult to determine the true impact of this project. The materials turbines are made of and what hazardous materials are stored within each individual turbine can affect the amount of hazardous materials present, safety features that can mitigate mechanical failure and fire

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mitigation at the turbine. As the entire report is based on the environmental impact of these turbines without such knowledge it is hard to give an accurate assessment of their impact. While I acknowledge the limitations noted in the project description 2-8, that the actual turbines will be selected based on availability from the manufacturer, it still stands to reason that more detail could have been given about the typical materials turbines are made of, as well as the expected amount of oils needed to be stored for use in the nacelle as this may differ by size and which could also change the impact. The fact of the presence of these hazardous materials should have also been addressed and not simply dismissed. CEQA allows for minimal discussion on less than significant impacts where substantial evidence supports this finding but it does not excuse the discussion itself.

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Responsible Agency

The county should not have neglected their role or made this a fight between the county and the public. The county itself has substantial reason to want to make informed decisions about projects that can significantly impact the county they are responsible for but for whatever reason the Lead Agency was satisfied with false, misleading and inadequate analysis – and they knew it. It is unclear why the county decided to not uphold its duty unless its mind about the project is already made up regardless of the results of the EIR or any conflicting evidence the public may provide. Regardless, it is clear that they failed to adequately understand environmental impacts and provide a truly informational document. However, I will attempt to do what this document failed to do and actually try to understand what impacts will be the result of this project. I hope that what I write will actually be listened to and not dismissed. I did not come to this conclusion before reading the entire document but rather after reading it. I became extremely concerned with how much the county seems to not care that this project was done fairly or that the public should be aware of the true impacts. I can only hope that this is not the standard that applies to all projects the County does this process for. In fact, from personal conversation with the county they led me to believe that they felt no one living close to the project site had the ability to understand let alone critique this report. It is truly disheartening the only government representation that those affected by this project show such disdain and disregard for them especially when their salary is paid by them.

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I therefore once again apologize with how long my response is (though it may not be as long as it appears since I added images, graphs and also word for word the impact or mitigation I am addressing so that it is clear what I am addressing). It is much longer than I intended to write or wanted to write because it was clear that the County left it up to citizens to fact check the report and hold both the agency and the applicant accountable for the work presented within the DEIR. Sadly, the county made the citizens attempt to be experts in all topics. Ironically, the government does not have to – they have different agencies to address each one. Yet, another example of injustice and unfairness placed on this community. Those who may read this who live in other areas of Shasta County take heed. They don't just do it to this community, though it does seem to pick any big project they want that will have massive impacts and decide to place them here, don't think they won't do the same to your community and evaluate the impacts as insufficiently as they did this one. The standard they applied to this EIR is the standard they hold applicants in all EIRs. One must devote the entire commenting period to researching and understanding every facet of the report and applicable laws simply because the Lead Agency seemingly neglected to do the task they were given.

First, before evaluating this report or my comments please let me share the words of a member of the Board of Supervisors, Les Baugh. He stated helping oppose the TANC Project that would have place high transmission lines all throughout Shasta County was one of his best political accomplishments. He said he was disappointed the project didn't meet with the Board of Supervisors because he would have asked "Had they held the meeting and I had an opportunity to ask a question, I would have asked them, 'How do you mitigate a life?'" (Mobley 2009). His question is just as applicable as the hazards are just as real as those presented by TANC and possibly even more amplified than that of TANC as I will demonstrate in my comments. Perhaps if given the chance I will ask him his own question "How do you mitigate a life" and why does it apply to TANC but not this project. Those who say anyone is opposed are opposed because they don't want these in their backyard are not correct. While yes, most of us do not want them in our backyards that it is not the only reason or even the primary reason for myself. I'm pretty sure it was BOS Baugh's reasons for not wanting TANC but this creates infinitely more infrastructure and ignition points to an area ripe with fuel, plenty of oxygen (that will only increase with the turbines), fire history that is still listed on the top 20 list of most destructive wildfires in California history and all it needs is one spark, one ignition and de ja vu – the Fountain Fire will happen all over again except this time maybe residents won't be so lucky evacuating or sheltering in their or their neighbors this time.

P45-28

I have a Master's Degree in Disaster and Emergency Management. I did not learn how to fight fires, be a police officer or be one of the EMS that responds to such a disaster. Instead my degree taught me how analyze risk and hazards, how to prepare for, mitigate, lessen the loss of life and destruction to property, figure out how to facilitate the best interagency response, help with recovery and then plan strategies that include land use planning to rebuild stronger, more resilient communities after a disaster. Land planning can be used as a tool to drive projects in high risk areas to other areas and lessen the risk for those already living in those areas. My Master's Thesis was on the Fountain Fire. The amount of research I did, the committee reports, the incident management reports, after action reports and all the other hundreds of hours of research I did on that fire and wildfires in general causes me great concern when considering this project location and project's potential impacts.

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The increasing amount of wildfires and their destructiveness worries not just those who have been impacted by this county but much of this state. The history of the Fountain Fire (still number 20 on most destructive wildfires in state history according to CALFIRE), a significant increase in large; destructive wildfires throughout the state (which have cost the lives of citizens in this county in just the past few weeks) and the substantial amount of electrical infrastructure already in this area make BOS Baugh's question even more pertinent now and more pertinent in this exact location – as CEQA Guidelines 15300.2 say "... a project that is ordinarily insignificant in its impact on the environment may in a particularly sensitive environment be significant." In this case, this environment is particularly sensitive to wildfire and climate change. How do you mitigate a life because that is actually the real question that the planning commission or Board of Supervisors should be asking but the DEIR fails to address how it can actually do so. Our lives are already at risk from this problem and bringing more construction, turbines that attract lightning, more ignition points to an area with primarily one evacuation route

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will almost certainly at some point clearly answer his question – you can’t mitigate a life. This county needs to address the real risks of wildfire and the problems the community has. It needs to worry about the health of its forests and its citizens before adding any new projects like this that will only add to the chance of something devastating happening. Instead of using their own general plans and goals of the state to pick an alternative like Biomass that could actually help the forests be healthier they are struck on such narrow project of objects of a wind project, that generates a specific amount of power and is located in this exact location. That in reality misaligns with their general plans more than the report would lead you to believe. It is not the County’s job to comply with the project’s demands rather the opposite.

Until you can already ensure the safety of your citizens and mitigate for wildfires in this area effectively I urge that the county does not rush to approve a project because of the promise of quick cash. It will not make up for the destruction of wildfire to homes or lives. The costs of destruction from the environment, homes and other infrastructure in the area will be significant but if money is the bottom line imagine the costs from this turbine farm and the Hatchet Ridge one which likely would be affected as well in the event of a wildfire. It would be unfathomable. Sadly, the county will have to take the brunt of the costs as one reporter found 9% of the total cost of the fire is putting out the flames, near term losses like destruction to homes, roads and hillsides equal 35 % of those costs and generally are paid for by FEMA and other non-profits. But the other 65% of the costs are from long term damage from reduced property values, reduced property taxes, repairs to infrastructure and damaged ecosystems that need to be rehabilitated – those costs are the counties (Rasker, 2018). It’s even hard to understand why developers of these projects or their insurance companies would want to choose a site so poorly suited for wind energy and that put the project site itself at risk.

This is a project that forces the county to prioritize. Which is a more important factor to address: wildfire and the health of our forests that offset carbon emissions better than renewable energy can or renewable energy that is unpredictable, is the most costly energy to produce, makes energy prices higher for the consumer and requires a vast amount of land to generate even one – fourth of what the maximum nameplates are. Which priority does the county value most – protecting its citizens and property or pleasing the energy companies that profit far more than the county ever will from such a project?

Unmentioned in this DEIR because the law does not actually go into effect until July 1, 2021 Public Resource Code 2490(b) shall include regulations which “...shall include measures to preserve undeveloped ridgelines to reduce fire risk and improve fire protection. The board shall, by regulation, define “ridgeline” for purposes of this subdivision.” This provision entered into the code because of SB 901-Wildfires. This would indicate to me that after July 1, 2021 a project on this particular ridgeline would not even be allowed to be considered by state law. While the state is pushing for more and more renewable energy they are also trying to get a handle on wildfire and create healthier more vibrant forests that can better withstand wildfires, which at the time being, is a more immediate problem than reaching Climate Change energy standards in the future. So the choice literally is which is a better objective and a better goal to help fight climate change. Preserve the trees that store carbon at such strong densities it can make up for over 80 percent more of GHG released into the air or Wind energy which will only affect the whether GHGs from generation power are released– wind turbines cannot store the



carbon and they cannot reliably produce the amount of energy the project specifies as an objective. If it in fact could do what it states – the amount of land required to hold all of the wind turbines would be unfathomable and certainly if the impacts of wind turbines are not well known now they would be then.

So I want to make it very clear I very much disapprove the project in this location. If the County chooses to override significant impacts I ask them to acknowledge in such a statement that the benefits of this project outweigh the lives of those living near the project site and even those further from the project site if in fact another Fountain Fire results from this project – directly or is indirectly much worse due to the limiting of certain fire suppression measures because of this project being located in this location.

Wildfire

FS -1 Shasta County goal Protect development from wildland and non-wildland fires by requiring new development projects to incorporate effective site and building design measures commensurate with level of potential risk presented by such a hazard and by discouraging and/or preventing development from locating in high risk fire hazard areas.

Apparently – the above objective is not important in relation to this project. The project cannot incorporate safety features commensurate with the level of potential risk and does not appear to be discouraging or preventing development from locating in a high risk fire hazard area.

Before evaluating any other section or concern I have with this report let me start with my main concern – wildfire. This section does not adequately identify the impacts and it fails to realize the overall picture of the environment we live in now. This and various elements of the other sections could have been combined and evaluated together as they are cumulative impacts of each other such as hazardous materials/hazard section and communications. Further they all should have been cumulatively examined with Climate Change. In actuality there is very little that can be done to lessen the risk of wildfire in very high hazardous fire areas especially with the number of human caused fires, lightning, the poorly maintained existing infrastructure, climate change and the improper management of forests leading to overgrown, disease and bug infested forests but there is especially little you can do to mitigate the risk of a wildfire to less than significant for any project at all in these types of areas. The only thing to reduce this risk is to lessen the number of people and ignition points in the area while actually addressing the problems that already exist within our forests by finding ways to make them healthier and more resistant to wildfire.

This whole section on wildfires is very vague. It underscores how big of a problem of fire is in this area and inappropriately finds that the impacts are less than significant after mitigation while failing to prove how mitigation which actually lessen the impact. Let’s reiterate CEQA – the county can approve a project that has significant impacts or impacts that cannot be mitigated to less – than significant, so there is no reason to come to inappropriate conclusions as they do not prevent the approval of this project. The only thing coming to such a conclusion does is fail to address the reality and severity of the impact and ignore other possible mitigation measures that may prove to have been helpful. In so it makes the DEIR fail to be informational to both the public and to decision-makers.

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cont.
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History of past disasters are critical for Emergency Managers in understanding what future disasters may look like since the same disasters continually face the same communities. Very little actual detail about the Fountain Fire is even mentioned and nor are the capabilities, response time of local fire departments and their literal inability to fight a wind turbine because of its height and the flames being thrown from it even addressed. They should have been addressed because the local capabilities may not have been able to provide emergency services to this project – I will demonstrate below that they are not even adequate without the project here. If more firefighting capability is needed this is an impact that needs to be addressed.

A look at the Fountain Fire gives you a true baseline and environmental setting. No one in this area, nor did the decision makers need a description of the fuel type and how it contributes to the fire in this area – the community and the decision makers already know. It is truly tragic that the same people making this decision benefitted financially multiple times after that fire (through activities involving restoration, replanting and then of course Hatchet Wind Project). They saw the destruction first hand yet couldn't even give one suggestion that maybe it was a little insensitive to call this "The Fountain Wind" project. It is downright shameful and discouraging that our own representatives could not understand the deep wounds the word "fountain" can still bring to those who survived the fire and speak up for us.

Do you want to know how fire behaves in this area? Don't read a manual that gives a fire severity rating or fuel index rating. Why don't you talk about the information we do have – how fire actually HAS behaved in this area. Though the utility ranking tiers is enlightening. As the report says "the project site itself is tier 2 except for 3 of the proposed turbines (which are tier 3). Many residents around the site though are tier 3. So the discussion is significant in that tier 3 means "there is extreme risk (including likelihood and potential impacts on people and property from utility associated wildfires." (3.16-4). This quote does not say with mitigation this likelihood is less than significant it says that it an extreme risk is already present. Thus, adding a project to an extreme risk that includes more potential risk cannot actually reduce the risk to less than significant – no project in this area can do that.

However, since a large devastating wildfire and how it behaved is the number one predictor of how a fire will behave in this area it is important to not just mention the fire but describe its behavior to understand the risks and fire behavior in this location. It is shocking that while making other determinations throughout this report random case studies are used as comparisons to validate conclusions but the report ignores the most important and applicable one of all – the Fountain Fire. Perhaps with the Carr Fire and Camp Fire and the now 4+ million acres that have burned throughout California this year - it is easy to forget for those unfamiliar with the area or lessens the memories of a fire of the past. But it is not easy to forget for those who lived through it and whose lives were completely destroyed by the Fountain Fire. I won't forget, I did not live here at the time and was young but my Grandpa lived here. I had spent much time here before that fire. His was one of the few homes in Round Mountain that survived but he lost most of his timber and one building on the property. The landscape the day that fire started changed forever – no matter what measures were taken by property owners or government agencies to return it back to normal.

The fire and its total obliteration of this area made a big enough impression on me write my Master's Thesis on it. I probably have done more research on it than anyone in this county – at least broadly. Others may have studied one impact or outcome I tried to examine the overall

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picture and lessons that could be drawn from it. While others in this county did fight this fire and experienced only what I could study and those living near the project lost much of their homes, property and the surroundings they loved so much and have their own harrowing and heartbreaking tales - what I learned from my research can bring great insight into the impact this project can have on wildfire in this specific location. This is not some narrative or opinion, it is the facts taken from numerous after action reports, legislative hearings and newspaper articles from around the area, state and nation. It is information researched for months and studied extensively. I feel that my insight is much more than opinion or narrative it is based on substantial academic research – the same thing that qualified those to do these studies and assessments in their particular area of expertise and which makes them “experts” in relation to writing the DEIR. I suggest to you however that perhaps my expertise on this fire (at least academically speaking) is beyond that of anyone involved in the writing of this report.

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cont.

I suggest that the background I am about to share should be used in the background of this section and let these facts settle in your mind before actually believing that the mitigation measures are sufficient, feasible or effective. The Fountain Fire is not some hypothetical situation nor is it a merely an anecdotal story. This is not a case of not in my backyard, this is written by someone who understands the fire in this particular location very well and it is appalling an area with such steep slopes, rugged topography and shifting wind directions would even be considered as an economically viable location especially when you add the past record setting fire behavior that occurred here.

Below I will briefly give you a quick synopsis of the key facts of the Fountain Fire and the wildfire baseline that exists. I can’t believe anyone reading it would think there is any more need for more ignition points or human behavior to add to the risk that already exists in this area.

The Fountain Fire (1992)

Before there was the Carr Fire in Shasta County, there was the Fountain Fire. At the time it seemed an outlier. Many involved in fighting that fire had never seen such extreme fire behavior before- something that has been echoed numerous times in the past few years as fires have become more destructive. It immediately took its place on CALFIRE’s list of the top most destructive Fire’s in California history claiming the fifth spot. At the time I wrote my thesis in 2016 it still ranked ninth on that list (Tanner 2016). As of September 27, 2020 it is now somehow still holding spot 20 (https://fire.ca.gov/media/11417/top20_destruction.pdf). This is significant because of how rural of an area this is. While wildfires burn more acres in rural areas they destroy fewer homes because of the density of population in these areas. This fact should not be overlooked! It also shows how in just four short years 9 fires were more destructive than this one. The Carr fire is 9th, and the Jones Valley Fire, curiously missing from your list of fires in the area, is 15th on CALFIRE’s list of most destructive fires. You would think that 3 of the most destructive wildfires in California state history occurring in just this county would be enough to take the threat seriously – it does not appear to have done so. Though it was never proven many speculated it was arson (and is listed as such) that started the Fountain Fire while others suspected that the utility lines it was next to may have had something to do with it. That will never be known.

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Record Setting Fire Behavior, Response and Destruction

The Captains and Director’s Speak:

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Dave Mack, Chief Director of the Forestry Department, “... *the most incredible burning situation many of us have ever seen.*” (Sugg 1992)

Chief Stewart of the Shasta Trinity Unit “... *most extreme, bizarre, and awesome fire in my 35 year career*”
(Barkdull, 1993)

Captain Mark Nelson “... *there’s no stopping it... It’s doing what it wants to do.*” (Bancroft & Lempinen, 1992).

- Became the 5th out of 20th most destructive wildfires in state history
 - Was 16th in 2016 and still holds the 20th spot as of 9/27/20
- Travelled **12 Miles in just 3 hours** – thought to be a record pace at the time and still likely one of the quickest spreading fires in State history - spotting occurred 2 miles ahead

In Perspective

- The Camp Fire (2018) thought to be one of the fastest moving fires at its peak burned **80 football fields a minute** (Verzoni 2019).
- Converting the Fountain Fire into Football Fields this would have meant **105 football fields a minute.**
- The Creek Fire in the Sierra National Forest on Labor Day 2020 that left hundreds of campers stranded and needing to be rescued by helicopter “Fire officials said they had never seen a fire move so fast in forestland – 24 km(**14.91 miles**) **in a day**”(Associated Press 2020).
 - The Fountain Fire travelled 12 miles in 3 hours.
- The Carr Fire’s fastest spread appears to have occurred between July 27 and July 28 – burning approximately 35,000 acres in a day
 - Between 10:30 and 7:00PM on August 21st the Fountain Fire was estimated to have destroyed between 40-45,000 acres (Burkdull 1993).
- It took 20 minutes for the first Engine to reach the remote area and the area the fire broke out in was on accessible roads not the logging roads that are even further away from fire departments and roads that are anticipated to be built for this project (though aircraft arrived sooner)
- 300 ft. high flames

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Figure 1 Fountain Fire from SopperWheeler.com

- Created its own weather system detected by weather radar in Medford Oregon – produced a 25,000 foot cloud, produced multiple lightning strikes, and soaring winds between 50-70 mph and spawned fire tornadoes.
- Less than one hour after it was spotted the fire was shifting directions every 10 to 15 minutes and had changed direction by 90 degrees. Smoke was blowing sideways reducing visibility for both air and ground operations (California Department of Forestry and Fire Protection SHU-4733, 1992d).
- Firefighters described seeing **fire tornadoes**- a damage assessment team who walked the area after the fire found 36 inch diameter trees not burned but snapped in half. (Holquist, 1993; California Department of Forestry and Fire Protection SHU-47333, 1992d)
- Numerous times firefighters had to drop hoses and run, 2 of the Mendocino Hot Shots at one point were surrounded by flames they took the "... quickest escape route to the highway, sliding down the nearly vertical slope" of Hatchet Mountain (Lemos and Ward, 1992).
- Destroyed 50% of the homes in Round Mountain, including destroying Cedar Creek Elementary School's Cafeteria (the school is now closed due to those who had to move after the fire and the drop in property taxes)
 - 40 out of 60 homes at Moose Camp destroyed
 - 2/3 of total structure loss occurred during the 1st day
- \$86 million in fruit orchards destroyed
- Roseburg Timber reported damage to enough timber to build 50,000 homes, \$362 million board feet and burned 10 million trees which would have exceeded \$1 billion dollars of future board feet (California Department of Forestry and Fire Protection's Response to the Fountain Fire, 1993).
- Herds of Swine and Cattle had been wiped out and potentially take 100 years to replace the loss (Jenkins and Lemos, August 28, 1992)
- In just 5 days burned an area twice the size of the city of San Francisco
 - 7,500 people were evacuated (some twice when the fire quickly encroached on the evacuation shelter that had been set up in Burney approximately 22 miles from the center of Round Mountain.

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- 307 homes destroyed along with another 267 other buildings in 5 days (end total over 600) (Bowman & Hayward, 1992; Hayward & Vogel, 1992; Wallace, 1992)
- Destroyed 37 businesses and damages exceeded \$105 million (Rural Fire Protection in America Steering Committee 1994)
- 1,000 of the acres burned included known habitat for
 - Northern Spotted Owl- 1 Nest
 - 2 Osprey Nests
 - 1 Goshawk Nest
 - Elk Calving area
- Infrastructure Destroyed
 - 300 PG&E Wooden power poles
 - 169,000 Ft of telephone lines
 - 300 Hwy Guardrails
- Salvage process killed 3 and seriously injured 2 (Jenkins 1992d; Jenkins 1993)
- Hundreds of thousands of gallons of retardant dropped setting records at the time
 - First day 180,000 Gallons of Retardant
 - Second day 214,000 Gallons of Retardant
- Only evacuation route cut off – many residents had to use old logging roads by older residents familiar with them (most of those who knew the roads are now dead and logging roads now gated). Others who were trapped had no choice but to sit it out in meadows and ponds. (Not the distance of Frisby Road off of Terry Mill Rd where many sheltered in place in meadows is only 3.3 miles from Buzzard Roost Rd, and the start of Frisby Rd only 0.4 miles from 299 E – but they could not evacuate using 299E. This testifies to how fast this fire spread).



Figure 2 Terry Mill Rd - Logging Road - One of the only ways out since 299E was cut off in both directions

- \$22 Million cost to fight the fire – a record at the time
- Burney – where people had evacuated to had to be evacuated from the shelter by the end of the second day. Burney had already been threatened by wildfire just 2 months earlier and had close calls four times in 15 years.

Firefighting Problems/Evacuation Problems

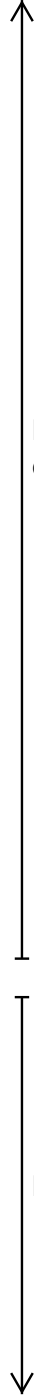
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One of the biggest problem firefighters had was that they simply did not have enough resources to fight the fire. The state was already battling multiple wildfires throughout the state. A problem that is worse and worse every year. This problem has only increased in recent years with larger and more destructive wildfires each year. On the 3rd day only 1,600 firefighters were battling the fire – 10% of what actually was needed – the others were assisting on other fires. By day 5, there were 600 new firefighters from the prison inmate crews, 60 additional fire engines were en route along with 100 Bureau of Indian Affairs Firefighters from Arizona and about 2,000 federal personnel. (Huber; Gottlieb and Robitaille, 1992). Significant was the fact that the Millville Fire Department that could have responded in 25-30 minutes and was equipped with special equipment that could have been sprayed on at least some of the homes and protected them from the flames, to the dismay of the Fire Chief there Devon Tassen – they were never asked to respond.

On the first day a 5 passenger helicopter attempting to warn people of the impending fire spotted a group of people sheltering in a meadow (at the end of Frisby road mentioned above). They only had enough time for one evacuation and could only take 3 people. The pilot had no way to request assistance to evacuate the rest of the group because all of the radio channels were already being used. The rest of the group would have to wait it out in heat estimated at 2,000 degrees and smoke so thick those there struggled to breathe. Firefighters could not reach the group until 10:00PM that night as they watched the firestorm destroy 15 buildings, 1,100 acres of pasture and 700 acres of timber and watched as the extreme winds blew the rooftop off of barns (Winship, 1992). Those who could escape were forced to be creative as SR 299 the only evacuation route was surrounded on both sides by flames. They had to caravan behind older residents, like my grandpa, who knew the old logging roads well enough to lead them out of the narrow mazes on rough dirt logging roads that would have easily left many trapped and lost if they had attempted to go down the road themselves. This is no longer an option. Most of those familiar with the roads are now dead and even if they were not – the roads are now gated off. Blocking the only other chance to leave if SR-299 is once again cut off by flames. (Sadly these harrowing events are becoming more and more common throughout California. The Camp Fire clearly illuminated this problem, as did the Carr Fire. But more recently the Zogg Fire also demonstrated how difficult it is to evacuate from areas that rely on one main road in and one main road out.

Volunteer Fire Departments

Two main fire departments are located near the project site. The CALFIRE Hillcrest Station which is staffed seasonally for fire season and the Montgomery Creek Volunteer Fire Station. No information or stats pertaining to these two departments are included in the DEIR. Helpful information would have included how many volunteers are on the rosters of the Montgomery Creek Station, what equipment they actually have, what size fires they can adequately respond to and the actual time it would take for those departments to reach the project site or surrounding area in the event of a fire. Though the county as a whole does have a battalion as noted those resources are spread out over the battalion’s entire jurisdiction. Since other fires both locally and statewide can be a strain on resources (which was the case during the Fountain Fire) a true knowledge of these two departments’ capabilities would be helpful. Also, since Hillcrest is only occupied seasonally this means that they would not be able to respond to fires at the Project Site that occur off season.



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However, from my own research I found that according to a Shasta County Grand Jury Report in 2011/2012 that Shasta County allocates 385 volunteer fire fighter positions for 19 different stations. The BOS partially or fully disagreed with some of the findings. In response specifically to funding on Shasta County’s Fire protection system and that a failure to adequately fund it could result in loss of life/and or property the county stated that it would be “too cost prohibitive” (Shasta County Grand Jury 2012). Well, here is your chance – if it was too cost prohibitive to address the fire system than you do not need more ignition points and a project that will make it even more cost prohibitive. An article in The San Francisco Chronicle stated that at the time of the Carr Fire (2018) the county only had 149 out of 385 volunteers on the roster (Gutierrez and Cassidy 2018). In personal communications with the Shasta County CAL Fire Headquarter on October 2, 2020 the official rosters now contain 144 volunteers with only 17 volunteer stations and only 7 volunteer firefighters listed on the Montgomery Creek Volunteer Department Roster. Though it is uncertain how many of those 7 are current or able to respond. This would significantly impact their ability to respond to a fire from different phases of this project including any accidents and fires within the Turbines themselves. Since volunteers also have other jobs all 7 volunteers will not be there at all times and possibly be an hour or more away if they work outside the area. Since Hillcrest is only fully operational seasonally, in the off-season the Montgomery Creek Volunteer Fire Department would be the first to respond.

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This is not just a local problem but a nationwide and statewide problem. In the past three decades volunteer firefighters have fallen by 10 percent over the past three decades though emergency calls have tripled. Even more significant, one-third of all firefighters in California are volunteers in rural areas such as this project site. (Gutierrez and Cassidy 2018).

The Grand Jury also addressed the fire problem in Shasta County more recently in July 2020. It’s number one finding “*Fire fuel management for the prevention of wildfires in Shasta County has not been a top priority for far too long, due to lack of funding, and limited manpower leading to a higher risk for the well-being of Shasta County*” (Shasta County Grand Jury 2020). There is no justification to increase fire risks given this knowledge.

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Further complicating the situation is the dangers that already face rural residents in high fire risk areas. The Fountain Fire, Carr Fire, Camp Fire, the Bear Fire and Zogg Fire of this year all demonstrate these risks without facts and statistics. The number of lives lost is devastating. The areas impacted reflect the same problems that exist in the area near this project site. But if those examples are not enough to convince you a real problem exists that will be further complicated by this project and that existing problems need to be addressed (and included with Baseline conditions) first consider these sobering facts.

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- Rural communities with populations below 2,500 are twice as likely to die in a fire as people living in communities with populations of 10,000 to 99,999.
- Rural homeowners suffer more than twice the property loss from fire each year
- In 1992, nearly one-fourth of all firefighter deaths at the actual site of a fire occurred at uncontrolled wildland fires – all of those who died were volunteer firefighters.

- Responders to the Fountain Fire included 400 volunteers from Shasta County, Burney Volunteer and Montgomery Creek Fire Departments at the time Montgomery Creek was staffed by 13 volunteers (though they were allowed 20 people they had a hard time recruiting) with an annual budget of \$4,500. Equipment included 1 water tender, 1 rescue vehicle and 2 fire stations and was in charge of a 20x30 mile fire district. The majority of their calls included medical calls and they had no Hazmat Response capability –the nearest capability was 100 mile away in Chico (National Associations of State Foresters Review) (remember staffing in Shasta County for volunteers is now 144 and only 7 are at the Montgomery Creek Fire Station). Can the EIR confirm this is actually adequate to address the hazards for a project of this size and scale when climate change has made conditions more conducive to ignite fires and have led to them being larger and more destructive? (Rural Fire Protection in America Steering Committee, 1994)

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Sadly things haven't changed for those living in rural areas. A study done by The National Fire Protection Association confirms what both the Shasta Grand Jury and the article in the San Francisco Chronicle found: volunteer rates are declining and the age of volunteer firefighters are increasing.

1. Volunteer firefighters are becoming harder and harder to find - rates for joining have declined significantly

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Rate of Joining Volunteer Fire Departments per 1,000					
	Years	Rate			
	1988 to 1994	7.45			
	1995-2001	7.13			
	2002-2008	7.13			
	2009 to 2015	6.66			

*Numbers from NFPA Journal July/August 2017

2. Number of Fires

Fires per 1,000 People	
Communities 1 Million or more	3.1
National Average	4.5
Population less than 2,500	10.8

*Numbers from NFPA Journal July/August 2017

3. Number of Deaths

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Deaths per Million People	
Population 1 Million or More	6
National Average	10.9
Population less than 2,500	20.9

*Numbers from NFPA Journal July/August 2017

4. Age of Firefighters

The study found that 42% of volunteers have been with their department for more than 10 years while 10% had been with their departments for only 1 year. (Verzoni 2017).

Sadly, for those who survived the Fountain Fire their future looks bleak. One newspaper article reported that up to 90% of the population affected by the Fountain Fire relied on some kind of public assistance and approximately three-fourths of the homes destroyed were not insured (Calvan, 1992b). This situation is likely not much different today than it was then as insurance is even harder to find for those who can indeed afford it in high risk fire areas.

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Environmental Setting

Unfortunately, instead of looking at the past to see what the very real problems of the future for this area are it was almost entirely ignored. The description I gave is the true setting of what would occur during a fire in this area. The undergrowth has built back up and the crowing of the trees is just as likely as before as many are dead and bark beetles have gotten to some of them. There is no need to say it is a Fire Hazard Severity Zone (FHSZ) or considered Tier 2-3 by utility companies or that fuel levels are 9. There was sufficient evidence out there, if one had only looked to see how a fire reacts in this area. Absent from this section but found on 3.1-6 CALFIRE is quoted regarding the areas around Round Mountain and Montgomery Creek, the area located around the Project Site **“can expect future fires to be more damaging.”** Please take a moment to let that sink in with the description I gave above before looking at each of the impacts. A description that provided all the information one needed to know and already shows what HAS happened here. I did not describe a hypothetical situation. It was a situation that has happened. It is hard to imagine another fire in this area more damaging than the one that has already occurred but property and economic damage would significantly be larger if 72 large wind turbines burned down with the everything else whether it caused the fire or not. Its presence will however, restrict the number of options available to firefighters to suppress fires in the area. The impacts of this project are stated as being potentially significant but less than significant with mitigation. They never address the capability already available, what would be needed or how some fire-fighting options would be restricted because of the Project.

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I am sorry but my extensive research on wildfires and mismanaged forests already create an area that has a significant impact from potential wildfires and at this point the county has not even addressed the problems that were uncovered as a result of that fire. It takes just one spark

to cause a fire like the Fountain, Camp or Carr fires. Sadly, the crux to the problem is the more roads you build, the more development you build and the more people you bring to an area the number of ignition points are substantially increased and fire's become even more likely. These same problems the Fountain Fire had with responders, communication and evacuation were also seen in the Camp Fire and locally in the Carr Fire. I talked to a few firefighting captains, some who fought the Fountain Fire who live in different areas of the state, those who did not fight the fire but had experience fighting them in this area and those who just have vast experience in firefighting. Each one of them stated that the area has sufficient fuel and conditions present that would make a fire like the Fountain Fire occur again or behave like the Carr and Camp Fires. No mitigation they state can actually reduce that to less than significant while adding more ignition points and activities that increase the chance of fire more. While the Fountain Fire travelled to Burney in a little over 24 hours it should be noted the distance to Bella Vista, Palo Cedro and Eastern parts of Redding is the same distance. Had winds blown the other direction the Fountain Fire easily could have gone towards those communities and not towards Burney. Round Mountain is the same distance to Eastern Redding as the Carr Fire's ignition point was to Western Redding. There is no guarantee that a fire will travel the same direction as before and an easily foreseeable problem would be that a new fire would travel to Redding instead of Burney.

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cont.

I am sure the applicants and contributors will come up with some excuse to deny the facts provided. However, you can't deny the facts and an area already struck by wildfire is more at risk of having another. In 2018, concurrent with the Carr Fire a fire started off Dunn Moody Rd. in Montgomery Creek but was contained to 50 acres (the cause not entirely known but thought to be the result of either smoking or equipment according to the CALFIRE investigation I obtained) thankfully because of a swift response from planes that had been working on the Carr Fire before it made its way into Redding – all of Montgomery Creek was required to evacuate. I watched from the top of the old logging road that is on our land and was used for evacuation during the Fountain Fire and watched as the large planes looked as if they skimmed within mere inches of the ridgelines the proposed turbines want to be set on and then quickly descended down towards the fire. Earlier this year a lightning fire started, which fortunately did not get out control due to weather conditions at the time. Had that lightning strike occurred during the dry summer months or early fall it is likely it would have easily had the chance to result in a large uncontrollable wildfire.

A Success Story

Though the fire did have devastating results and record setting precedents at the time it also was shown to be a model example of recovery after a wildfire. In one study done in 2008 it evaluated the reforestation after the Fountain Fire. Within 5 years of the fire 15 million seedlings were planted on industrial lands previously supporting timber. Homeowners who had insurance and could, also helped in this replanting effort on their land. Roseburg's replanting efforts results indicated "that by the age of 36 years, the young plantations will carry as much stem volume as the prefire stands at about the age of 70. The authors of the study note other fires that did not choose to reforest their burnt areas were not as successful. They found that the efforts of the active reforestation "...restores forests faster, sequesters and stores more carbon in forest trees, provides more forest products than passively managed forests, and does so without sacrificing plant diversity... although the planted post fire forest fire may lack the structural legacies of the passively managed Forests, we may help the system to withstand the next wildfire

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P45-42

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(Zhang, J.; Webster, J.; Powers, F.; and Mills, J. 2008). Sadly, the authors may just be wrong about that if the wind project is approved.

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Though they are not the only ones who found a success story out of the Fountain Fire. Another study evaluated the effects on emissions released in four large wildfires including the Fountain Fire. In this study Bonnicksen found that the emissions released from the four fires they studied was the equivalent of "... adding an estimated seven million more cars onto California's highways for one year... [or] stated another way, this means fifty percent of all cars in California would have to be locked in a garage for one year to make up the global warming impact of these four wildfires." (p. 3). The results are alarming, but Bonnicksen also found that the different replanting efforts taken by industrial landowners recovered 99.2 percent of the total CO2 emissions that had been released during the fire (p. 14). These results suggest that replanting efforts can have a positive impact. However, the results can also provide an example of how the emissions burned by prescribed burning can be regained if efforts are taken to replant the area afterward to foster a healthy forest (Bonnicksen 2008). This is partially what is so perplexing to me about tearing up timberland to place turbines. Trees are our best known sequesters of CO2 emissions. There is no telling what the impact would be on climate change if our rush to tear down forests to create clean emissions would do to the environment. To make up the amount of renewable energy the state has suggested would require doing just that – tearing down the one thing we know for a fact helps fight climate change. In fact, we may find years later that the results are quite the opposite. We will no longer have the trees to sequester the emissions and the turbines will have been aged and placed into large dumps leaving the problem for other generations to solve anew. In fact CEQA section 1516.2(d) considers this type of effect to be considered significant when "Significant Irreversible Environmental Changes Which Would be Caused by the Proposed Project Should it be Implemented. Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified. (See Public Resources Code section 21100.1 and Title 14, California Code of Regulations, section 15127 for limitations to applicability of this requirement.)" The project does not acknowledge this potential impact which is very likely due to climate change that may make it impossible to revert the environment back to its prior use.

P45-43

It is unfathomable knowing the state of the forests and the impacts of climate change that the conclusions reached in this report think that the impact would be less than significant. We already have high transmission lines, a substation, the Hatchet Wind project (with its own substation) and multiple other power lines. Considering a vast amount of recent fires which have resulted in uncontrollable fires, loss of whole communities and the loss of numerous lives because of the negligence of Utility Companies throughout this state (most recently the Bobcat Fire in southern California) and the PG&E equipment that resulted in the loss of 84 lives (PG&E plead guilty for manslaughter for these lives lost) and the destruction of Paradise and nearby communities. How can one possibly think adding more infrastructure in an area with past record

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setting fire behavior and destruction can be mitigated, or is even a good idea? It is beyond all common sense.

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PG&E’s honest evaluation of fires started by electrical infrastructure

Before the Camp Fire, in a report written by PG&E for the Karuk Tribe Department of Natural Resources, PG&E admitted what the wind project will not “electrical infrastructure including distribution and service lines and transformers are a leading cause of wildfire ignitions. Furthermore, there is growing evidence that wildfires caused by power lines and other electrical infrastructure are amongst the most destructive.” They continue, “Climate impacts in the form of an increasing frequency of high severity wildfire has the potential to negatively impact infrastructure provided by other entities such as roads, electricity, and water systems. Remote communities are uniquely vulnerable in the context of climate change for a number of reasons. In such communities dispersed populations live in greater distances from emergency services, and individual road closures may completely cut off travel access. Furthermore, low population numbers lead many agencies to prioritize other regions for emergency services, and routine maintenance, further exacerbating rural community vulnerabilities.” They further explain “...populations in urban areas have multiple alternatives which serve as “redundancy” should power be lost, rural communities are entirely dependent on electrical availability for communication. (PG&E 2018).

PG&E also notes that the fires that start from communities in the Klamath Region are likely to become much larger before they can be contained. These large fires they say “also have important impacts that may not have been previously considered in tier prioritization including environmental justice vulnerabilities of community, local cultural and economic impacts and the fact that the resulting large fires generate significant carbon emissions... Road closures during wildfire events cut off the community from the outside potentially affecting escape routes, access to emergency services and food supplies. They even go on to note that wildfires sparked by power lines and electrical equipment have been the cause of over half the total acreage burned in California in recent years. But this fire just doesn’t happen from trees falling on lines as the DEIR would like you to believe. In fact, fires can also start “when lines contact one another, or when transformers explode. Powerlines can ignite wildfires via multiple mechanisms... these include the mechanical failure of transformers and other equipment, when lines or conductors are close enough together to cause arcing, when unmaintained vegetation comes in contact with a line or when a fallen tree or branch downs a power line.” Discussion on impacts the project may have on wildfire that only note one or two ways of ignition subvert the CEQA process.

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In a figure provided by PG&E they include other ignition scenarios including powerlines, high winds lead to conductor slap, storms or high winds cause vegetation to fall on conductor lines, and transformer failure. Further, the figure states “climate change is likely to exacerbate weather extremes such as drought and high winds that can trigger these power-related incidents.” Fires from powerlines are expected to “increase in the face of changing ecological and atmospheric conditions.” In other words, as the Climate continues to change the area surrounded by this project can expect more accidents that may cause arching, cause transformer failure and all the other examples given that contribute to sparking these fires. We already have miles of high voltage transmission lines, not including the lower voltage ones, we have a power substation which needs critical work done to it and another wind farm nearby with its own power station but apparently that hazard is not enough. Nor do any of the things above warrant the need to be addressed by the DEIR in cumulative effects.



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PG&E also states standard information that lots of fuel for ignition, wind speed and slope all help to increase the pace and rate at which a fire spreads. “Topography matters because steep slopes carry a fire faster, as do slopes that are south facing as these hold less moisture and experience hotter daytime temperatures. Both wind speed and wind directions are also very significant for how fast fires may spread, (PG&E 2018). The loss of vegetation because of clearance for the turbines, transmission lines and access roads amongst other things will further amplify this problem in this area. As PG&E reflected on the series of devastating recent wildfires up to 2018 they said the fires “were caused by electric power and distribution lines, conductors, and the failure of electrical equipment in power poles. This infrastructure failure occurred in the immediate context of high winds and very low humidity.” Not one mention of vegetation is included in that description. Then PG&E does what this DEIR fails to do in many places quickly and to the point listing ignition risks and impact severity (most of which was discussed above but also includes road access, homes and other structures directly within unit, homes and other structures within .25 miles of unit and road access or entry or exit.

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P45-47
cont.

Due to their role in starting wildfires and their negligence to its own infrastructure PG&E has started shutting off power when conditions become too hazardous for their equipment to operate safely (meaning they acknowledge the only way to mitigate fire from their own equipment is to shut it off). The weather outlook for today (10/20/20) given by PG&E on their PSPS page states: Dry weather and above normal temperatures will continue across the territory through the middle of the week, with temperatures reaching 15-20 above normal across parts of the Delta and Interior. Light offshore flow is also expected today into tomorrow, and wind gusts will remain under 30 mph and will be primarily focused across the western Sacramento Valley and Northern Sierra in addition to elevated North Bay terrain. Wednesday night through Friday morning, a stronger offshore wind event is anticipated to develop, as a weather system shifts into the Pacific Northwest. This will result in two periods of breezy to gusty north-northeast winds, with the first expected to produce sustained winds of 15-35 mph gusting up to 40-50 mph, across the Sacramento Valley, Northern Sierra, and elevated terrain of the North and East Bay with potential for gusts to exceed 60 mph over favored peaks and ridges. With a second weaker peak expected Thursday evening into Friday morning, with winds expected to be around 5-10 mph less than the first push. Offshore flow will gradually diminish throughout the day Friday and calmer winds and seasonable temperatures are expected. An additional weather system is then expected to move through the region Saturday into Sunday, resulting in increasing humidity and a slight chance for light showers across the North and along the Sierra. High pressure will then rebuild behind this departing system, which may result in another round of breezy to gusty offshore flow starting as early as Saturday night and continuing through Monday; however, details are still limited at this time and forecast models are not in alignment on strength and timing. PG&E meteorology will continue to monitor the situation closely for any weather model forecast changes and the *forecast may be updated to elevated Saturday through Monday across Northern CA once forecast confidence increases*. Fire danger remains seasonably high as live fuel moisture values are at critical levels in the lower and middle elevations and dead fuel moisture values are at critical levels and historically low in some areas. *The US Drought Monitor indicates that most of Northern CA is in severe to extreme drought at this time, and the last 6 months have been the hottest on record for CA (hottest in 126 years on record) according to the NCDC. The latest National Interagency Fire Center wildland fire potential outlook continues to favor above normal large wildland fire potential for most of Northern CA for October followed by normal large fire potential for November and December.*” Tomorrow

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power to the area near the site is anticipated to be turned off for up to 48 hours. This will be the third time since response has started to the DEIR. Further, according to this forecast conditions may be elevated enough to warrant keeping power turned off through Monday – 5 days. This long of an outage did occur last year around this same time when PG&E failed to restore power between two PSPS events that followed back to back. Others not in this area at least temporarily had power restored before it was turned off again – this was not the case in this area.

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P45-48
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It is somewhat ironic that the same company that plead guilty to over 80 counts of manslaughter acknowledge these utilities do increase the risk and that the impact is not less than significant but that this project choose to simply ignore them or live in an alternate universe where no accidents or problems ever happen. Instead, this project assures all who read that there is no new increased risk by adding more electrical infrastructure (they don't support the claim with any substantial evidence) but they then think their minimal efforts are going to somehow stop it. But guess what – every utility company, every county, city and state have their own mitigation plans all with the attempt to mitigate risk to less than significant. With a year that has not even reached its peak yet 4 million acres have burned – how successful were those mitigation plans at reducing the risk to less than significant? Please tell the homeowners who lost their homes or those who lost their loved ones that they had mitigation plans that reduced the risk to less than significant- I'm sure it would be comforting. Nowhere in PG&E's report discussed that their mitigation would reduce the risk of fire to less than significant they simply stated the problem was there, it was going to get worse as climate changed and acknowledged there were activities that could be done to reduce the risk but they did not claim they could reduce it to less than significant. In fact, the only way PG&E has been able to reduce the risk to less than significant is to shut off everything. However, this company that has not even existed for 2 years, can mitigate the risk to less than significant. They should share their knowledge and techniques with the world.

P45-49

<u>Primary Impact</u>	<u>Secondary Impact</u>
Loss of Electrical power	Government, non-governmental organization, business and community functionality and communications
	Cooling and air purifying for smoke
Road Closure	Loss of transportation access
	Lack of escape route
	Emergency Services cannot access
Smoke	Health Impacts
	Fatigue and stress

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Taken from PGE Table 3 Primary and Secondary Impacts of Powerline Ignitions

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Since the qualifications of those who wrote and proofread this section are for some reason kept from us I would conclude that besides their experience in writing these reports and reading things like the different ranks given by different agencies of how at risk this area is or the fuel level ranking of the area, they have no idea what exactly those things even mean. My own extensive academic research on wildfires leads me to quite a different judgement than the conclusion of those who wrote this section and sadly how anyone in the county – particularly those who actually were paid to help in the recovery of the wildfire or know what happened in the Carr Fire also know this risk cannot be mitigated to less-than-significant. If the applicant would like to question that and have the current commander say “sure we can handle it” or find some random expert to travel the evacuation route – an honest answer will not be the result. They know it, this community knows it and the sheer volume of destruction done by most recent wildfires is more than enough evidence to refute whichever expert witness chosen.

P45-51

Utility equipment, a flat tire and one hammer was enough to cause massive wildfires. Any new construction that brings more people and activity to an area only increases the chance of a fire starting. That is just in the construction period. Who are the first firefighters that will respond – the Montgomery Creek Volunteer fire department – their 7 volunteers? Fortunately, for the report they won’t interfere with evacuation plans that the county doesn’t have. Why doesn’t the County have one? Why didn’t they address this after the Fountain Fire or the Carr Fire? It is listed in their Hazard Mitigation Plan of 2017 and mentioned by the state as a requirement to add into a counties Safety Element of a General Plan. Just because the County does not have one does not address that they are responsible to have one and does not reduce interfering with the plan as it is supposed to be included in the Safety Element of a General Plan. They know completely that these roads dead end and they know exactly the problems that occurred for those trying to evacuate. While the project itself may not interfere with a “county evacuation plan” that does not exist it will interfere with the evacuation plan of every single resident that lives in the surrounding area. Though maybe you don’t have to address that even though we are told to have evacuation plans.

P45-52

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<p>Impact 3.16-1: The Project would, unless mitigated, substantially impair an adopted emergency response plan or emergency evacuation plan. (<i>Less than Significant with Mitigation Incorporated</i>) The implementation of Mitigation Measure 3.14-3 (provided in Section 3.14) would ensure that emergency access would be maintained during construction and decommissioning and thus would reduce this impact to less than significant. Mitigation Measure 3.16-1a: Implement Mitigation Measure 3.14-3 (Traffic Management Plan)</p>
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P45-54

Improper deferral of mitigation. (CEQA 15126.4 (a)(1)B). “agency (1) commits itself to the mitigation, (2) adopts specific performance standards the mitigation will achieve, and (3) identifies the type(s) of potential action(s) that can feasibly achieve that performance standard and that will considered, analyzed, and potentially incorporated in the mitigation measure. Compliance with a regulatory permit or other similar process may be identified as mitigation if compliance would result in implementation of measures that would be reasonably expected, based on substantial evidence in the record, to reduce the significant impact to the specified

performance standards.” As *Gray v. County of Madera* (2008) 167 Cal App.4th 1101 ““the county [has] committed itself to a specific mitigation goal,’ not a specific standard.”

This refers to a plan to be made in the future with no specific performance plans. 3.14-3(b) states “they will provide advance notice... to ensure that alternative evacuation and emergency routes are designed to maintain response times.” While certain elements can be deferred by the lead agency they can only be deferred if specific mitigation performance standards are adopted, and that a description of some possible mitigation options are possible, there are no specific performance standards and the agency doesn’t commits itself to the mitigation. An EIR is inadequate if ‘the success or failure of mitigation efforts, may largely depend upon management plans that have not yet been formulated and have not been subject to Analysis and review within the EIR. *Communities for a Better Environment v. City of Richmond* (2010).

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cont.

This states that it will maintain response times of emergency responders yet there are no response times noted anywhere in this document. What response times are they trying to achieve? There is no acknowledgement of evacuation problems that already exist in the area or that the majority of the roads are dead end roads. It takes me almost 10 minutes just travel to the bottom of my road 3.5 miles down. The Fountain Fire that happened in the area of the project site and those surrounding the project already has demonstrated that evacuation in this area is a problem –many could not evacuate because there is only one evacuation route and it was blocked by fire. Yet, it has continued to be not be addressed by the County. Mitigation also states that it needs to be “feasible” yet there is no evidence that an alternate or “feasible alternative evacuation route is available. There is no study done to consider evacuation. There was no looking at records that examined the perils of a past evacuation problem that I have described above. The fact that the evidence existed and was not explored (despite naming the project after the fire) defies logic that this will not be a problem in the future as the county has yet to address this problem almost 30 years later. There is no reason to believe that they will address it in the future and certainly not for this specific project. They need to substantially prove with evidence that a feasible alternative route does exist, and that response times (which are unknown) will be maintained (and a performance standard set). It also needs to make sure this is implemented and that the public is fully aware of any alternative that can be thought of – if you can by some chance figure out how to make an alternative evacuation route please inform the public! This information is important. Most people got stuck on their roads during the Fountain Fires because that feed onto 299E but 299E had fire cross over the road many times and 299 E was not an option in either direction. This option was cut off almost immediately... not 12 hours later or days later – people had no notice. The fire moved had record setting pace. This section does not affectively inform the public of the hazard nor does it inform decision makers of the true risks associated with this.

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P45-55

While there may not be a specific evacuation plan – which the county should have incorporated based on its own Multi-Jurisdictional Hazard Plan (2017) WDF-3 or Senate Bill 99 that states that a city or county have a long term plan included in their safety element plan that includes evacuation does not mean it does not impede with an evacuation. The 2019 California Hazard Mitigation Plan also states "The goal of the safety element is to reduce the potential risk of death, injuries, property damage, and economic and social dislocation resulting from hazards... Within the safety element, local jurisdiction must address fire-safe standards,

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including evacuation routes, water supplies, road widths, and clearance around structures... SB 1241(2012) added more specific fire planning requirements to Government Code section 65.302.5 and intensifies the application of OPR's Fire hazard planning Guidelines in SRAs and VHFHSZs (see section 8.1.5.2). However, if you would like to get very technical you could interfere with the National Response Plan ESF 1- Transportation, ESF 4- Firefighting, and ESF 13 – Public Safety and Security. While they do not have specific directives stated that it could impede with your transporting of equipment if it causes a wildfire or accident or there was a wildfire or accident that would be significant enough to implement this plan – it would interfere as in part the plan was created to streamline emergency management to make cross-agency and multi-jurisdiction coordination easier like the National Incident Management System (NIMS).

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Assuming the project itself follows law and creates an Emergency Action Plan (which it later says it will adopt as a mitigation measure) and that individuals and families who have been asked to create their own evacuation plans based on FEMA and CALFIRE guidelines does not mean there are no evacuation plan in place to be interfered with. There is no substantial evidence on record that exists to reach this conclusion. There is no substantial evidence on record that this vague, non-specific, sentence out of a plan that will be planned in the future but not guaranteed to be adopted will ever achieve what it says it will do.

This situation needs to be addressed and recirculated. Without a feasible alternative and knowledge that an alternative evacuation plan or emergency response time can be maintained this does not reduce the impact in any way. I do not believe a feasible alternative evacuation route can be found and I do not believe that emergency response times can be maintained though – we are left to guess just what those times are.

P45-57

Perhaps the response to my claims will be addressed by justifying this with *Sierra Club v. Placer County*. This would be a mistake. The facts are different. Sierra Club did try to challenge on the grounds that evacuation had been impeded and this should not be deferred mitigation as there was only one route and no formal evacuation plan. However, they did have an informal evacuation plan, there had been no large destructive wildfires nearby and thus no evidence to support their claims that evacuation was a problem. This area on the other hand does have a history of large wildfires, it has proven that evacuation routes were impossible and while they may claim sheltering in place is an option. For myself at least, that would be sitting right under high transmission lines in close proximity to turbines and I should feel safe knowing that a blade the size of a bus will catch fire and go crashing down on me if the conditions of the fountain fire exist (of course assuming this scenario happened when the turbines were operational). This is a different scenario and a well-known problem to this county and to the state. This needs to be addressed now and not in some future traffic plan. If the fire breaks out while big equipment is being moved it will impede responder's response time and perhaps block the only evacuation route leaving those living around the project stuck with nowhere to go.

P45-58

Mitigation Measure 3.16-1b: Pre-Construction Coordination with CAL FIRE

Prior to construction, the Applicant shall provide GIS files or other maps of the Project layout to CAL FIRE to facilitate aerial fire-fighting planning. The Applicant shall notify CAL FIRE of any changes to the Project layout or any maintenance that would require the use of helicopters or the use of equipment not previously identified on maps provided to CAL FIRE that could present a new, previously unidentified vertical obstacle to aerial firefighting.

Significance after Mitigation: With implementation of Mitigation Measure 3.16-1b, CAL FIRE would have the information necessary to plan for aerial firefighting with the Project in place. This would allow CAL FIRE to identify locations for retardant or water drops within the Project Site and would allow for the planning of flight plans around the Project Site. With the implementation of Mitigation Measure 3.16-1b, impacts would be reduced to a less-than-significant level.

The impact did not suggest that it would impair with plans to fight fires solely within the project site. In fact, it would be intuitive that the impact means emergency plans to all areas surrounding the project as well. Further it ignores that it can hamper with CALFIRE’s Emergency Response Plan and its objectives. That is to contain fires to a certain size and respond immediately and effectively. The turbines reduce the ability to fight fire in numerous ways. Fire attack at the turbines themselves will be restricted. This mitigation simply states that after Mitigation Measure 3.16-1b is implemented they could fight fires within the project site and “plan for flight planes around the project site.” The measures however do not state whether it is even feasible to do aerial drops in the areas closest to the turbines and closest to the ridge the turbines are placed upon. *GIS files are not mitigation.* There is no substantial evidence that having the geographical coordinates will allow aviation to fly safely and perform their operations. Further, due to other ridges, wind turbine farms and other electric infrastructure this could significantly impede on aerial firefighting as they need to fly at a low distance in order to have a successful drop, the location of these turbines could cut off 3 approach routes. Second, depending on smoke and other factors this may make an aerial attack impossible. Third, there is no consideration of the wake factors created by the turbines even when they are turned off that could create hazards to flying. Turbulence and wind shear exists without turbines. The turbines will only change the turbulence intensity and wind shear as objects in the physical environment impact turbulence and shear. Winds on stationary blades – especially this large do create wake/turbulence. Fourth, Australia fights bush fires on flat terrain not mountain fires (not a good comparison). Fifth, a recent firefighting air craft in Australia did crash with no physical obstacles killing 3 U.S. firefighters (<https://www.bbc.com/news/world-australia-51231983>). There is no discussion regarding the needed space between objects and the plane both vertically and horizontally that are required by the various agencies.

P45-59

However, coordinating with CALFIRE and their requirements would be beneficial and perhaps help you stage your turbines better to continue to have the capability to fight fires in the area the way they normally do as that has become a standard and their prompt response to aerial attack on the Montgomery Creek Fire in 2018 was key to it not getting larger than it did. However, merely stating that such coordination will occur does not mean that objectives are actually feasible. However, aerial firefighting is not the only thing this project will impair. It will affect the ability of firefighters ground as they will be required to keep a certain distance from the turbine to reduce risk to their own lives. This is not even acknowledged as an impact. Further, ignoring this ignores the fact that they will be limited to stopping secondary fires that occur as a result of a turbine fire. How far can a wind turbine throw sparks and into densely vegetated area. 15 ft.? The size of the ring around the turbine. This is illogical. Certainly embers or sparks from a turbine going 300 mph will throw sparks much further than 15 ft. Also, this does not account for when extreme wind conditions are present that can easily carry such embers 2 miles ahead – this is known as spotting. It occurs in most wildfires and as noted in the Fountain Fire spotting occurred at least 2 miles ahead of the main front.

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c) *Whether the Project would require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.*

Impact 3.16-3: The Project would require the installation and maintenance of Project-related infrastructure (such as roads and power lines) that may exacerbate fire risk, and the installation and maintenance of fire suppression infrastructure (such as vegetation clearances and emergency water sources) that may result in temporary or ongoing impacts to the environment. (Less-than-Significant Impact)

This is misleading, completely untrue and defies what is well known about utility infrastructure and access roads. This conclusion warrants more discussion and actual evidence to support this conclusion. The very installation of and maintenance of infrastructure can exacerbate fire. “Wildfire risk can be significantly reduced or exasperated by the locations of homes and other structures in the landscape and by what building materials are used. Knowing about the relevant sociodemographic characteristics of at-risk areas/populations and how they are distributed across a fire threatened area can be as important to fire-protection planning and suppression strategies as knowing the amount, condition, and distribution of fuels (Daniel, T.C.; Carroll, M.S.; Moseley, C. and Raish, C., 2007 p. 2-3). Since turbine models are unknown and description of materials of them are almost absent there is no idea how those materials will exasperate fire risk except for the fact they will contain many flammable materials and be more susceptible to lightning strikes.

As discussed above in relation to PG&E power lines are not the only problem. As I quoted above PG&E explains that fires occur “when lines contact one another, or when transformers explode. Powerlines can ignite wildfires via multiple mechanisms... these include the mechanical failure of transformers and other equipment, when lines or conductors are close enough together to cause arcing, when unmaintained vegetation comes in contact with a line or when a fallen tree or branch downs a power line.” Simply meeting the requirements of cleared vegetation is not enough to reduce the risk of fires. Further, it is only one way a fire can start it certainly doesn’t account for or mitigate any other way fires can start because of this impact. We already know that PG&E has hundreds of thousands of miles of lines that have not been cleared properly and will take at least 10 years to fix – sadly, the process will begin anew. The lines are in fact so neglected that I am rushing to finish my comments before the power is turned off in the next 24 hours for three days (the third time since the DEIR was released). This is not a onetime task – it has to be done over and over again. So initially while vegetation may be cleared this is not the only way fires start at powerlines. Yet, the explanation for why this is less than significant is completely dependent on the fact that vegetation will be cleared and fails to consider how fires start otherwise. Further, it negates the details of any vegetation management plan to even conclude that mitigates the risk.

Furthermore the construction of roads, and the clearance around them and the wind turbines themselves also is a continuous ongoing event and not limited to the construction process. The analysis in this discussion makes it appear as if it is a onetime thing that never has to be addressed again. “Fuelbreaks require maintenance, and once the crisis has passed, reluctance toward the expense and labor of annually weeding, cutting and burning overwhelms the project” (Pyne 2004, p. 123). But fuelbreaks don’t necessarily protect anything since it is the radiant heat surrounding a fire that ignites other combustible material” (Ibid, p.121). Further, while new roads will be built and others widened within the context of the “project description” it merely state compliance with erosion and storm control. I cannot find in this section or in the

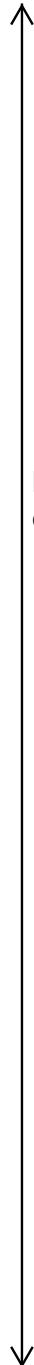
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project description section any plan that includes the continual maintenance of the area around the roads to keep them clear of vegetation that will continuously grow back (I apologize if I missed this as most information is buried in spots that are not obvious places for such information). No specifics about how clearance around these roadways are done. There is no performance standards, monitoring program or any other detail. In fact, in terms of roads it only addresses the need to periodically grade and compaction to minimize erosion. I could not find any discussion of this in this section or in the project description – maybe it is explained elsewhere.

Further while “clearances are part of the project description, their construction and ongoing maintenance is analyzed as part of the project description...” (3.16-23). This actually is not appropriate. There is no explanation of how much water the water storage tank will hold or how much would be needed to fight a fire in this area or if an adequate water source is found (unless it is once again stated elsewhere). There are no known maintenance plans in any detail to warrant a conclusion they would help or examples of such maintenance plans as a specific model has not been selected. Mitigation Measure 3.16-2a gives examples of mitigation that may help reduce the risk the mitigation and monitoring plan but gives no specific performance standards, does not commit the leading agency to ensuring it is implemented except during construction (if that) merely to review the plan. It only requires compliance reports upon request, there are no penalties mentioned if this is not adhered to. It does not address the continual maintenance of roads which will have to be done during a 40 year period. It does not even explain how any of the details within that plan will reduce the risk.

In *Lotus v. Transportation* (2014) the court stated “simply stating there will be no significant impacts because the project incorporates ‘special construction ‘techniques’ is not adequate or permissible.” The court then defines mitigation as avoiding, minimizing, rectifying, reducing and compensating for a significant impact but by grouping these construction techniques into the design it never identifies these as mitigation techniques. The Court further states “this short-cutting of CEQA requirements subverts the purposes of CEQA by omitting material necessary to informed decision-making and informed public participation. It precludes both identification of potential environmental consequences arising from the project and also thoughtful analysis of predictable impacts from the project.” It also explains that it leaves out whether or not the mitigation is feasible to comply with codes (such as CPUC General Order 95), standards and the other vague “mitigation in 3.16-2 that it chooses to call mitigation though it is clear it is in fact mitigation.

In fact all of the measures above are in fact mitigation. There would be no need to clear vegetation if there was no risk, there would be no need for a water storage tank for firefighting if there was no risk and there would be no adhering to defensible space guidelines if there was no risk. This should have addressed the ACTUAL real impact and then these measures should have been described accurately as what they are – mitigation measures. In fact, adhering to Mitigation Measure 3.16-2a acknowledges that mitigation is incorporated. Thus, it was the duty of this report to demonstrate how these measures actually do mitigate the situation or if it is feasible to actually incorporate them and provide substantial evidence that they indeed will reduce the problems. However, by side-stepping this process they conveniently ignored a very large problem that all utilities face. Again, the project can be approved even if all impacts cannot be mitigated to less than significant but failing to acknowledge an impact as significant or



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thoroughly discussing its impact and how mitigation measures allows it to not be an information document. It allows the real risks and ways that fires can be caused to be ignored.

Since clearing around powerlines will be left to PG&E this is out of the applicant's control. Also, as I quoted with PG&E earlier there should have been more discussion about how fire can actually start because of the installation or maintenance of associated utilities. A past firefighter and leading wildfire expert on Wildfires in California (Stephen J. Pyne) states "... in no cases do fuelbreaks succeed by themselves, any more than firewalls will keep a building from burning down; but they buy time and assist firefighting. (p.91). Fuelbreaks struggle "when retrofitted or imposed over landscape in defiance of terrain, wind, and fuels. When local conditions favor large fires, only very large fuelbreaks can help check them, and that effectively means type conversion, transforming whole landscapes..." (Pyne 2017, p. 91). Pyne also explains "engineers design for a 50- or 100- year flood, not a millennial one, or for a 5.8 or 6.7 earthquake, not for a Richter 8. Similarly, fire agencies traditionally plan for an average event" (Pyne 2016). Sadly, the average fire events are becoming much larger and much more destructive and according to climate change scientists will only continue to do so. This area already has experience a much larger than average fire event. Further, his analysis of fuelbreaks does not even include what would be necessary for wind turbines which would clearly require a more significant fuel break.

Pyne also explains that throughout the world the most massive changes in land use result in the most violent outbreaks. Furthermore "Complete prevention is chimerical – accidents, arson, lightning something will start a blaze. This shifts the burden of protection to rapid detection and initial attack... even the best systems will lose 2 to 3 percent of starts under extreme conditions, and these fires may sweep widely. (During the 2002 season, initial attack caught 99.2 percent of all starts – and lost 7.2 million acres)" (Pyne 2004). Even prescribed fires that are done by professional firefighters using the best methods under optimal conditions cannot stop a prescribed fire from burning out of control. "Prescribed fires have killed, their smoke has obscured views, led to car crashes, and compromised human health...the percentage of fires that escape prescription is estimated at approximately 2 to 3 percent, roughly the same as those that escape initial attack. (Ibid). Of course, that was written in 2004, the statistics may well have changed in California for both prescribed fires and initial attacks since climate conditions have worsened.

Further, roads may increase access to firefighters but they actually increase fire starts. "...They lead to other landscape modifications which may or may not dampen fire." Pyne continues "Further if Russian statistics are a guide (and they probably are), most fires hug roadways, a road starts more fires than it helps control. If what is wanted is faster access to fires, then initial attack by air – helitack, rappelling, aerial tankers – is a better and cheaper solution." (Ibid, 121). Of course, the wind turbines will affect these faster measures from being utilized near the turbines. In fact, statistics from Russia in the 1990s show the distribution of fires from roads and settlements. "The closer a route of transit, the more fires... the more people the more starts... while roads would improve ground access to fires, they are essentially mopping up the fires that the roads themselves encourage. Roads, moreover, promote fire-flashy weeds along their rights-of-way, thus further worsening the fire hazard (Ibid, 208). Shasta county and the area surrounding this project site have ample proof of that – just look at all the weeds that are not native but have taken over brought from other areas such as star-thistle.

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This section inadequately discusses the true impacts and whether or not these can and will be mitigated against. Further discussion is needed to thoroughly evaluate the risks associated with this impact as well as substantial evidence that their “mitigation” they choose not to describe as mitigation works. While some parts can be deferred until later this was not suggested as for the conclusion nor would it be sufficient to make such a conclusion without substantial evidence and a more adequate discussion. In fact the mitigation factors it does outline in 3.16-2 that can be deferred to a later date still do not actually set specific performance standards and a proper monitoring program. The DEIR fails to address how such measures actually help. This section also completely ignores accidents at the turbines and substation/switching station (which would be considered “utilities” as mentioned in the impact statement and it also does not state the risk of building these things or decommissioning them. Absent from the discussion is the permanent impacts of the transmission lines.

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b) Due to slope, prevailing winds, and other factors, whether the Project would exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations or a significant risk of loss, injury or death from a wildfire or the uncontrolled spread of a wildfire.

Impact 3.16-2: The Project would, unless mitigated, exacerbate wildfire risks and expose people to pollutant concentrations or a significant risk of loss, injury or death from a wildfire or the uncontrolled spread of a wildfire. (Less than Significant with Mitigation Incorporated)

First, just because no one will be housed at the project it does state that 12 onsite employees will be there. Their lives could be put at risk from a wildfire or the uncontrolled spread of a wildfire. Also, fire behavior triangle evolves around fuel, terrain and weather. This area of this project site and surround areas has 75% slopes between 15-75% and 41% slope between 30 –75 %. This is a rough calculation taken from the soil study done for this project (not included or mentioned DEIR) and listed under ceqanet and does not account for slopes that can range between much smaller numbers and the 15-90% slopes. However, based on the information within those studies it is safe to say that the slope in the majority of these areas is extensive. It is known fires spread quicker up slopes and even down slopes but vegetation and other combustible material play a large role in how these slopes speed up the process. Just the fact that the project is located on and near such slopes exasperates conditions. Unmentioned in this DEIR, because the law does not actually go into effect until July 1, 2021, is Public Resource Code 2490(b) shall include regulations which “...shall include measures to preserve undeveloped ridgelines to reduce fire risk and improve fire protection. The board shall, by regulation, define “ridgeline” for purposes of this subdivision.” This provision entered the code because of SB 901 Wildfires. This would indicate to me that after July 1, 2021 a project on this particular ridgeline would not even be allowed to be considered by state law. While the law does not explain why such ridgelines are under consideration slope is likely part of the reason as the speed of fire will increase because of it and hamper firefighting efforts. Further, development on such ridgetops will be more at risk to damage by wildfire.

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“Vegetation is in parts, ever combustible, and under the right circumstances explosive. It can burn against wind or down slope... terrain is so steep and crenulated that fires can always race up or send spots across a narrow ravine, and firefighters have, after several lethal lessons, learned not to build line on steep slopes under flame fronts or try to cut across narrow ravines on mountain flanks” (Pyne 2016, p. 49). Even without this information the facts I stated above

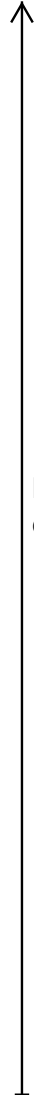
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about the Fountain Fire show how the terrain, topography and weather helped contribute to one of the fastest moving fires on record covering 12 miles in just three hours.

The discussion under this impact does address many of the issues that could help spark a fire and acknowledges that its fuels from materials stored within the turbines could increase exposure to harmful pollutants. Though little detail is given to O&M aspects that might exacerbate the risk. For example, just the brakes on a wind turbine stopping operations can cause sparks. Thus, any time a turbine is shut down because of unsafe wind speed or shear or curtailment of operations – this risk is presented. At such a height and with such topography and climatic conditions that one spark could lead to a large problem. It also neglects that “wind turbines catch fire for the same reasons as other heavy machinery - components inside the turbine fail, generating heat or sparks and igniting flammable materials such as plastics, resins, fiberglass, and hydraulic lubricants. Most turbine fires originate in the nacelle, typically at three points of ignition: converter and capacitor cabinets, nacelle brake and transformer” and “a wind farm can expect to face *one to two fires* over the course of its operational lifetime” (emphasis added) which is based on a standard of 20 years (Krcmar, 2020). I suppose in this case this wind farm could expect two to four based on 40 year operational period. This of course does not insinuate that these fires will lead to forest fires but it does increase the risk of wildfire or an uncontrolled wildfire. Combine this with the topography, weather and slopes in this area the results could be disastrous especially when all the worse conditions are present – an increasing problem that is making almost the entire a year “fire season” in California.

When wind proponents tout the safety of turbines and ask why opponents are more concerned about the fire problem associated with turbines as opposed to other heavy machinery – I think the fact is obvious. Large machinery and other things they can compare it to have a long history and record to compare it to. They have been around longer and their risks are better known. They also are not close to 700 ft. tall, with spinning blades going up to 300 mph which can easily shoot the fire that is started out much further than large machinery.

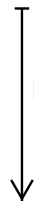
A study of wind turbine fires found that “worldwide fires reported in the media between 2012 to 2016 shows that only 10 percent of the fires were suppressed by the Fire Services, whereas 72 percent were left to burn out, and the rest (18 percent) were unknown suppression cases. Due to significant height of wind turbines, firebrands can travel long distances aided by the wind, creating the need to protect against fire not just the wind farm but also a large area around it. In fact, our review of worldwide fires reported in the media between 2012-2016 shows that 12 percent of the turbine fires cause secondary fires in industrial or forested areas, whereas 73 percent are contained to the turbine alone, and the rest (15 percent) are unknown containing cases (Rein, G.; Westhead, E. and Ang, E., 2019).



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Mitigation Measure 3.16-2a (Fire Safety) would be required. The implementation of a Project-specific Fire Prevention Plan would reduce potential sources of ignition and require immediate and effective suppression measures. The plan would specify that when the National Weather Service issues a Red Flag Warning.

Mitigation measure 3.16-2a (Fire Safety) would help however, besides being reviewed it appears to have no real performance standards or substantial evidence that any of the measures suggested are feasible or demonstrated to be effective and it’s compliance and even enforcement

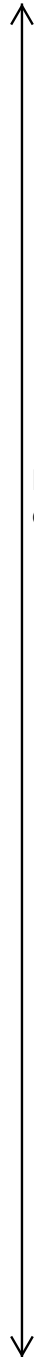


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after the approval process appears to be left in the hands of the contractors and the applicant not the proper agency. One of the measures states that since construction will occur simultaneously at many sites enough equipment sufficient to fight small fires will be provided. But this does not state what is sufficient to stop a small fire or what they would do if it happened to be a larger fire. Though I will note if an inspection does occur by Shasta County Fire Department that they will indeed make sure that enough is there for at least a “small fire.” It states a monitoring and inspection protocol will be established while the design of this can be deferred CEQA 15126.4(1)(B) states that numerous issues must be addressed if deferred. It does give plenty of potential actions and seems that compliance that at least a Fire Safety Prevention Plan is adopted it does not tie the agency to the mitigation and does not specify specific performance standards that are measurable. Further, it states that compliance is reliant on the applicant and its contractor. And I assume they too are responsible for monitoring and reporting (since they state reports are available upon request). This does not give much confidence that it will indeed be complied with if the only person enforcing and making sure compliance is performed is the applicant and its contractors. Though I find many measures rather vague I hope that they will be more detailed and perhaps a more detailed analysis could be given since Hatchet Ridge presumably already has one in place and the requirements for that are or can be found. Further letters by CAL FIRE officials submitted to the agency gave suggestions on possible mitigation measures – these were not included here. The letter writer was not sure if it was needed to be addressed in the DEIR or after approval. However, his suggestions, having come from an agency responsible for fire were very much meant to be included in this DEIR. It provides information on what can be done. This document ensures that decision makers and the public will have the necessary information before a project is approved. After approval most actions will never be made publicly available – thus this is the way the law was written to inform the public.

In *PROTECT OUR HOMES AND HILLS et al., Plaintiffs and Appellants, v. COUNTY OF ORANGE et al., Defendants and Respondents; YORBA LINDA ESTATES, LLC, Real Party in Interest and Respondent* (2017) the court said

To address the Project’s potentially significant wildfire impacts, the County included a mitigation measure requiring development of a community evacuation plan (CEP)—a document the FEIR refers to as “the backbone of hazard relocation/evacuation planning for the Esperanza Hills community.” Mitigation Measure Haz-6 (MMH6) mandates the CEP be submitted to, and reviewed by, OCFA and OCSD, and approved by OCFA prior to issuance of any certificate of use and occupancy.... The problem with MMH6 is there are no performance standards to guide OCFA’s approval process. For example, while “emergency evacuation plan details” must be included in the CEP, nothing in the measure guides the minimum standards for those details, nor is there mention of any statutes or regulations that do so. The fire protection plan appended to the FEIR, which is to form “the basis of” the CEP, does not fill the gap. Though titled a “plan,” it is truly just an analysis that provides recommendations for minimizing impacts. The FEIR relied on those recommendations in concluding fire hazard impacts would be less than significant, but there is



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no requirement each of them actually be included in the CEP. Under these circumstances, deferred mitigation is improper.

This seems to be similar to the Fire Safety Plan described in Mitigation 3.16-2a.

An EIR is inadequate if the success or failure of mitigation efforts, may largely depend upon management plans that have not yet been formulated and have not been subject to Analysis and review within the EIR. *Communities for a Better Environment v. City of Richmond* (2010).

On July 23, 2018 in Ontario, Canada an ATV at a windfarm construction site caused a 27,700 acre wildfire. Despite the fact that they were supposed to stop construction activities during Canada's equivalent of a Red Flag Warning they proceeded anyway. Employees stated that in the week preceding this wildfire they were forced to continue working by the contractor using heavy equipment blasting rocks 2- 3 times a day. During that week 3 separate fires did start from the blasting activities but the workers were able to extinguish them quickly. They could not however stop the spread of the fire caused by the ATV. (Selgin 2018). As Canada also does environmental impact reports and had a Red Flag Warning type ban in place I can only assume that this project also had similar requirements and Fire Safety Plans that were clearly ignored. Thus, compliance being placed on the contractor or its applicant was not affective – I also would assume the three minor fires were never reported to the proper fire authorities otherwise actions would have stopped. In this case their plan did not reduce the hazard to less than significant. I am aware of one fire that started during the construction period of Hatchet Ridge that possible reignited a couple of weeks later – according to an article in Record Searchlight. However, the article included little detail. I have filed a Public Information Request concerning the possible fires and they are currently searching for that information otherwise I would have added that information to my comments – regardless of the cause or suppression efforts because it would have helped provide useful information about fires starting nearby during the construction phase, how they started and what played a role in effectively suppressing them. If the project is approved I would want that information known by the applicant, contractors and the firefighters.

It also notes 15 ft. gravel rings will be placed around each base of turbines. I believe Hatchet Ridge uses 30 ft. rings. Second, these rings cannot significantly reduce the impact. On June 12, 2012 a generator at a turbine caught fire, the fire spread to other turbines partially from arcing through the lines. It led to a 367 acre fire that was put out quickly because fortunately the public called it in promptly as it was in a more populated area. When Fire Captain Craig Ewing who responded to the fire was asked if the fire was started by a wind turbine and if there had been proper clearance, such as the gravel rings, noted here he responded, "Yes, ma'am." He also confirmed that ground had been cleared around the base of each turbine, the blaze swiftly spread to become a wildland fire despite those precautions" (Rafferty 2012).

I realize these are just two examples and they can seem rare but there is no regulatory agency that enforces wind turbines to report any safety problems with their turbines. Obviously, in the Canadian incident they did not report that they had 3 separate small fires in a week. I also know of two fires that started near Hatchet Ridge Wind during the construction phase and am waiting for the information back from CAL Fire from a public information request. While the applicant and others involved in this process like to claim this is not an issue this is far from true.

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Many examples are reported in the media – this is just when they are not suppressed by the wind farm or contained to the wind farm. In fact, the number of fires started no matter how quickly contained or not is important information but it is proprietary information and leaves the public unaware of how many fires actually start and how they are properly addressed. There is no way of knowing what percentage of fires are effectively contained or how many get out of control or how these fires start without this information. Siting turbines in terrain such as this will almost inevitably lead to a scenario that leads to a media report. The terrain, topography are the environmental setting and the conditions present here will make any utility project exasperate a wildfire risks or the uncontrolled spread of a wildfire – no matter which mitigation is used. This is just a blatant way to ignore addressing this impact. The County zoning ordinances would likely not approve a project on this type of terrain if it was located in other of its zoning categories. It is somewhat perplexing why it would be approved in zone for Timber Production considering this obviously implies the fuel to burn is readily available.

However, maybe a manual from Europe about Wind Turbine Fire Protection can better say what I have tried to express about the fire risk. “A fire in a wind turbine can lead to the situation, that burning elements, which fall down, can cause a secondary fire on the ground where the tower is located. These circumstances can result in a forest fire, difficult in some cases to be extinguished. Very often long distances between the wind energy plant and the fire station and the strong wind prevailing in these places are both factors that can promote the quickly spreading of forest fires... . fire brigades do not have any chance to fight a fire at wind turbines if the nacelles or rotors are affected.... With respect to the fires that have occurred so far, the fire fighters' work has been restricted to the projection of the location of the fire and the prevention of secondary fires on the ground or at adjacent installations” (Wind Turbines Fire Protection Guideline CFPA-E Guideline No. 22:2012 F). Thus, fire happens, it can spread quickly and easily, response time can be hindered and fire fighters have to stand back and watch as the turbines burn while trying to put out fires at secondary spots that may start on fire due to the fire flying of the blades. Or maybe listen to the insurance industry, “Damage by fire in wind turbines is usually caused by overheated bearings, a strike of lightning or sparks thrown out when the turbine is slowing down. The possibilities of fighting a fire in a wind turbine are often severely hampered due to the height of the tower, inadequate or non-existing access roads, or sitings in the countryside... far away from the nearest fire-fighting service. Consequently, even the smallest spark can easily develop into a large fire before discovery is made or, even worse, fire-fighting can begin. Fire in wind turbines usually lead to a total loss of nacelle and rotor” (IMIA 2013)

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Mitigation Measure 3.16-2b: Nacelle Fire Risk Reduction.

Turbines shall be equipped with fire detection and prevention technology compatible with the manufacturer’s operating requirements and will be maintained in good working order throughout the life of the Project. Turbines with electrical equipment in the nacelle shall have safety devices to detect electrical arc and smoke that use the best available technology for fire detection and suppression within turbines. The turbine design shall include the following components:

1. Early fire detection and warning systems;
2. Automatic switch-off and complete disconnection from the power supply system; and
3. Automatic fire extinguishing systems in the nacelle of each wind turbine.

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4. Additionally, turbines shall include lightning protection equipment such as grounding equipment, and a lightning measurement system.

Should any of these devices report an out-of-range condition, the device shall command a shutdown of the turbine and disengage it from the electrical collection system, and send a notice through the SCADA. The entire turbine shall be protected by current-limiting switchgear installed at the base of the tower.

In the event of a lightning strike, an electrical inspection shall be conducted on the affected turbine to identify and address any damage to the turbine or electrical system that could result in subsequent fire risk.

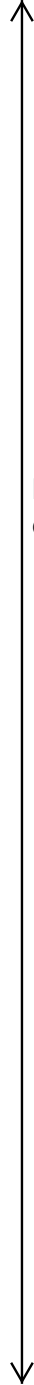
First, we know very little about the model or manufacturer of the turbine. The features listed involved in turbine design differ amongst different models and manufacturers, as do their safety records, number of accidents and effectiveness of the designed safety features. So I can only address this broadly and not fully understand the risk. Second, it also does not discuss other problems that the nacelle can lead to – and what else can be done to address them. To that end, “[w]hile foreseeing the unforeseeable is not possible, an agency must use its best efforts to find out and disclose all that it reasonably can.” (Guidelines, § 15144; see also, Vineyard Area Citizens, supra, 40 Cal.4th at p. 428.) *Communities for Better Environment v. Chevron Products Company et al., Real Parties in Interest and Appellants* (2010)

Lightning

In terms of lightning one study found that rotating turbines actually trigger lightning and increase their vulnerability to being struck by lightning. Further, the lightning can often bypass the grounding systems used as protection measures. “The surge of electric current often overpasses lightning protection systems installed on wind turbines and leads to burns, punctures, tip damage and edge debonding” The study analyzed installed power of 997 MW, in TX, KS, and IL the analysis was performed during a 5 year period of 508 wind Turbines. "... On average each wind turbine experienced blade damage due to lightning every 8.4 yrs. This accounts for 2-3 blade damage incidences due to lightning during an estimated wind turbine lifetime of 20 years. (Garolera, A.C.; Madsen, S.F.; Nissim, M.; Myers, J.D. and Hollboell, J., 2016). GCube a major insurer of renewable energy said the industry can do little to reduce the risk of lightning strikes (GCube 2013). The report included the 5 leading cause of insurance claims issued in the insurance industry. Data based on 2012 US reported claims, shows that blade damage and gearbox failure account for the greatest number of losses - accounting for 41.4% and 35.1% of the total claims reported. Meanwhile, damage to generators (10.2%) and transformers (5.1%) ranked third and fourth with damage to foundations coming in fifth. The top two most frequently reported causes of loss were cited as poor maintenance (24.5%), and lightning strikes (23.4%). Design defect (11.5%) wear and tear (9.3%) and mechanical defect (6.2%). Although the majority of wind turbine blade damage can be attributed to lightning strikes; delamination and improper handling during the construction and installation phase are also frequent and need to be addressed. Poor Maintenance contributes significantly to the leading cause of gearbox failure with design defect factoring into loss frequency as well. (Ibid) Gcube’s information is quite informative especially since the turbine selected may never have even been tested in real world conditions and only in a laboratory – let alone on complex terrain. But the percentage of claims that come from poor maintenance, lightning strikes and design defect are alarming.

SCADA

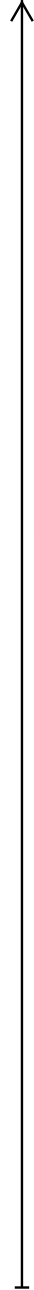
One study analyzed the effectiveness of SCADA for detecting failures and preventing problems in wind turbines. While some of the results were encouraging it also indicated that the



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technology is not without its problems. It does not ensure that all problems will be caught. The study could not name specific manufacturers or models of turbines studied because of proprietary reasons and thus assigned a letter to distinguish which turbine was evaluated. The study ... “analyzed SCADA for 440 wind turbines over a period of 3 years resulting in 1320 operational years. An overall number of 653 failures and 1345036 alarms were registered and processed... The results found Direct drive (DD) turbines show an extremely high share of controller failures. Geared wind turbines suffered from extremely high gearbox failure rates and downtimes... This indicates that blade failures are more severe for DD Wind Turbines than for geared ones. The gearbox showed the most critical behaviours, with very few alarms but very high failure rates (types F, G)... It is remarkable that many alarms due to environmental conditions but hardly any blade and controller alarms were recorded. At the same time, however, a large number of blade and controller failures appeared in the data set. The generator also showed relatively high failure rates as well as the second highest number of alarms (Reder, M.T. et al., 2016). It is unclear to me if a direct drive turbine or a geared wind turbine will be used – though this may have been referenced somewhere. But clearly both systems have their pros and cons.

In a report done in April of 2013 on the O&M of Hatchet Ridge, less than 2.5 years of becoming operational an audit filed to the SEC revealed multiple problems with three different sensors (assuming this was part of the SCADA data for these turbines). They found that the sensor issues happened more frequently during cold weather. The only specific sensor mentioned that did not work was the gearbox oil level sensor. Oil had even leaked from several gearboxes. Considering oil is highly flammable this could have easily resulted in a fire had conditions been right and any sparks ignited the oil. The report states that the faulty sensors resulted in notable sources of turbine downtime during early months of the project operation. At the time of the report it noted many sensors had been replaced but not all and that the turbine manufacturer was further studying sensor models to see what would be preferred for the Hatchet Wind Site. Furthermore, the report states that “a relatively small number of major turbine components have failed or required serious repairs since the Project operation began, some of which were identified by the turbines’ monitoring systems prior to component failure, minimizing turbine downtime” (Garrard Hassan America, Inc., 2013). Important in that sentence is the word “some” meaning not all of the serious major turbine component failures were caught by the sensors or SCADA before failure. It does not indicate which major failures were discovered by sensors and which were not. This would not indicate that SCADA can limit this to less than significant if it has been shown to not be reliable at all times. In fact, in this case oil sensors and the failure to catch some major turbine components failure could have easily sparked a wildfire. This does not negate the risk to less than significant. SCADA is only helpful if the sensors are reliable and humans interpret the information correctly. SCADA monitors too many different variables to be 100% reliable and just one sensor can completely undermine the rest of the data. Thus, how often will the SCADA and its sensors be monitored... or at least what is standard and how does this one measure make problems less than significant? Of course, again this information is proprietary in nature and thus very limited in peer reviewed studies and not widely available to the public.



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Mitigation Measure 3.16-2c: Emergency Response Plan.



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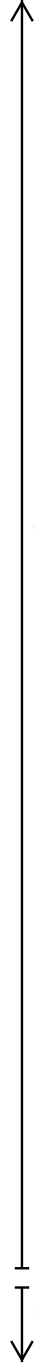
Prior to the submission of the building permit application, the Applicant shall prepare an emergency response plan to be reviewed and approved by Shasta County Planning, CAL FIRE, and the Shasta County Fire Department. Following approval of the plan, the Applicant and/or its contractors shall implement the requirements in the plan during all phases of construction and operation, as applicable. The emergency response plan shall describe the likely types of potential accidents or emergencies involving fire that could occur during both construction and operation, and shall include response protocols for each scenario. The plan shall include key contact information and a description of key processes, in the event of an emergency in order to alert relevant responders of the emergency, and how to control the emergency. The plan shall include crew member training in response, suppression, and evacuation. The training shall be coordinated by the designated Fire Coordinators. Prior to construction, the Applicant shall submit to the County a compliance report demonstrating that all crew members have been trained. As new construction crews or operation workers are brought onsite, the Applicant shall submit additional compliance reports demonstrating that they have been received training on the emergency response plan. This plan may be combined with the Fire Prevention Plan (FPP).

This sounds similar to what I discussed earlier referencing *PROTECT OUR HOMES AND HILLS et al., Plaintiffs and Appellants, v. COUNTY OF ORANGE et al., Defendants and Respondents; YORBA LINDA ESTATES, LLC, Real Party in Interest and Respondent (2017) the court said*

To address the Project’s potentially significant wildfire impacts, the County included a mitigation measure requiring development of a community evacuation plan (CEP)—a document the FEIR refers to as “the backbone of hazard relocation/evacuation planning for the Esperanza Hills community.” Mitigation Measure Haz-6 (MMH6) mandates the CEP be submitted to, and reviewed by, OCFA and OCSD, and approved by OCFA prior to issuance of any certificate of use and occupancy.... The problem with MMH6 is there are no performance standards to guide OCFA’s approval process. For example, while “emergency evacuation plan details” must be included in the CEP, nothing in the measure guides the minimum standards for those details, nor is there mention of any statutes or regulations that do so. The fire protection plan appended to the FEIR, which is to form “the basis of” the CEP, does not fill the gap. Though titled a “plan,” it is truly just an analysis that provides recommendations for minimizing impacts. The FEIR relied on those recommendations in concluding fire hazard impacts would be less than significant, but there is no requirement each of them actually be included in the CEP. Under these circumstances, deferred mitigation is improper.

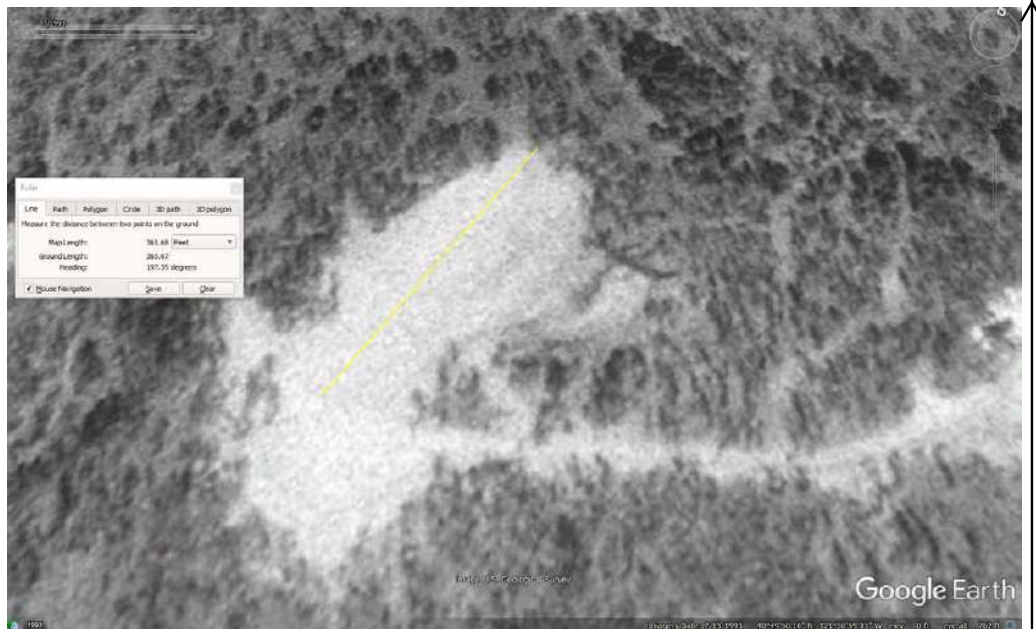
This should have been able to give more specifics and specific performance standards that needed to be achieved. It also needs to discuss further how this would substantially minimize the impacts. With all of the issues and inadequacies I addressed in this section it does not seem that this was addressed thoroughly enough. Impacts were not thoroughly discussed. Deferred mitigation did not include performance standards and there was no substantial evidence included to reach the conclusion that this would reduce the risk to less than significant. This fails to be informational and precludes discussion of how these mitigate the risk.

d) Whether the Project would expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.



P45-66
cont.

P45-67



P45-67
cont.

This picture is also used in the geology section. However, it shows a landslide that occurred around approximately 1993 – the Fountain Fire was 1992. This gives me every reason to believe that this took place because of the fire. So it is a false conclusion to automatically say this is less than significant. This has happened, has happened, and looking at Google Earth imagery in this region within a year or two of the Fountain Fire would likely produce more images. This is the most substantial and obvious one – and it was in the pre-geotechnical report. I merely verified that this was first picked up by satellite imagery in 1993.

This assumes that a fire will not start because of the project or within the project site. The question is if there is a fire how would this affect slope instability, flooding, and mudslides. The mitigation measures above all address stopping a fire. They do not address what will happen if there is a fire. As no plan is 100% effective this merely avoids answering the real question. Not one of the mitigation measures mentioned address water quality, unstable slopes, flooding, landslides or drainage changes AFTER a fire. These mitigations do not apply whatsoever to the impact rather to fire prevention. It is obvious that fire resulting in the loss of vegetation naturally leads to these consequences. I don't need a source. KRCR and any major news reporting agency report on this problem every winter after a wildfire. This is well established knowledge- please do not act like I need a proper citation. Anyone that watches the news or reads a newspaper is aware of this problem especially as multiple warnings and advisories occurred within the burn scars of the Carr, Delta, and Hirz fire the winter after those fires warning that this could happen.

In some cases, evacuations occur in burn scars before a storm simply to "mitigate" the risk to lives from potential mudslides. I can give you hundreds of citations if necessary – I think I have proven I know how to research and where to gain that information. This is just plain common sense that should not need citing. So please actually address this. In fact, if you really

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want a citation (I don't want to give you an excuse that a significant impact was not brought to your attention because it was not cited properly) look up Glendora, California mudslides in 1969 – a wildfire in the foothills of my hometown in 1968 led to the instability of soil that caused a mudslide that damaged 167 homes, resulted in \$27 million dollars in damage and dozens of deaths (<https://www.scpr.org/news/2014/03/03/42553/rainstorms-leave-glendora-but-protective-barriers/>) as reported in a news article in 2014 after a large fire in that SAME area led to more safety concerns and mitigation measures (AFTER THE FIRE) and not before the fire to reduce damage and risk. I know you don't have to check the source. But there is some audacity that this report and the County just think that a "Fire Prevention Plan" reduces the risk of a problem after a fire to less than significant when further actions must be taken to mitigate the threat and rehabilitate steep slopes to prevent these problems in an after fire rehabilitation plan and not in a pre-fire prevention plan. The County knows this and deals with this all the time. Please properly address this issue in the EIR – it is a significant impact that needs to be mitigated and the evidence to support the conclusion is illogical. Wildfires are expected to increase in this area due to climate change. Even if the project does not cause the fire – turbines close to 700 ft. tall located on steep slopes certainly will exasperate any risks of fires entering the area after a wildfire. The simple construction of roads already increases the risk to erosion and instability as soil is stabilized by the roots of vegetation holding it in place. After a fire the roots no longer hold the soil in place.

While the general plan does not state landslides as a problem it does say "Landslides occur throughout Shasta County, although they have not been considered a major problem. Landslides are more prevalent in the eastern and northern portions of the County and are commonly related to the sedimentary and volcanic rocks in these vicinities." In the Whitmore Quadrangle mapped by G.A. MacDonald and P.A. Lydon, 1972, slumping and landsliding were widespread and attributed to poorly consolidated sedimentary rocks overlain by massive volcanic rocks. This type of instability has occurred in the Montgomery Creek Formation, in mudflow deposits of the Tuscan Formation, and in the sedimentary rocks of the Chico and Red Bluff Formations." Though the county did not decide to include this in their Multi-Jurisdictional Hazard Mitigation Plan in 2017 noting that it would not be studied further their failure to properly study the actual problems that exist within their own county does not make it a "fact" that landslides aren't a problem and in fact it does state that landslides are "prevalent in eastern and Northern portions of Shasta county and are commonly related to the sedimentary and volcanic rocks to these vicinities." They chose to ignore the hazard and not be prepared for it – I wonder if in their negligence to follow up this subverts FEMA's Disaster Mitigation Act that requires a hazard mitigation plan as a requirement for receiving funds? I hope that the admission of a hazard exists but failure to properly mitigate for it does not result in a failure to get money from FEMA if/when a disaster relating to a landslide was acknowledged but not properly addressed. (Maybe I will have to go back to my Emergency Management Research and verify this because if not I will need to submit comments to the County about this problem as well). The pre-technical study p. 7 even notes that parent materials are volcanic ash, lava flows and volcanic rock consistent with the geological mapping and produces maps of this very problem under a proposed turbine. Thus, this could indicate that in fact this is a problem for this project site.

This needed to first, state the slope and topography of the area, risks to erosion and landslides. What techniques would be used to address the impacts if a fire were to occur?

P45-67
cont.

How are you going to stabilize the slope that the project already leads to some instability simply by removing vegetation and construction activities that seek to minimize slopes? How is erosion and runoff going to be addressed? The DEIR refers to Geology Impact 9-3 which I will show later was not analyzed sufficiently but says there will be a geotechnical report in the future... this is really infuriating because there already was enough information available to give some information to the public even if more information was needed for more site specific information. A pre geo-technical study was done and is found on the counties website under Appendix A: <https://www.co.shasta.ca.us/docs/libraries/resource-management-docs/projects/fountain-wind-project/initial-study/initial-study-Appendix-A.pdf> in the scoping section. Yes, further detailed studies are necessary but that was to further address what was already found. In fact, the evidence should have been provided to inform the public what is needed from further studies that is not already known. Yet this document makes no reference to this report and the public would not be aware of it without doing their own research.

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P45-67
cont.

Information was also provided to the State Clearinghouse for CEQA which included soils, soil type etc. prepared by the National Cooperative Soil Survey. This too would have given an idea of what the county and applicants knew but chose to disclose. Just as the court stated in *Sierra Club v. Fresno* (2019). The agency “must adequately explain what the agency does know and why, given existing scientific constraints, it cannot translate potential impacts further.” The agency had enough information to give a broad overview of the problem and possible mitigation efforts it could have included that would reduce some of the risks but chose for whatever reason to hide this from the public. (But I will save my main contentions of that for the geology section). It does not inform the public of hazards or how they will be lessened if they can be. Please do address this appropriately and resubmit to actually provide accurate and adequate information to the public about the impact risks and feasibility of this impact (including the geology section).

P45-68

As for Water Quality and the Hydrology Section this explanation also does not sufficiently give enough substantial evidence to reach this conclusion. It merely suggests a SWPP plan and Best Management Practices. There should be discussion about how BMP and a SWPP will actually mitigate this risk to less than significant the agency cannot simply state it without support or discussing how it reduces the effect. I would normally give the BMP and regulatory plans enough to warrant that this will be followed but after finding how incomplete, vague, misleading and that this report failed to apply to the regulations it was given – I am sorry I more convincing is necessary.

P45-69

Cumulative Analysis

I will simply disagree since the county did not show that they can reduce any of these impacts to less than significant. This is especially true when you include other infrastructure, and unhealthy forests. The fact that past wildfires and climate change are acknowledged as only considered in analysis for baseline conditions it makes every single section of this report, especially wildfire, to be inconsistent and not legally comply with CEQA. CEQA gives broad discretion to agencies to consider impacts but does not give agencies the ability to completely ignore or omit substantial information that would result in significant impacts so that it is easier to justify a project. CEQA generally uses the Greenhouse Gas Emissions to assess Climate Change as Green House Emissions contribute to it. Yet, it should also address how Climate Change is making wildfire a greater risk and threat and how combined

P45-70
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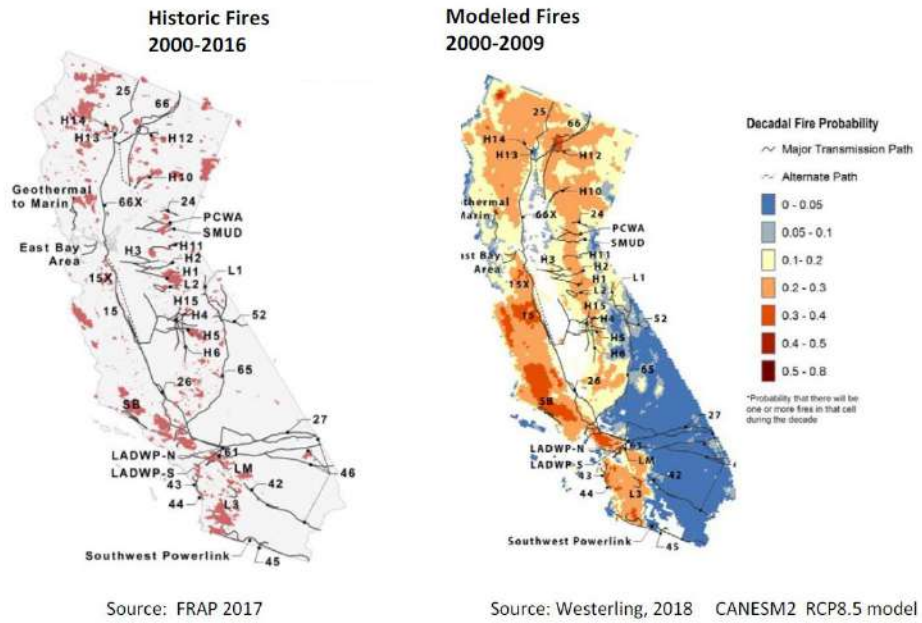
with this project the impact could be increased – or if it is not shown to cumulatively be an impact with that why. There is no evidence to suggest that the wildfire problem will decrease only that it will increase. A report by the Governor’s Office of Planning and Research found that these types of fires started by utilities “...tend to spread quickly and be amongst the most destructive. Hundreds of thousands of miles of electrical transmission and distribution lines snake across California landscape, often igniting fires during extreme wind events and in remote areas, making early detection and fire suppression extremely challenging. Longer fire seasons make utility-caused fires even more likely” (Governor’s Office of Planning and Research 2019, 2).

Section 15126.2(a) says “the EIR should evaluate any potentially significant direct, indirect, or cumulative environmental impacts of locating development in other areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas), including both short-term and long-term conditions, as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas.” This does not do so. In fact this type of development will increase risk of wildfire discussed throughout almost every section. It acknowledges the area is identified as a wildfire risk area but ignores potential significant direct and indirect impacts to comply with this statute. The project also places a lot of expensive and critical infrastructure at risk by being located in such a hazardous area. Infrastructure that is vital for living and expensive to replace – vital to California in general and not just the area in close proximity to the project.

Furthermore, technical reports made for California in regards to the Fourth Climate Change Assessment include one report regarding the impacts of wildfires on electric infrastructure and the ability to reliably provide Californians with electrical service. The report reviews past wildfires that were in close proximity to high transmission power lines, disrupted service from fires near powerlines, the financial cost of repairing such infrastructure, increasing climate change problems that will further exasperate the risk to electric infrastructure particularly high-powered transmission lines (including the ones specifically in this project area) and notes that efforts should be made to either place these lines underground or make land use choices to locate such infrastructure outside of high fire risk areas.

One significant finding from the report is that “Over the 2000-2016 period, wildfire damages to the transmission and distribution system in selected areas exceeded \$700 million. Total wildfire damages to all sectors of the economy were much larger. Damage to distribution from wildfires during this period was significantly higher than wildfire-mediated damage to transmission.” Included in their analysis is Path 66 considered a Western Electricity Coordinating Council (WECC) path which ends in Round Mountain and other transmission lines that are routed off of that path including H12, which is within/near project site, but not considered WECC.

P45-70
cont.



P45-70
cont.

The figure above is included on page 13 of the report titled “Figure 5: The Exposure of California Transmission Paths to Wildfires.” Note paths 66 and H12 and their high decadal fire

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probability. Also note the table below included on page 23 of the report.

Table 7: New and Alternative Path Characteristics

Path_ID	Path Name	# Colls Crossed	Path Length (mi)	2040-2049 Expected No of Fires	Density
Alternative Paths					
15	Midway-LosBanos	120	635	21	0.18
15 Alt	Midway-LosBanos	98	600	16	0.16
66	California Oregon Intertie (COI)	106	338	35	0.33
66 Alt	California Oregon Intertie (COI)	108	372	32	0.30
15X	Tracy-LosBanos	52	130	11	0.21
15X Alt	Tracy-LosBanos	15	123	3	0.20
Total Original Paths		278	1103		
Total Alternate Paths		221	1098		

Source: GIS analysis applied to WECC 2013

Path 66 is expected to have the largest increase of number of fires from 2040-2049 and largest density. This is also portrayed on the map below from the report.

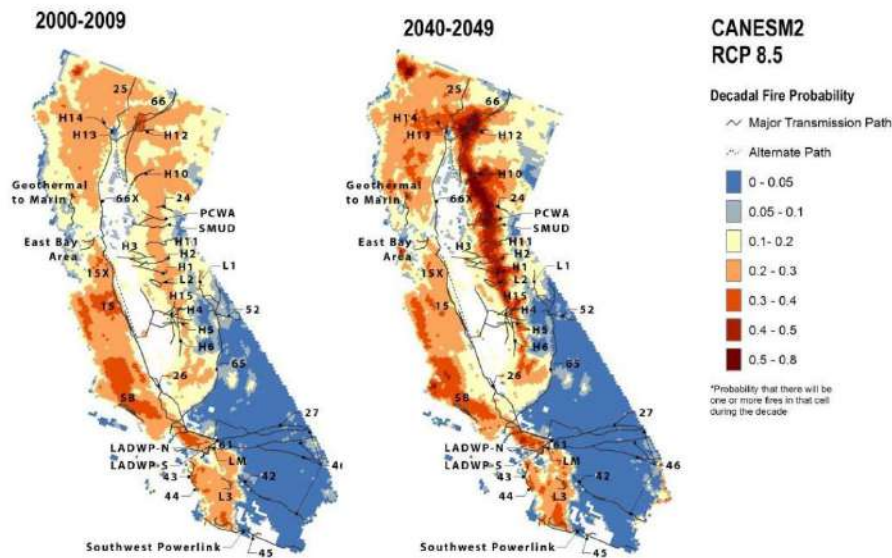


Figure 8: Projected Change in Future Fire Risk

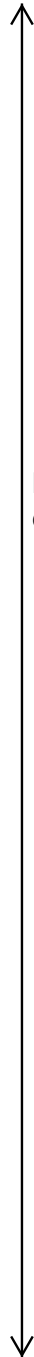
P45-70 cont.

The report defines the increase of probability near the Path 66 transmission lines as an increase of 46% higher probability with 35 fires in the ten year period. With H12 the direct transmission lines located near or within the project site as having an increase of 75% more fires or 12 fires. These represent some of the most significant increase in wildfire probability they modelled. H12 includes just 122 miles but has one of the largest MW production of the smaller paths with the capacity of 1395 MW. This project will only add more transmission lines to this vicinity making more infrastructure and lines at risk (though does not address the transmission lines capacity of adding more MW to it). Since these projections are forecasted for 2040-2049 it also means that it will be during the operational timeframe of the wind turbines which would also put the turbines, the new substation and switching station and all of its lines into the associated risk of 75% more fires than between 2000-2009. This seems like quite the gamble for such a costly investment project. The County will be left with much of the associated costs of such damage and it could impact the reliability of energy throughout the state.

Table 8: Projected Change in Transmission Path Fire Risk

Path ID	Area (cells)	2000-2009		2040-2049		Change	
		Expected number fires	Fires per Cell Area	Expected number of fires	Fire per Cell Area	Expected number of fires	Change Number fires (%)
WECC Paths							
15	120	27	0.23	21	0.18	-6	-22%
24	44	8	0.18	11	0.25	3	38%
25	29	6	0.21	8	0.28	2	33%
26	72	15	0.21	14	0.19	-1	-7%
27	48	1	0.02	0	0.00	-1	-100%
42	15	0	0.00	0	0.00	0	0%
43	26	6	0.23	5	0.19	-1	-17%
44	12	3	0.25	3	0.25	0	0%
45	1	0	0.00	0	0.00	0	0%
46	445	10	0.02	8	0.02	-2	-20%
52	30	2	0.07	1	0.03	-1	-50%
61	3	0	0.00	0	0.00	0	0%
65	88	7	0.08	5	0.06	-2	-29%
66	106	24	0.23	35	0.33	11	46%
15X	52	12	0.23	11	0.21	-1	-8%
66X	97	16	0.16	25	0.26	9	56%
Non WECC Paths							
EastBayArea	23	4	0.17	4	0.17	0	0%
GeothermaltoMarin	68	11	0.16	14	0.21	3	27%
H1	30	6	0.20	9	0.30	3	50%
H10	72	16	0.22	32	0.44	16	100%
H11	29	5	0.17	10	0.34	5	100%
H12	58	16	0.28	28	0.48	12	75%
H13	18	2	0.11	3	0.17	1	50%
H14	13	3	0.23	4	0.31	1	33%
H15	18	4	0.22	5	0.28	1	25%
H2	38	6	0.16	9	0.24	3	50%
H3	46	8	0.17	11	0.24	3	38%
H4	22	3	0.14	4	0.18	1	33%
H5	22	4	0.18	4	0.18	0	0%
H6	119	19	0.16	25	0.21	6	32%

After calculating future projections to current paths they suggested either burying lines underground or avoiding putting future electric infrastructure in these areas projected to have a high increase in fires due to both the reliability of electricity for Californians and the estimated

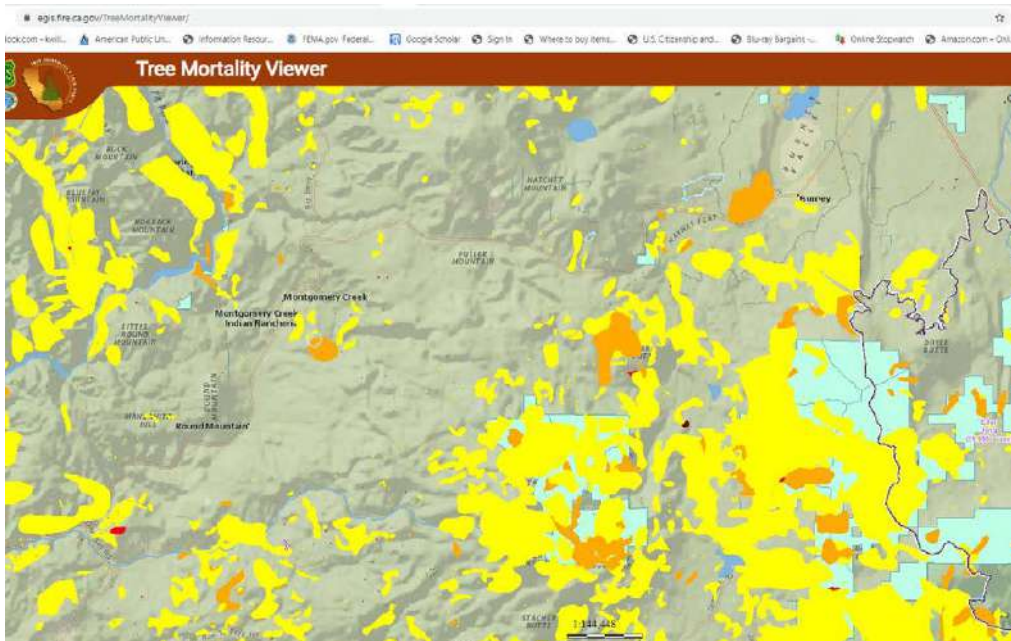


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cost of damage to these paths (Dale, L.; Carnall, M.; Wei, M.; Fitts, G. and McDonald, S.L., 2018).

If no other evidence was given on wildfire or any other impact of this project or exasperation of impacts for the project I would think this would be enough to warrant disapproval of the project. Also, ignoring this information will increase the liability of the County for fire if one were to occur as a result of this project or within the vicinity of this project which could be found to be significantly worse because of the project. The demonstrated fire behavior, evacuation problems and current wildfire risks should demonstrate the sheer risk to all lives near this project site and if that is not enough to make a decision at least the sheer financial cost when those 36 and 12 fires occur - unless decision-makers are willing to gamble that none will be within the vicinity of the project site.



This map shows the Tree Mortality due to death or pests near the project site and area provided by CALFIRE mapping. It indicates conditions that will also contribute to making fires more severe unless appropriately addressed. Another cumulative impact that should have been considered.

Failing to address this issue fails to further analysis if this is actually in line with County Plans and State Plans – both which acknowledge a need to protect forests, limit the cost and destruction of future wildfires, and provide RELIABLE renewable energy.

Geology and Soils

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P45-70
cont.

After the analysis of this section I cannot trust any other information in this report. This violates public trust and calls into question the objectivity of the leading agency.

Impact 3.9-6

This section fails to disclose a lot of information about the potential impacts because of geology and soil. There are numerous references to the design-level geotechnical investigation in all impacts and refer to them as the investigation being described above. However, I do not see any significant discussion of what exactly is included in that geotechnical investigation or how this information will be useful in siting turbines and reduces the impacts of the Project. As CEQA's purpose is to give understanding to those who did not partake in the completion of the report and help the decision-makers have the information needed for informed decisions - I would find this information helpful to know since otherwise what assurance is there that it will be complied with and what the results the County hopes such a study will help them achieve. While I can assume that it would be subject to some oversight or approval this does not address that so I can't know for sure how this will be enforced or if it is necessary for approval of the entire project. This process will take place after an approval so will no longer be subject to needing comments by the public. The responsible agency or the project applicant might understand this process but the public and maybe some decision-makers will not all be familiar with such reports or the process. From review of at least one other DEIR (Humboldt County) information was included about what is in a geotechnical study and the approval and permit process.

The county already has a preliminary geotechnical study that they fail to disclose which includes important information and was the basis of an initial study that was presented and what should be considered in the DEIR. While one can find it if they go to the county's Fountain Wind page and search for it no one would know to look for it as the DEIR does not include information found from it. The report includes impacts have been downplayed but should have been addressed. Based on that study and its appendix (the geotechnical preliminary report) it addresses significant concerns that could arise. The preliminary Desktop Study Conducted States

“The review of geologic and geotechnical risks completed as part of the desktop study indicate that there are potential concerns related to depth of bedrock, corrosion potential for buried metal and concrete structures, and slope stability. There is the potential for areas of lower strength or high compressibility soils, though due to limited soil thickness, soil strength and compressibility considerations will not likely affect turbine foundation design. Consideration of rock anchors and socket foundations would require in depth investigation of bedrock properties at proposed turbine locations. Based on Barr’s experience with similar geology, rock anchor and socket foundations may not be economical due to the quality and variability of the volcanic and sedimentary bedrock, despite its shallowness.” (Appendix A, p 2).

The summary of the report is ***“...the key issues at the project site include, corrosivity to concrete, corrosivity to steel, slope stability, and shallow bedrock. Of these issues, the possible presence of shallow bedrock will have the biggest impact on project risk and cost, from a geotechnical standpoint.”*** (Appendix A. p. 17) The report than notes a preliminary study addressing specific details can help further understand what would be necessary in the final geotechnical study.

P45-71

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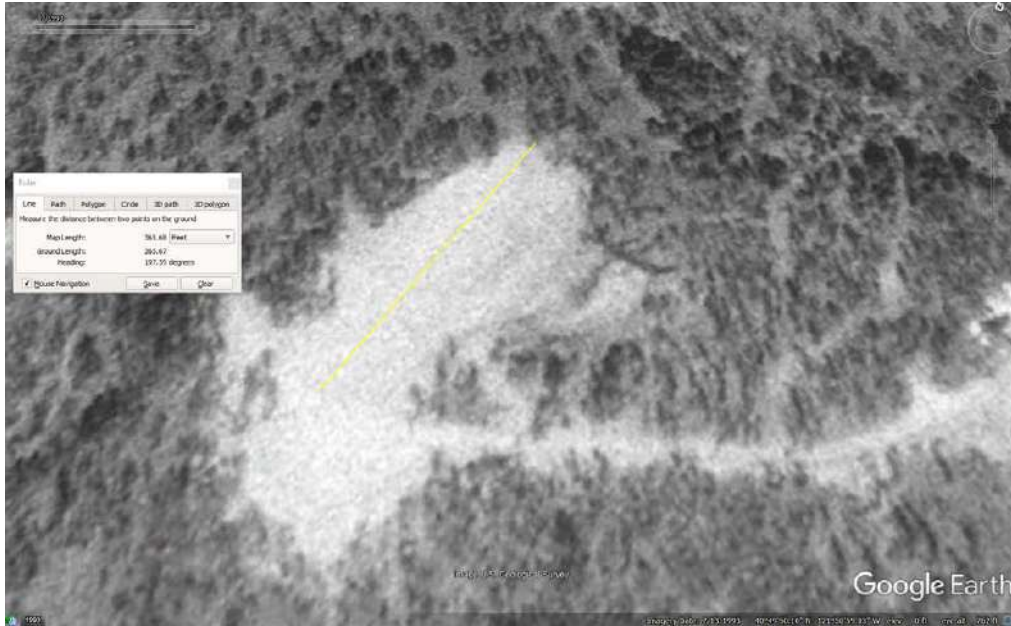
It does not appear that this preliminary study was done nor are any new facts discovered that seem to differ much from the ones this report already used except ones that simply are not accurate as demonstrated below and that comments in the pre geotechnical study were not provided in this report. Is a plan like this not necessary before project approval? (For those of us unfamiliar with the process). Could that report identify any concerns that the county would find unacceptable as an impact or risk? What is included in that report that can confirm mitigation measures can be feasible and that this project can be done feasibly? Or can it result in an impact that would then need to be acknowledged in an overriding statement of why such an impact is acceptable?

The most glaring omission or misleading information can be found on 3.9-16 which states “Geological mapping by Dupras indicates there are no landslide deposits located within the Project site.” (3.9.16). However, it is very clear that the county land planning commission knew this information was false and the applicant and all the other consultants were also aware. They had it in the information from the original applicant. In Figure 12, of the geotechnical study. It had an aerial image of the proposed turbine I5 that showed a very large landslide scar. I’ve included the figure from their preliminary study and with just a little effort on my part could identify it myself using Google Earth without any coordinates – that is how obvious it is. The Google Earth map is from 2016. Though the Dupras citation is from 1997. Any other reference to Dupras is questionable since it does not seem to be reliable.



The outdated citation could simply be a mistake meaning at the time it was evaluated perhaps there was no evidence of this but again Google Earth seems to contradict this.

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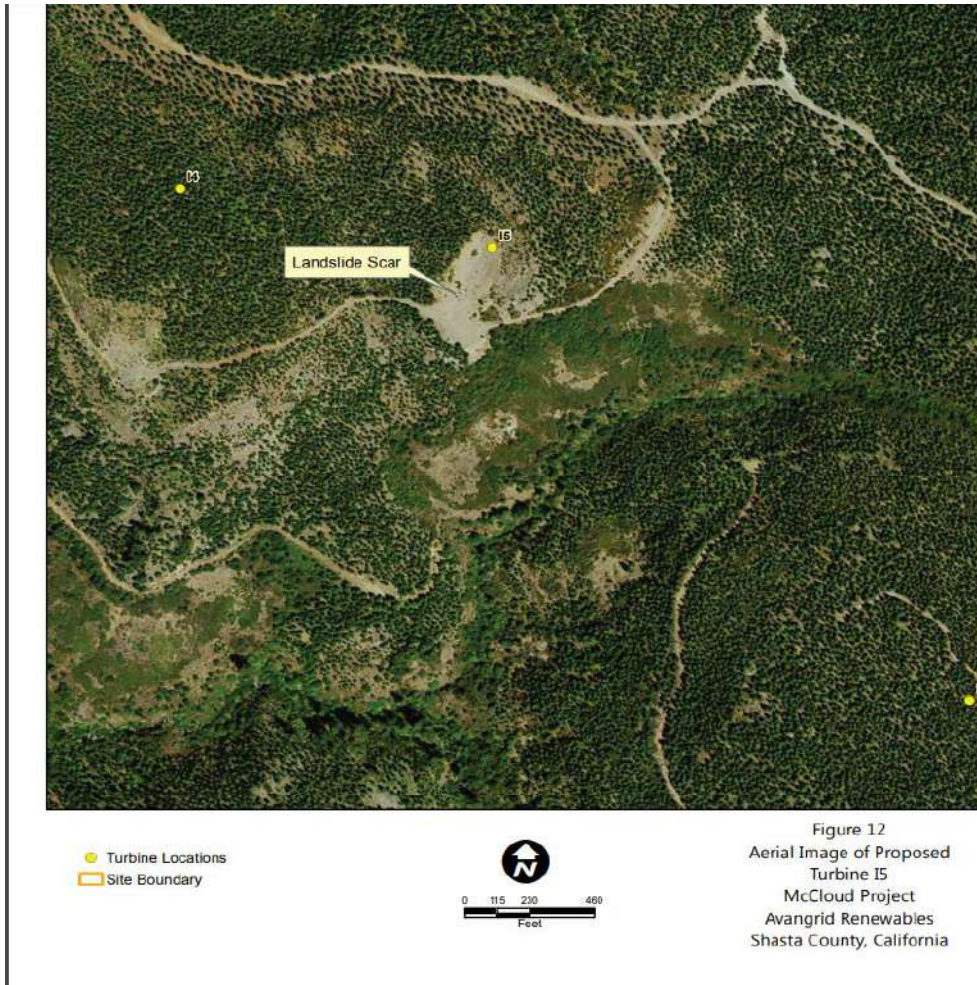
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cont.

With such glaring evidence that the information they provided was false why did the “peer-reviewed” process and the Lead Agency in making sure the report complied with CEQA ask the applicant to address it – knowing the information to be false. If they didn’t correct the information that the applicant provided it would seem they were complicit or at the least very negligent in not providing this information. Below is a screenshot from Appendix A of the Initial Study that can be found on the county’s website – that somehow was forgotten for some unknown reason or willingly kept out of this report. Or perhaps the rationale was we couldn’t use the study from the prior applicant. If that’s the case it wouldn’t be on their website and they could have at least tried to duplicate the results. At the very least, it would be logical to assume that the updated turbine sites in the DEIR would not have been placed on top of this specific location – that is not the case. The turbines were merely misnamed making it more difficult to identify this particular turbine. Since that was not done and is a glaring elephant in the room at the very least ample discussion of this known issue and how the project will affect it or how mitigation measures adopted minimize the impact of unstable ground should be addressed. This cannot be ignored. I am curious how a site specific investigation of this particular location would make this suitable for placement – could a turbine be placed on or near this slide and be stable? If so, how? If not why was this information not included? Clearly, the timber company never tried to plant on top of this site... why would it be safe to place an almost 700 ft. turbine on top of it?

This simply shows that impact 3.9-3 simply is incorrect and possibly intentionally hidden. With the evidence provided they cannot state that the adverse effects directly or indirectly is “less than significant.” Considering the entire area is composed of similar soil and geology. It is insulting particular to those living in the area that know these slides happens and that the report continues to say though no evidence is found a “required-site specific, design-

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level geotechnical investigation identified above would analyze site-specific conditions, including any potential for landslide potential or other slope instability accordance with CBC requirements. *Should any potential impacts be identified...*” (3.9-16). Of course, at this point it would no longer be under the scrutiny of the public eye. Further, they already knew that there was site specific evidence of this. With their failure to disclose this what assurance that proper diligence would be done. Are we supposed to trust the county who will approve their geotechnical report will ensure it was done thoroughly and accurately and that it will be complied with? They couldn’t ensure this process was adequately complied with? What assurance is offered and what proof does any citizen of this County have that other requirements that the Agency needs to make sure are complied with actually are? They couldn’t even and seemingly didn’t want the public scrutinizing this. And since it isn’t explicitly stated that this report exists anywhere in this report how would the public know it existed?



P45-71
cont.

Considering that this was an obvious landslide missing from their report (though called the “McCloud Project” – is another site also being considered for future projects or was it already ruled out) I decided to look further to see if there was evidence of any other landslide, rockslide or erosion that they either chose not to look for or decided not to disclose. This is some of what I found.



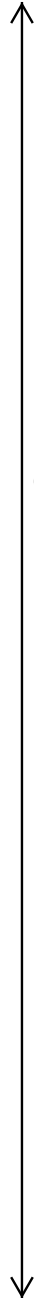
Possible slide near turbine M4 – (left picture 2002/right 2016)



Possible slide near turbine M4 – (left picture 2002/right 2016)



All sides of slide near around turbine M4 (left 2002/right 2016)



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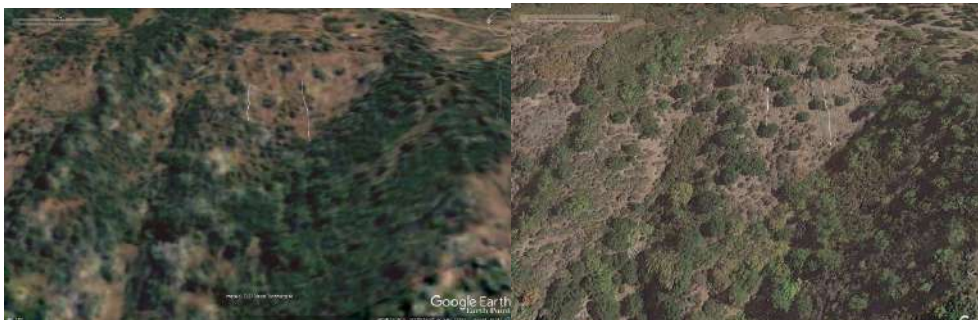
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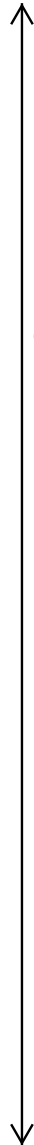
Possible slide seen near Turbine B4 (left picture 2005/ right 2016)



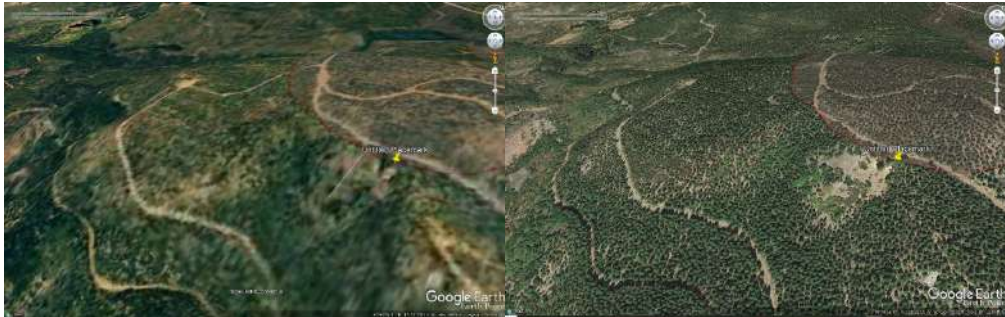
Likely Rock Slide/Slide near A6/A7 (left picture 2005/ right 2016)



Possible Slide/Erosion near M3 (left 2002/Right 2016)

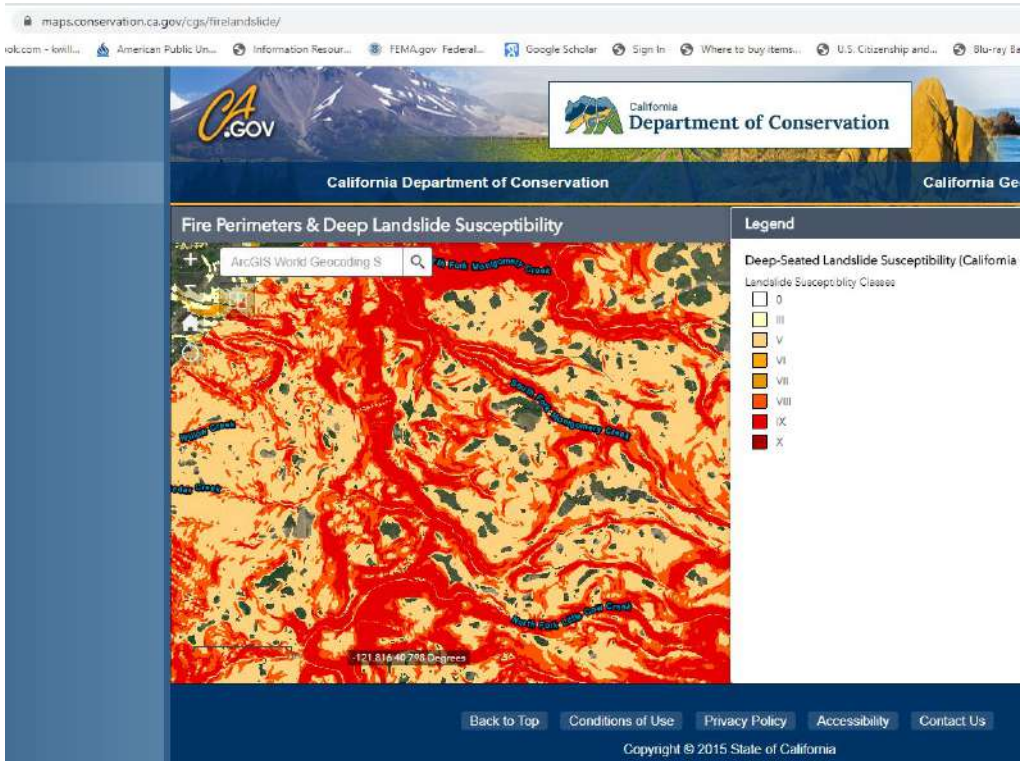


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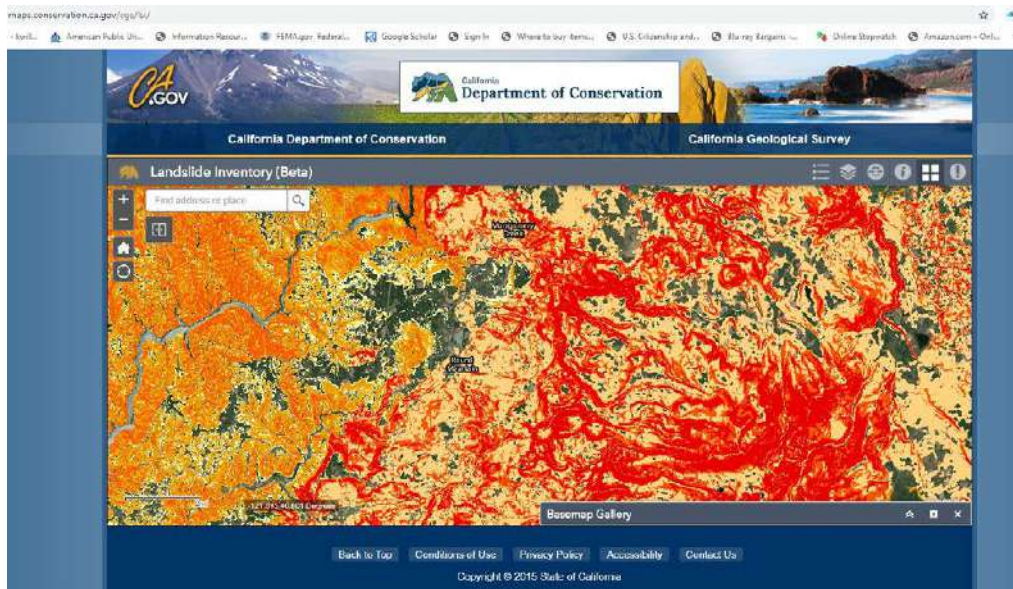
Possible Slide near E01 (left 2005/right 2016)

If my own analysis is not evidence enough consider the following maps from the California Department of Conservation that shows Deep-Seated Landslide Susceptibility within the area.



P45-71
cont.

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P45-71
cont.

Clearly this all was inappropriately concluded:

a.iii) Whether the Project would directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides.
Impact 3.9-3: The Project could directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides. (*Less-than-Significant Impact*)

b) Whether the Project would result in substantial soil erosion or the loss of topsoil.
Impact 3.9-4: The Project could result in substantial soil erosion or the loss of topsoil. (*Less-than-Significant Impact*)

c) Whether the Project would be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.
Impact 3.9-5: The Project could be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse. (*Less-than-Significant Impact*)

P45-72

Please follow up with a more thorough real investigation and the real effects that can result not only to your employees/contractors but to the giant turbines meant to be placed in this area and recirculate for public comment. Landslides exist some within close proximity to residences where if a slope was not stable could lead to it dropping down a significant slope and possibly injuring people outside the project area. I do not understand why this was not disclosed despite the knowledge of it. To that end, “[w]hile foreseeing the unforeseeable is not possible, an agency must use its best efforts to find out and disclose all that it reasonably can.” (Guidelines, § 15144; see also, Vineyard Area Citizens, supra, 40 Cal.4th at p. 428.) (Communities for Better Environment v. Chevron Products Company et al., Real Parties in Interest and Appellants (2010)). Not only does the report need to discuss this and identify it as a potential impact give real mitigation options that are feasible, enforceable and have measurement actions. If you choose to state that an erosion plan or Best Construction Methods is being used please use substantial evidence to identify how this will address the issue at this project site

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given such vulnerable conditions already exist. Any sort of construction, road building or grading will lead to more unstable soil and create more erosion. This completely undermines this report and erodes trust that the leading agency did its job instead it chose to what many courts have found inadequate. “The agency [will] not be allowed to hide behind its own failure to gather relevant data. CEQA places the burden of environmental investigation on government rather than the public. If the local agency has failed to study an area of possible environmental impact, a fair argument may be based on the limited facts in the record. Deficiencies in the record may actually enlarge the scope of fair argument by lending a logical plausibility to a wider range of inferences.” (Sundstrom v. County of Mendocino (1988) 202 Cal.App.3d 296, 311, 248 Cal.Rptr. 352; see also Christward Ministry v. Superior Court (1986) 184 Cal.App.3d 180, 197, 228 Cal.Rptr. 868 [fact that initial study checklist was incomplete and marked every impact “no” supported fair argument that project would have significant environmental effects].) *Gentry v McMillin Communities* (1995).

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P45-72
cont.

The Garrard Hassan report mentioned above noted that at Hatchet Ridge Wind Farm in the first two and a half years of operation that turbine access roads already showed some signs of erosion and minor ground settlement around the base of severely newly installed transmission line poles which the auditors felt should be evaluated by the Engineer of Record and corrected (Garrard Hassan 2013). Your own data includes at least one landslide – who knows what other information was known and not made public accessible. I can show other areas where possible, landslide, rockslides or erosion has resulted near where planned turbines are going to be used. There are other areas not pictured where there also appears to be evidence. Also, this area is on very steep slopes which is not adequately disclosed either.

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P45-73

The report indicates future studies will be done and neglects that some have been done evaluating types of soils, its corrosive properties and steepness. The studies seem to have been done on March 12, 2020 by the Natural Resource Conservation Service and the leading agency submitted the documents to the CEQA state clearing house. I had to take it upon myself to compile an average within the project site for steepness and corrosiveness however this is the slopes based on the numbers for the 14,000+ acres of area of interest that the study included and is a broader area than the project site itself. I imagine it would not have been that difficult to get more precise information as much of this is located online by these agencies. If a broader study was conducted on 14,000 acres it would have been feasible to look at conditions within the project site to ensure this was an appropriate location – both for the county and the applicant.

Slope	Acres	percent
none	36.6	
0 to 2	142.3	1%
0 to 5	17.8	0%
2 to 9	219.8	2%
2 to 15	2120.5	18%
5 to 15	469	4%
15 to 30	4108.7	34%
30 to 50	4105.3	34%
50 to 75	881.3	7%
	12101.3	
		15 to 75 = 75%
		30 to 75 = 41%

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P45-74
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According to this soil study approximately 75% of this area has a slope between 15 and 75% and 41% have a slope between 30 to 75%. I imagine that this percentage of slope would make this project quite risky and could understand why these figures may have been left out of public view by simply referring to a study that will be done in the future. It also explains why more site specific information is needed. However, it does not tell me what standards the project will be held to, what is acceptable and considered safe by the county and what the impact of grading in areas that are 30-90% steep can have on the environment and what more hazards that will result from grading activities. There is no reason to hide the initial evidence that could warrant some concern unless it questions the feasibility of the project altogether and its safety. I know optimal wind turbine sites should have very low slope. This could completely lead to safety concerns and construction details that need much more disclosure to properly inform those who did not participate in this process or further in the process once this project is approved. I am not satisfied with the conclusions nor am I satisfied with the agencies decision to not disclose what they did know and at least state how it could be a problem based on initial studies. Further discussion should have been given to mitigation and if mitigation is even feasible or worth the expense and what impacts those mitigation factors like grading can also have on the environment.

P45-74
cont.

d) Whether the Project would be located on expansive or corrosive soil, as defined in California Building Code (2019) Section 1803.5.3, creating substantial direct or indirect risks to life or property.
Impact 3.9-6: The Project could be located on expansive or corrosive soil, as defined in California Building Code Section 1803.5.3, creating substantial direct or indirect risks to life or property. *(Less-than-Significant Impact)*

Again this is misleading and leads to an inadequate discussion of the risk, performance standards and feasible mitigation options that are possible. There is a preliminary soil report – it gives enough information to draw some conclusions on and to state that it warrants further investigation. The agency once again was supposed to include what is known and what that means but what further information it needs. Under this section it at least does indicate a study was done on the soil but does not adequately explain how this conclusion was reached. The mapping shows that “... a majority of the Project Site as underlain by soils that have a range of potential to corrode both steel and concrete.”

Again, I had to find the numbers myself – here is the actual range.

Concrete	Acres	Percent	Steel	Acres	Percent
None	36.6	0%	None	36.6	0%
Low	2810.3	23%	Low	2448.2	20%
Medium	9254.4	76%	Medium	0	0%
High	0	0%	High	9616.5	79%
	12101			12101.3	

P45-75

This indicates 76% of the area’s soil is medium corrosive to concrete and 79% is highly corrosive to steel. Given the fact the agency knew this and yes it would warrant it would need further studies. Once again there is enough evidence to conclude that there could be a potentially significant impact and then explain why not and how another study can help reduce the risk as well as provide other feasible mitigation measures if such exist. You cannot state ***“The impacts to life or property associated with corrosive soils, if not addressed appropriately, would be***

significant due to the soils corroding and/or weakening the concrete and/or steel followed by significant failure to infrastructure” and simply state less- than significant impact.

As is done throughout this entire report this claims that a study will be done and it is implied it will be followed. This does not on its own justify the conclusion of less than significant as in order to make it less than significant mitigation techniques would have to be used. Further, while it states a study will be done there is not one sentence that suggests the report’s findings are mandatory nor that they have to be followed. While clearly complying with CBC is fundamental what happens if these reports provide information that this is not possible? As was found in *Endangered Habitats League, Inc. V. Rutter Development Company, Inc., Real Party in Interest* (2005) “Deferral of the specifics of mitigation is permissible where the local entity commits itself to mitigation and lists the alternatives to be considered, analyzed and possibly incorporated in the mitigation plan. On the other hand, an agency goes too far when it simply requires a project applicant to obtain a biological report and then comply with any recommendations that may be made in the report.” (*Defend the Bay v. City of Irvine*, supra, 119 Cal.App.4th at p. 1275, 15 Cal.Rptr.3d 176.) If mitigation is feasible but impractical at the time of a general plan or zoning amendment, it is sufficient to articulate specific performance criteria and make further approvals contingent on finding a way to meet them. (Id. at pp. 1275-1276, 15 Cal.Rptr.3d 176.)” In this case the leading agency is basically saying the same thing a geotechnical study will be done and the applicant will comply with its findings. This needs to be explicitly stated and have performance standards. How will the lead agency even assure the public, in this case, that the project can be done safely and adhere to any construction standards that may be required or best practices? I expect that much more attention will be given to the potential impact – what could actually happen and what exact adverse effects of corrosive soil are and how if feasible this can be addressed reasonably. It needs to give more informative impacts to the actual impacts because this conclusion was improperly made.

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P45-75
cont.

Another initial study of the environmental impacts was conducted to see what should be addressed in the EIR. Curiously, in their initial assessments of CEQA’s Appendix G impacts to consider the answers differed considerably from what is given in the report. All five impacts listed in Appendix G were classified as potentially significantly. How then was there such a drastic change from potentially significant (note this is not less-than significant with Mitigation) all the way down to less than significant with mitigation not required? The explanation in the initial study was more informative on why it could be a possible impact than this DEIR does.

P45-76

e) Whether the Project would have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water. Impact 3.9-7: The Project could have soils incapable of adequately supporting the use of a septic tank. (*Less-than-Significant Impact*)

“... The soils within the Project Site are rated as “Very Limited” in relation to septic tank usage according to the generalized NRCS Web Soil Survey.” 3.9-19.

P45-77

Again, this is dumbfounding how the conclusion of less than significant was reached. The DEIR concludes that “the project would not introduce an environmental or public health hazard by building septic tanks or other wastewater disposal system in soils...” with absolutely no evidence that this can be achieved or how.

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Alternatives

Only 3 alternatives were seriously considered. The report addresses multiple possible alternatives that were turned down because they did not meet project objectives and because they elected to evaluate only on site alternatives stating consistency with general plans citing Shasta County Code of Ordinances 17.08.030 and two court cases (without actually explaining how they are consistent with the case or the code).

P45-78

First, yes they have the discretion to choose which they explore. However, their reasoning is misleading. The Ordinance cited does not actually include anything about “wind.” In fact, it states:

D. The erection, construction or alteration of a gas, electrical, water or communication facility, or other public improvements, in accordance with Government Code Section 51152.

Under this ordinance it just says that a project like that is allowed in this particular zone. However, Government Code Section 51152 says that a project should not be done if the only reason that site is chosen is because it is cheaper. “(a) No public agency or person shall locate a public improvement within a timberland production zone (TPZ) based primarily on a consideration of the lower cost of acquiring a land in a TPZ.” I believe the county has dismissed this as not a public utility – if so that is improper. It cannot comply with both this zoning ordinance and Government Code Section 51152 if it is not considered a public utility.

Furthermore, the Shasta County General Plan objective states: “E-2 Increase utilization of renewable energy resources by *encouraging development of solar, hydroelectric, biomass, waste-to-energy, and cogeneration sources.*” Technically, the project’s narrow definition of wind doesn’t even meet the county objective while the alternatives ignored include “solar, hydroelectric and biomass.” Further, policy 6.4.4 E-i says “***The County should support efforts to amend California’s timber harvest rules that encourage thinning and harvest of biomass fuels for purposes of improving wildland fire protection and forest productivity in developed areas, such as in the Shingletown area, and which are capable of timber production.***” In fact, the biomass alternative seems more in line with the County General Plan than the proposed project. Though discussion before the objectives and policies does include wind, the objectives and plan do not actually include wind. Also, Shasta County General Plan FS-1: says to discourage and/or prevent “***development from location in high risk fire hazard areas.***” It is also inconsistent with the county’s general plan on views. In fact, the view of this part of the General Plan and the part of the county zoning ordinance the Leading Agency used to support their conclusion actually support that wind is not necessarily consistent with the plan or ordinances. If consistency is the reasoning, it is flawed and in fact inconsistent. Alternatives seem to be ignored because they project objectives were too narrow. Also, CEQA 21002: “The Legislature finds and declares that it is the policy of the state that public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects, and that the procedures required by this division are intended to assist public agencies in systematically identifying both the significant effects of proposed projects and the feasible

P45-79

alternatives or feasible mitigation measures which will avoid or substantially lessen such significant effects. The Legislature further finds and declares that in the event specific economic, social, or other conditions make infeasible such project alternatives or such mitigation measures, individual projects may be approved in spite of one or more significant effects thereof.” Though a project can be approved despite the fact that are told not to if a feasible alternative can be discovered the agency should really explain why this particular project is so beneficial that it ignores reasonable alternatives that would have less impact on the environment.

P45-79
cont.

Alternatives not considered

Sadly the county chose not to include cogeneration – or the use of creating electricity from waste heat (or *Biomass*) as another alternative despite two sites that were identified as promising and seem to have already been studied but was not included because it would not include wind energy, would only supply 86,000 households rather than the 100,000 households the project goals stated but is equal to the goal as defined on ConnectGen’s website. Again, this shows narrow objectives and would conceivably achieve the goal of reaching 86% of the households the project hoped to achieve which again is acceptable under CEQA described above. Ironically, in the projects own footnote it states that nameplate does not actually equal performance standards and therefore it acknowledges that the project itself will not even generate enough power for 100,000 homes. Though the lead agency is given discretion on alternatives the agency has chosen too narrow of project objectives based seemingly on wanting wind energy and this site. I strongly urge the county to include this alternative because of the many other benefits it can provide and is even more consistent with many of the goals of the county like reducing wildfire risk, healthier forests and biomass. All, included in the discussion above. Further, its greenhouse emissions effect would be overwhelmingly replaced by the benefit of helping reduce the severity of wildfire discussed under Greenhouse Gas Emissions.

P45-80

In fact, cogeneration or biomass is seen as a positive for the community as a whole and complies with both state and county objectives. In normal timber harvesting smaller and younger trees have little value and are not economically profitable to cut. However, part of how fires burn as destructively as they do is that the ladder fuels that exist and buildup over time allow the fuels to get to the crowning of trees which then allows them to burn hotter, spot further and allows for longer flame lengths. Biomass actually creates incentives for thinning out the underbrush or understory and these fuel ladders that are not profitable otherwise. Biomass allows branches that are bundled together that would be considered low value to then be chipped into smaller pieces and then used to create energy with biomass. While biomass harvesting by companies themselves has its own complexities, used with the support of rural communities and individual private landowners who comprise the area around the project site it can incentivize them or at least give them another option to clear the underbrush on their properties and have it collected for biomass energy. This could in fact create more local jobs and more permanent jobs than stated as part of the project description.

The Fountain Fire itself is used as a primary example of the benefits of biomass thinning. In fact, just prior to the fire Roseburg Industries had just completed a biomass thinning project to improve conditions in the understory of the trees. This thinning was done approximately five

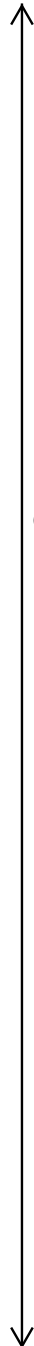
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miles from where the Fountain Fire started and though the fire moved extremely rapidly when it entered the area that had been thinned by biomass harvesting the fire in this particular spot dropped from the crowns it had been on to the ground. Evidence that this thinning likely helped the fire move from the crowns to the ground was that the trees were scorched but not killed or totally consumed by the fire. Furthermore, the cones on the ponderosa pine were not consumed or killed allowing them to cast their seed following the fire and allowing the forest to naturally regenerate in the 1000 acre biomass thinned area (Nakuamura 2004). While it clearly could not stop the fire and it is uncertain whether enough of a break was created for firefighters to fight in this area it certainly protected this small area from the worst of the fire by getting the fire out of the top of the trees. If done on a larger scale it could create energy and much healthier forests. This same effect of fire dropping from crowns to the ground after biomass thinning was also observed in the Megram Fire (1999) in the Six Rivers National Forest, the Goat Fire (2000) and in the Cone Fire (2002) in the Lassen National Forest (ibid 2004). Though the area thinned was not large enough to drastically reduce any of these fires it does demonstrate that it can shift the fire from the crowns of trees to the ground which makes it easier to fight and allows trees to survive as well as their seeds so that the forest can naturally regenerate. Will the wind turbines provide such benefits?

Furthermore, biomass can combine multiple objectives as one study finds, the biomass removal process can combine the following objectives “ecological restoration, wildfire hazard reduction, forest-stand improvement, rural community stability, employment, and habitat improvement” and in the analysis of this study 75 percent of the projects included in their case study included two or more of the desired above outcomes. (Evans and Finkral 2009). The study further found that while 71% of the cases were to reduce fuels as the primary objective, “...77% included a restoration, watershed or habitat improvement objective and 56% of the case studies were implemented for forest stand improvement. (Ibid 2009). These are all worthwhile objectives to the county while allowing for approximately 80% of the green energy to be produced that the project aims for. It is a shame that this green option was tabled to fit narrow objectives when in fact it can create more positives for the surrounding communities and with less risk or mitigation necessary.

Biomass removal can also be undertaken with community support and in some cases be done just as waste management is done. Trucks, like waste removal trucks, can come to rural communities and pick up this type of biomass fuel allowing others to participate in the process and allow private landowners (who primarily makeup the area surrounding the project) make their properties safer as well.

Additionally, biomass utilization not only can reduce fire fuel while providing green energy to homes it can also “...have smoke management and carbon sequestration benefits.” (Ibid) Though the same study admits that it can be pricy, as can the construction of wind turbines, this is not a reason to exclude this option as it still would allow for some of the most important objectives of the project while garnering further benefits to the land that adding wind turbines will not do. According to CEQA, the extra cost should not exclude the option.



P45-80
cont.

While green energy is an important goal for the state, county and its citizens the other benefits of biomass, specifically, helping reduce fuel in high fire hazard areas should be examined closer and may possibly show that it is more beneficial than the wind turbines. This is especially true since one of the objectives of the county is to discourage building in high fire risk areas and the fact that wind turbines actually increase the risk of fire. It also promotes healthier forests, reduces carbon emissions, and can take fires from crowns to the ground to make firefighting easier and fire spread slower.

That being said, this option should have been considered more thoroughly as an alternative to this project. I strongly suggest the county re-examine this options and its benefit and not ignore it by using too narrow of objectives. *Habitat and Watershed Caretakers v City of Santa Cruz No. H037545 (6th District Nov. 27, 2012)* states “objectives that are overly broad aren’t helpful in paring down possible alternatives to those most useful to decision-makers. Objectives that are too narrow can mean that few, if any, alternatives will qualify for consideration.” This is reiterated by many other Court Cases as well.

I believe the true reason it was not considered was because it did not meet the applicant’s goals of building a wind farm at this precise location and the Lead Agency instead ignored the greater benefits to the county overall and state in helping create healthier, more fire resistant forests and instead chose to comply to the applicants desires and project objectives.

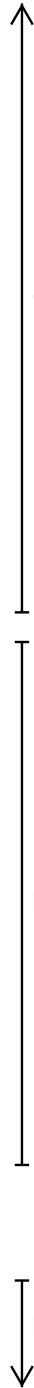
Improving the efficiency of Existing Energy Infrastructure

This alternative was not considered because it would not meet California renewable energy goals or support the landowners through diversification of revenue streams. While the renewable energy goal may be impactful considering changing climate conditions and the current energy crisis in California and the fact that power was not sufficient to meet demands this year forcing rolling brownouts because of the rush to meet deadlines by the state for having only alternative energy this should have been an option that was considered. Furthermore, with the Public Safety Power Shutoffs (PSPS) and the electric grid problems that create very real risks for those close to infrastructure because PG&E has failed to maintain its existing infrastructure focusing efforts on improving energy infrastructure may have been a better option in at least allowing more people to have power and not worry about PSPS or rolling brownouts during critical fire weather or extremely hot conditions. Furthermore, it would have done more to ensure that this infrastructure was safe and would not continue to contribute to an astonishing amount of wildfires every year. This problem is of particular concern to those living in this area since we live so close to infrastructure including infrastructure that is considered to be a major issue for PG&E.

Environmentally Superior Alternative and Two Other Alternatives

The Superior Alternative

CEQA points out that the superior alternative is the one that leads to no environmental impacts thus the most superior alternative in this case would be to not follow through with the



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P45-81

P45-82

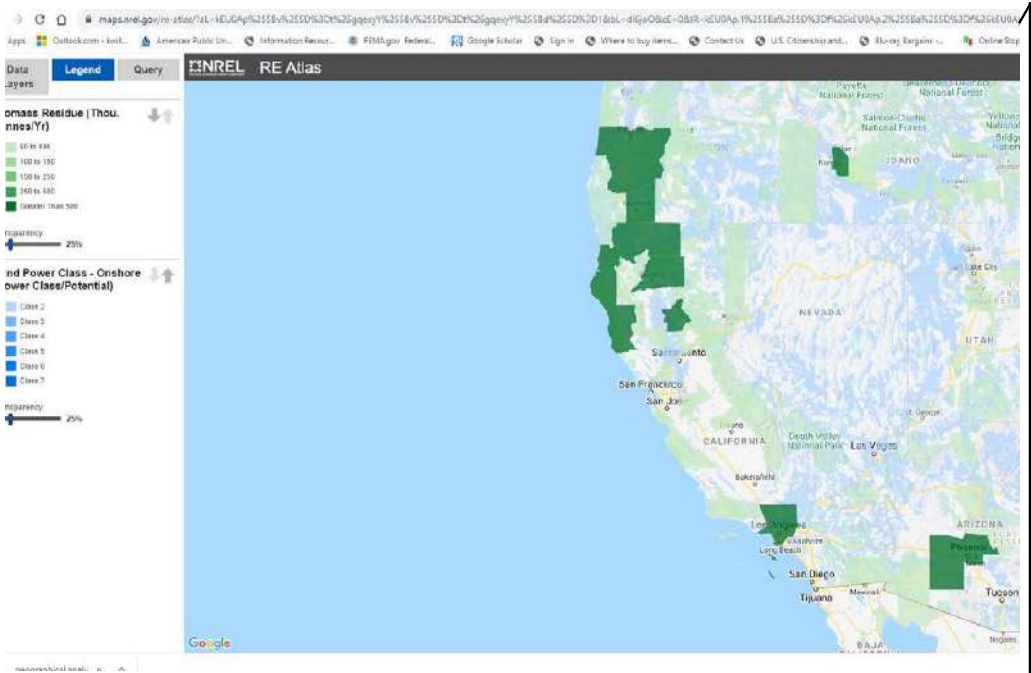
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project altogether. This alternative would lead to no further environmental impact and would thus need no mitigation. It is also the only alternative that allows us to completely understand the true environmental impact as the proposed project and the other alternatives will all in fact create unavoidable and non-mitigatable environmental impacts. Any mitigation proposed would be speculative and based on projections that are not tested or studied (including wind shear, geotechnical reports, cultural resource measures improperly ignored etc.). This DEIR is no more informational about the impacts of this project than the alternatives dismissed. The DEIR also eliminates any of the cumulative effects of other projects that are going to be undertaken in this area. Cumulative projects are also narrowly defined by projects that already have use permits and takes into account any project that may happen in the future that the General Plan of the County promotes. This is improper. Surely, if the county wants more renewable energy projects than it is reasonable foreseeable they may happen.

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P45-82
cont.

It further ignores the objectives of the California Bill it cites as reason for this project - that bill does not state a location where these projects need to be built. Other bills regarding climate change, wildfire, forests, carbon storage in forests etc. are all ignored to point to one bill for justification that the bill does not in fact provide. Further, how many other projects are already in motion to meet this goal. Can California's goal be met without this specific project? How will generating power to an unspecific and vague number between 86,000 to 100,000 homes, that footnotes acknowledge the project will not actually meet impact this goal, as a whole? If the goal is to help California reach the goal of AB 100 that "accelerates the state's renewable energy goals, requiring 60 percent of California's electricity portfolio to come from eligible renewable sources by 2030 and that all retail electricity be carbon-free by 2045" how does this project significantly help achieve this goal? Households in California = 13.19 million. 60 percent would be equal to 8.34 million homes. 100,000 homes is less than .01 percent of this goal. 86,000 is also much less than this. Based on current information from energy production in California and the Wind Energy Association wind generation only produces on average from 25% to 40% of nameplate capacity. Though 40% is rarely met and requires optimal wind farm placement - which this site does not meet optimal wind farm siting goals. Thus, power will be equal to generating enough power to roughly 25,000 or 40,000 homes. Or between .002 percent and .004 percent of California homes. In other words, this project literally is completely insignificant in helping California reach this goal. The County has no right to justify ignoring alternatives that do not meet "project goals" that cannot be achieved and that actually show that they do not actually contribute in any significant way to this goal. The County cannot possibly justify that this project's overall benefits to the State outweigh the impacts. This is insufficiently proven and justified by this specific project. Which alternative will be better suited for this county - you can decide based on renewable energy maps provided below.

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P45-83



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Figure 3 NREL map of best Biomass Production Sites

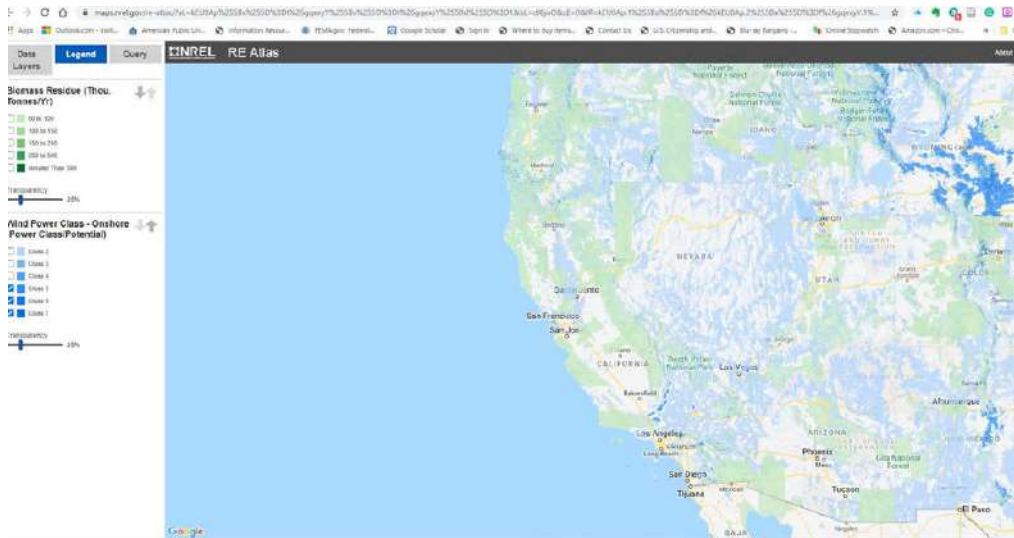


Figure 4 NREL map of best Wind Production Sites

Clearly, California and this County should logically go about producing renewable energy and would focus on the most suitable projects for given regions to maximize renewable energy

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production while protecting nonrenewable resources. In this instance, this area is at best Class 5 for wind but iffy due to terrain complexity and wind shear, but barely meets the criteria and in a very confined area. As for Biomass it is almost the highest class. This area is more suited for biomass projects than wind. The area’s forests and California would benefit more from a biomass project in this area than a wind project. Green House Emission goals also would benefit from less severe wildfires that biomass can help achieve.

This entire project is based on impractical goals that ignore “scientific evidence.” The County should deny this project or seek biomass as an alternative. I imagine though the applicant is not interested in a biomass project so maybe the DEIR should simply state the Biomass and other Alternatives were not considered by the applicant as acceptable or projects that interested them. This is not for them to determine. They do not have to do a project – however it is the Lead Agency’s job to make the best decision based on scientific data and information and clearly support such decisions with obvious evidence of how the project’s benefits greatly outweigh the impacts. This is not done in this DEIR. I am pretty sure it is clear which projects are more beneficial and this project does literally nothing to achieve the goal set by AB100.

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P45-83
cont.

Aesthetics

Local policies only include the policies in relation to Scenic Highways and ignores inconsistencies with other parts of the general plan.

In *Napa Citizens for Honest Government v. Napa County Board of Supervisors* (2001) “whether development . . . is compatible with and will not frustrate the General Plan’s goals and policies.” If a project “will frustrate the General Plan’s goals and policies, it is inconsistent with the County’s General Plan unless it also includes definite affirmative commitments to mitigate the adverse effect or effects.” “...whether development . . . is compatible with and will not frustrate the General Plan’s goals and policies.” The basis for the ruling in this case actually came from the Office of Planning and Research.

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P45-84

OSR-a “Protection of the open space resources under Shasta County jurisdiction shall be achieved primarily through policies recognizing the contributions of these resources to the economy of the County. Specifically, the Timber, Croplands, Grazing, and 6.9.07 Small-Scale Croplands/Grazing, and Natural Resource Protection-Habitat land use designations shall be used for this purpose”

Objective DR-e “As various elements of the design review program are developed, the County should consider the formation of a design review committee consisting of a spectrum of citizen’s interests, which acts to review projects based on adopted design review standards.”

Which citizen’s interests are taken into consideration the ones in rural areas or the majority of the county that doesn’t have to deal with impacts caused by the project?

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P45-85
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P. 7.6.03 of Design states: “Design Review in Rural Communities The focus of a design element in rural community and residential areas should center on blending commercial and residential development with natural landscape features afforded by these rural settings. The

overall objective of enhancing the natural environment within the context of rural development can be achieved by encouraging development which is as unobtrusive to the natural setting as possible. Design review issues in rural areas generally will involve the use of appropriate building color, fencing and screening, maintenance of viewsheds, use of natural vegetation and terrain when integrating development, and the appropriate mixing of uses in rural centers and private recreational areas.”

Overriding this impact is inconsistent with the County’s own general plans on design and the county and state’s policies for Open Space. The objectives of the Open Space Element have been clearly stated by the State Legislature and are included in Government Code Section 65561: “... (a) That the preservation of open space land ... is necessary not only for the maintenance of the economy of the State, but also for the assurance of the continued availability of land for the production of food and fiber, for the enjoyment of scenic beauty, for recreation and for the use of natural resources.” This is particularly true when you already add it to the massive amount of infrastructure projects that the county has chosen to place in this area.

“The KOP-level analysis describes the visual change at each representative viewpoint, but does not make CEQA conclusions” 3.2-21

What does this mean? That an individual KOP does not make CEQA conclusions or the overall analysis of all of them does? Or is Aesthetic not even considered a problem? Really – a real question?

Impact 3.2-3: The Project could create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area (less than significant)

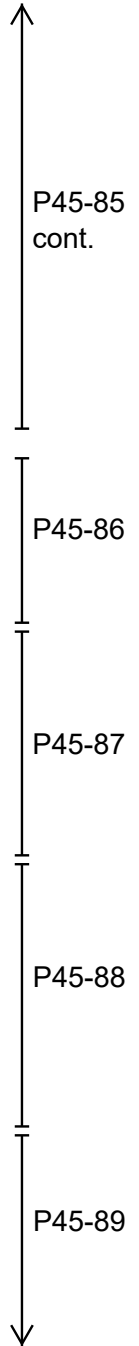
How was this conclusion reached in terms of night views when many of the local areas have no light pollution at night? Why are the only people’s views that seem to matter be those of travelers through the area and not those living within close proximity? Wouldn’t this effect those near the project site more than “travelers?” When people are used barely finding their house at night walking up their porches how this not be a significant effect?

KOP 1-3- introduce nighttime lighting where currently nighttime light pollution is very limited – would have a substantial impact on these views. Not significant because few turbines would be seen at each KOP and spacing.
Mitigation – none required

But what if the clearance of trees around these objects make it so trees are no longer blocking them? How do you know that there will be enough trees to hide these effects if you have to clear a certain space around each turbine? Which trees are 700 feet tall? Or the height of the lights placed on individual turbines?

Study

This study seems very limited and uses only seven key observation points. Only one was from Redding and a couple North from the project. The others were close to the project sight. Sadly, the study was done on 3 days in the months of January, February and July whereas it is admitted that April and spring is when views would be optimal. Further, no sites were selected east of the site near Lassen despite the fact that it could have a negative impact on that



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area as well. Furthermore, places like Bella Vista and Oak Run were excluded though many residents live there do to the escape from city life and the country views those places offer.

↑ P45-89
cont.

Other Impacts not evaluated: Tourism and Amenity of Dark Skies

Tourism

While normally CEQA states that you do not evaluate the economic or social impacts unless they are based on a physical change in the environment from a project the following is in fact a problem that could result from the environmental impact it does if an environmental impact from the project on the environment leads to an economic or social impact. § 21082.2. From studies described below it could significantly affect tourism and Shasta County’s economy if these studies are accurate.

↑ P45-90

I would suggest that the document should have also considered 1) the adverse effects on scenery from area National Parks, State Parks or tourist destinations such as Shasta Lake. Thus, more KOPs should have been considered for example from Burney Falls, Britton Lake, Shasta Lake, and Lassen Volcanic National Park. This is based on the fact that the areas surrounding the Project Site are significant tourist destinations – both within and outside of the County. Tourism is one of the main economic drivers of the Shasta-Cascade region and generates about \$96 million in state and local tax revenue and 12,360 jobs (Arthur 2020). Tourists do not come to the area because of amusement parks and other types of entertainment but they come because of hiking, boating, fishing, RVing, to view wilderness scenery and wildlife. If tourists find that an increase in Turbines affect the attractiveness of the area and choose to go to a different area where the wilderness is not impact but a change in aesthetic views the impact would result in reduced tax revenue, and reduced customers using hotels, restaurants and other businesses that are substantially helped by tourism.

↑ P45-91

The county should not dismiss the visual impacts of wind turbines on tourism. Though I have no evidence, I imagine it would be safe to say those that choose to come to Shasta County and the surrounding counties that generate tourism in this area do so because the areas they live in or close to do not offer the same natural amenities that this area has. There are various studies that have looked at the impacts of wind turbines on tourism. One study found that “The visual impact of wind turbines on landscapes increasingly matters due to the growing importance of visual consumption and the role of aesthetic judgement of landscapes. Not surprisingly, the visual dimension is therefore among the most important predictors of a tourist destination image” (Broekel and Alfken, 2015). Additionally, “...visitors and tourists in search for recreation prefer untamed and less artificial landscapes” and that “survey individuals were particularly sensitive concerning the placement of wind turbines in “landscapes of high aesthetic quality.” (Ibid) In their study of the effect of wind turbines on tourism in Germany they found a negative relationship between tourism and wind turbines. Furthermore, they found that tourists avoided their preferred destinations if large wind turbines (size and number) existed and an alternative similar destination that did not have wind turbines present. They also found a correlation between hotel occupancies decreasing as the number of turbines or amount of energy produced by turbines increased (Ibid).

↑ P45-92

In yet another study researchers did an experiment giving tourists an option to bid on hotel rooms of various qualities. The one constant variable was a view of wind turbines. No matter the quality of the hotel the majority of bids were much lower if a view of a wind turbine was present. Only 16.5% bid higher or normally on the rooms with views of wind turbines.

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The authors noted though the study was limited it did produce similar results as other studies on tourism suggesting a negative relationship between wind turbines and tourism (Fooks, Messer, Duke, Johnson, Li and Parsons 2017). Another study found similar results that there is a strong correlation to tourism – especially by inland mountainous regions. They found a loss they claim as understated to be roughly \$10.5 million dollars (Kipperberg, Onozaka, Bui, Lohaugen, Refsdal and Saeland, 2019). Though this may not have been seen with the Hatchet Ridge Project (I am unaware if a negative impact to tourism was caused) adding more turbines within just 1 miles of the Hatchet Ridge Project that are significantly taller and would more than double the current wind turbines already here the cumulative effects of this needs to be examined and include possible viewpoints from well-known nearby tourist destinations. This could significantly impact Burney. If the results of this study proved to impact tourism in this area it is an affect that would last for 40 years. The economic impact could be significant and hurt all sectors of the economy within Shasta County that depend on tourism.

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P45-92
cont.

KOP4, 5 and 6 are considered to result in any change to the visual appearance of viewers. While views in all of the other viewpoints are degraded to some degree according to analysis. KOP 2 notes that at night there is currently no lighting but with the project it would be highly noticeable. The Appendix notes that in KOP 3 “What is currently a natural-appearing backdrop to a densely developed transmission corridor would, with the project, appear dedicated to energy generation.” This clearly violates the general plan. Though interestingly enough that change would only degrade the view from Moderate to Moderately Low. It is interesting that this interpretation is chosen since it would seem a “naturally appearing backdrop” to a “densely developed transmission corridor” would degrade the view much more than just to “moderately low.”

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As mentioned an almost complete transformation of the view would only downgrade it from Moderate to Moderately Low. How is that possible unless one thinks a “densely developed transmission corridor” has some visual appeal? This is curious as most view densely developed transmission corridors are seen as eye sores and clearly does not take into account the cumulative effect of having the transmission lines also viewed from certain viewpoints along with the already existing turbines of Hatchet Ridge. For me personally, and I believe many others they would view the view quality is low to extremely low. Though as one article notes “there are few other artifacts that change landscapes as profoundly as wind turbines (Mattmann, Logar and Brouwer, 2016). However, this is of course individually based although research on tourism support many others feel the same and I find that this particular observation downplays how extremely the visual view quality would be changed at least at this particular KOP and possibly others as well. Of course, one could argue that 7 KOPS may not be sufficient to actually judge true aesthetics. For instance, only one viewpoint in Redding is considered. This does not give a fair analysis of the aesthetics for a city the size of Redding or its surrounding areas. Also, not considered is aesthetics somewhat closer to the area including areas of Bella Vista that have a more clear view of the ridgeline. However, it is acknowledged the study is not required to be “exhaustive.”

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P45-93

Furthermore, how was the arbitrary number of 30 miles chosen as the expected view distance? The DEIR states that typically a view shed is a 10-20 mile radius however, this is the radius for much smaller turbines. In fact, the Cedar Creek Wind Farm that has approximately 200 ft. turbines was studied and noted to be visible as 20 miles from the turbines and at some

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P45-94
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points seen observed as far as 36 miles (though visual impact from this distance was noted to be minimal). (<https://blmwyomingvisual.anl.gov/docs/WindVITD.pdf>)

Adding only a 10 mile visibility to the radius around wind turbines over 600 ft. does not seem to sufficiently take into account the size of the turbines anticipated to be used in this project.

Whether the project would have a substantial adverse effect on a scenic vista or substantially degrade the character or visual quality of views from publicly accessible vantage points.

The report notes that this would have a significant and unavoidable impact from publicly accessible vantage points. Considering the relatively few number of vantage points selected and the times of year that they were chosen to be viewed during that this is significantly downplayed. Further no information is given regarding the time of day these viewpoints were viewed at so it is unclear if they were times of day where visual quality would be expected to be higher or lower based on lighting. This degradation of visual quality is noted that there is no feasible mitigation that could reduce the visual impact. In other words, for the next 40 years and possibly even longer the entire visual character (depending on vantage) will drastically change despite the reports minimal downplaying of the extent of this visual impact.

Dark Skies

In 2015 Los Angeles County Board of Supervisors voted unanimously to ban wind turbines in L.A.’s unincorporated areas. The then-supervisor said “... skyscraper-sized turbines ‘create visual blight... [and contradict the county’s rural dark skies ordinance.’” (Bryce 2017) San Bernardino County also banned green energy projects in which 50% of the energy used by those projects would not be used by the county (Bryce 2017). Though it appears Shasta County does not have a dark skies ordinance it is what brings many visitors to this and surrounding counties. Perhaps Shasta County takes advantage of its ample amount of Dark Skies that Los Angeles County has relatively little of. However, if Shasta County continues to approve and allow construction of such projects in Shasta County, while they may not have the light pollution resulting from millions of homes, cars and skyscrapers, they could very soon see the dark skies that the county is blessed with start to disappear as well as the natural landscape that draw visitors and residences to the area alike. The area in Shasta County impacted by this project would seem to comply with such an ordinance if one existed and this would no longer be the case. In one article describing the best places to view a meteor shower in Shasta County it notes that viewers should look North/Northeast for best visibility (<https://www.shastalandtrust.org/blog/2017/8/11/the-perseid-meteor-shower-peaks-this-weekend>). It is interesting to note that this is the exact area where these turbines would be placed. Since the structures would be so tall and require 2 lights each perhaps the report should indicate how this may obstruct views for those specifically star-gazing and meteor watching – if this draws people here.

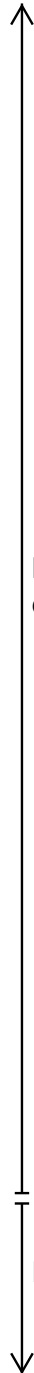
Furthermore, it is also not considered how far these lights would be visible. Lassen National Park annually hosts a Dark Sky Festival and is noted as one of the few places left in the country whose night sky is virtually untouched by artificial lights. They are currently even going through the process of obtaining a Dark Sky Designation by the International Dark Skies Association which signifies the importance of dark skies and places untouched by light pollution - something that is becoming a rare commodity in the world around us. With green in mind and leaving as little impact on our environment as possible should not light pollution also be



considered as an impact on the environment especially when being added to an area that is void of it? Dark Skies should also be sought to be preserved and valued as many counties throughout the state and country have started to value. Internationally, dark skies are also viewed as a rare commodity that should be protected.

Observations or research on how far the light will travel from these turbines would travel should be explored further since they could potentially impact more than just the KOPs observed and extend far beyond the view of the turbines themselves. Pictures provided in 3.2-6 are not sufficient evidence as these photos are taken in the day time, do not show how far the light would travel nor is any scientific evidence or research used to come to this conclusion. It also notes that due to the fact that the Hatchet Ridge Project exists that this would “not introduce a significant new source of nighttime lighting” at least for KOP 4 through 7. It is unclear how 72 additional turbines with 2 additional lights would not be a significant new source of nighttime lighting especially when the report states that this lighting could be worse if the Hatchet Wind Project and the Fountain Wind Project flash at different times and that currently there is very little artificial light in the surrounding areas at night. The report does indicate that it would in fact introduce light pollution in the KOPs in rural areas where little lighting exists at night. The KOPs do not in fact represent fully the effects of this lighting because no KOPS were picked east of the project- perhaps due to the fact that they are not located in Shasta County. However, should areas outside of Shasta County be overlooked for total impact? In fact, one study indicates that at Cedar Creek Wind Farm in Colorado that the flashing lights were observed 36 miles away and these were on towers (approximately 200 ft. tall) significantly smaller than the proposed towers and with only one light not two. (<https://blmwyomingvisual.anl.gov/docs/WindVITD.pdf>) Therefore, it should be studied and noted if this could in fact impact the dark skies at Lassen, in fact if the lights were in fact found to be visible, it surely would deny them entry into the International Dark Skies Association.

While this DEIR does give reference to how far visibly the turbines themselves would be seen, approximately 30 miles, and notes that the flashing lights will be a nuisance to those residing closest to the turbines it does not say how far these lights will be seen or relate their impact (the picture they provide indicated the nighttime view are not valid as they were not taken at night and no light is projected from the area the turbines will be). With the number of turbines, their size and the number of lights on each this could drastically add much light pollution for many areas that would seemingly not be visually affected by the project. Furthermore, this issue and the issue of visibility does not give proper information on how they came to the results they did both in how far visible they will be at day and at night, how much light pollution will be added and if that can adversely affect those living closest to the turbines nor does it cite any references as a basis of how they came to the methodology used for assessing how far the turbines will be seen or how they could quantify or even qualify how the visual impact would merely result in a slight degradation of the visual impact when they note that the entire landscape will change from a natural landscape to one obviously used for energy generation. While it states that cumulative effects would combine to make the visual affect even worse it does not state how much more the visual quality would be considering all of the cumulative scenarios as it does to the KOPs in relation to the wind turbines themselves rating them for instance the view quality as moderate to moderately low after the project (again I disagree with such a minimal downgrade in the quality in particular KOPs) however cumulatively it should be assessed if that rating would be decreased even lower amongst the



P45-97
cont.

P45-98

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different KOPs based on these cumulative effects. It also notes that cumulative projects would combine to increase sources of substantial light or glare but does not give any analysis on how this would impact those nearby, if at all. Nor does the report consider these lighting sources or glares effect on wildlife in the area.

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P45-98
cont.

Air Quality

Existing air qualities are taken from areas at least 30 miles away which differ drastically based on altitude, population density, and traffic. This is not an accurate baseline for this area. If a more accurate baseline cannot be achieved perhaps this should be explained why not. Sensitive receptors seem to only include schools and hospitals and does not take into account the demographics of the region. How is the nearest residence evidence of this not having an effect? The chapter says most Ozone exposure happens further away from where the pollutant is given.

P45-99

“The CEQA analysis should consider the degree to which various other tools such as CalEEMod... could assist in assessing specific health impacts of a project, and, where those tools would not be useful and why. For example, while CalEEMod may be useful in comparing emissions to significance thresholds, it is not able to assess transport of pollutants or the impacts of external factors (weather, terrain etc.) on pollutant concentrations at particular locations” (Friant Ranch)

P45-100

To satisfy CEQA's findings requirements "the lead agency "must find(1) the measures are at least partially effective, (2) all feasible mitigation measures have been adopted, and (3) the environmental impacts will not be mitigated to less than significant levels. The findings must be supported by substantial evidence (21168.5). The record does not show that the measures will be partially effective. (King and Gardiner Farms v County of Kern (2020).

P45-100

The EIR should have provided the concentration levels at which pollutants would trigger the identified symptoms. In addition, even though the EIR provided some detail about ozone concentration levels, it did not provide the anticipated parts per million that would have resulted from the Project. As the court put it, after reading the DEIR, the public would have no idea of the health consequences that result when more pollutants are added to a nonattainment basin.

P45-101

Impact 3.3-a Construction, decommissioning, and site reclamation activities would generate ROG emissions that could result in a cumulatively considerable net increase of ozone, for which the Project region is non-attainment of State ambient air quality standards. (less-than-significant)

P45-101

This does not account for the 50-100 to 100 cement trucks for the calculation. Why was this left out?

P45-102

Impact 3.3-2c: Construction, decommissioning, and site reclamation activities would generate PM10 emissions that would result in a cumulatively considerable net increase of PM10, which the project is non-attainment of State ambient air quality standards (Significant and unavoidable)

P45-102

There is no discussion of even how much ground removal would be necessary – considering the extensive slopes in the area how was this calculated or was it even concluded since different areas have different slopes and no finite placement for wind turbines are known? How could this further create risks?

P45-102

Mitigation Measure 3.3-2c – Fugitive Dust Control (NOT AQMD STANDARDS as stated)

Mitigation Measure 3.3-2c undermines the integrity of this report and has given me reason to question the entire EIR research, proposals, the “peer-review” process and make sure this adequately meets the standards outlined by CEQA law and Environmental Impact Reports. I discovered that it was completely taken bullet point by bullet point from a letter that can be found on pages 35-36 of scoping comments written by someone representing AQMD. Not a word is changed except in this mitigation to state that the “following AQMD Standard Mitigation Measures for fugitive dust shall be implemented...” no citation or reference to these “AQMD Standard Mitigation Measures” is given. In fact, if you read the letter from Appendix C, which contains scoping comments written by responsible agencies, you will find this exact list word for word and in the exact order. However, these measures are not cited as AQMD Standard Mitigation Measures nor does the letter state this. In fact, the letter states. “Assess for and apply Standard Mitigation Measures- Potential Mitigation measures are listed below.” This does not state these are the standards nor does it analyze the impacts of such measures- it expects the applicant and DEIR to do so. This was the job of the report and study. It appears they did not even read these “potential mitigation measures” because if they had they would have realized they needed to be explained further and analyzed further to describe how they would reduce the impact or in some cases lead to further environmental impacts. This is discouraging. If it had been in fact the standard a proper citation would have been needed. This not only shows sloppy work but it shows that no other research or thought on possible mitigation was considered. Yet, according to Appendix B models and their own declarations they can reduce this fugitive dust from close to 2800 to 475? How?

P45-103

Sierra v. Fresno (2019) the key question when determining whether an impact analysis contains sufficient information to satisfy CEQA is whether the EIR includes "sufficient detail" to enable those who did not participate in its preparation to understand and to consider meaningfully the issues raised by the proposed project. "The EIR should have provided the concentration levels at which pollutants would trigger the identified symptoms. In addition, even though the EIR provided some detail about ozone concentration levels, it did not provide the anticipated parts per million that would have resulted from the Project. As the court put it, after reading the EIR, the public would have no idea of the health consequences that result when more pollutants are added to a nonattainment basin." If an environmental impact cannot be analyzed or fully analyzed, in an EIR, the EIR, needs to say that and explain why. The EIR "must adequately explain what the agency does know and why, given existing scientific constraints, it cannot translate potential impacts further. With regard to the Project's significant air quality impacts, the EIR stated that the proposed mitigation measures would "substantially reduce" that significant impact, but not to a level that was insignificant. This "bare conclusion" was not supported by any explanation or factual support. The court determined this was unlawful because it did not satisfy CEQAs disclosure requirement.

P45-104

In the case of fugitive dust we have no idea what impacts it can have at what levels, and how far away from the fugitive dust we need to be. Nor do we know how far fugitive dust travels and this does not take into fact the elderly and young demographics of this community. Personally, I want to know for sure that if the optimal number cannot be reached that they can indeed prove that this can be substantially lowered from 2,800 to 475 pounds per day? Furthermore, after the Friant Ranch Case, the CEQA analysis should consider the degree to

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which various other tools such as CalEEMod... could assist in assessing specific health impacts of a project, and, where those tools would not be useful and why. For example, while CalEEMod may be useful in comparing emissions to significance thresholds, it is not able to assess transport of pollutants or the impacts of external factors (weather, terrain etc.) on pollutant concentrations at particular locations.

Very little of this plan is specific. There are few performance standards stated, it is left to the applicant/contractor to implement in a timely effective manner. I would hope that there is an actual monitoring/reporting method to be associated with this that states a specific number that the project will try to comply with since if not done to the numbers they claim they can achieve – that is 2,800 lbs. of fugitive dust. If this number is not complied with much further impact would result from this impact. This should not be left to the contractor. Each of this measures where possible should have performance standards and monitoring/reporting that is outside of the applicant/contractor. In this case I would assume AQMD would be in charge of this but is there a standard they will be expected to comply with and how will this be monitored?

- Options to open burning of vegetative material on the project site (with AQMD approval) or chipping, mulching, conversion to biomass fuel

Leads to need for more mitigation and statement of environmental impacts/ CALFIRE permits. *How much would be burnt, how much emissions could this release? Would they need a general permit or a special permit and/or need CAL Fire there to help.* (CEQA Guidelines § 15126.4(a)(1)(d). When mitigation measures can cause another environmental impact this must be explained, though secondary impacts do not need to be addressed as thoroughly as the first.” What are other risks could occur and how would safety measures be implemented.

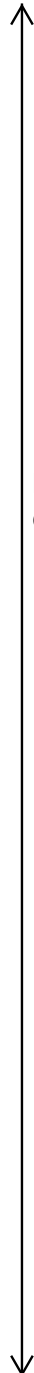
- Applicant shall be responsible for ensuring that all adequate *dust control measures* are implemented in a timely and effective manner during all phases of Project development and construction

This is vague, does not suggest performance standards, what is timely or how they will ensure this. Is there a monitoring program set up and what will be used to monitor this? I suggest for that this whole issue should have a thorough monitoring and reporting plan because of the vast amount of dust that will be exceeded if it is not adequate or implemented in a timely and effective manner.

- All material excavated, stockpiled or graded *should* be efficiently watered to prevent fugitive dust from leaving property boundaries and causing a public nuisance or a violation of an ambient air standard. Watering should occur at least twice daily with complete site coverage, preferably in the mid-morning and after work is completed each day

What is sufficient? How often. Is twice daily the standard or something else?
How will this be monitored/reported/enforced? Is this included in the actual permit for grading? Or is this something not normally included?

- All areas (including unpaved roads) with vehicle traffic should be watered periodically or have dust palliatives applied for stabilization of dust emissions.



P45-104
cont.

- All onsite vehicles should be limited to a speed of 15 miles per hour on unpaved roads.
- All land clearing, grading, earth moving, and excavation activities on the Project Site shall be suspended when winds are expected to exceed 20 miles per hour.

How is this actually monitored and enforced? How often when watering occur to stabilizer dust emissions? How does this mitigate the impact?

- All inactive portions of the development site should be seeded and watered until suitable grass cover is established.

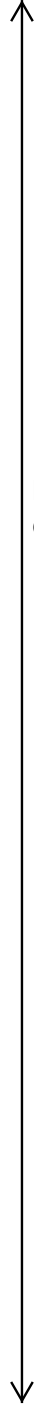
When will this occur, what is considered suitable? Who will keep track of this – will there be a log or something? Who determines it is suitable?

- The Applicant shall be responsible for applying (according to manufacturer’s specifications) nontoxic soil stabilizers to all inactive construction areas (previously graded areas that remain inactive for 96 hours) in accordance with the Shasta County Grading Ordinance.

What are the nontoxic soil stabilizers that might be used and what do they do? Is this to protect the roads? Can they have further environmental impacts are do they not impact the environment at all?

- All trucks hauling dirt, sand, soil, or other loose material should be covered or should maintain at least 2 feet of freeboard (i.e., minimum vertical distance between top of the load and top of the trailer) in accordance with the requirements of California Vehicle Code Section 23114. This provision shall be enforced by local law enforcement agencies.
- All material transported off site shall be either sufficiently watered or securely covered to prevent a public nuisance.
- During initial grading, earth moving, or site preparation, the Applicant shall be required to construct a paved (or dust palliative-treated) apron, at least 100 feet in length, onto the Project Site from the adjacent paved Highway 299.
- Paved streets adjacent to the development site should be swept or washed at the end of each day to remove excessive accumulations of silt and/or mud that may have accumulated as a result of activities on the development site.
- Adjacent paved streets shall be swept at the end of each day if substantial volumes of soil materials have been carried onto adjacent public paved roads from the Project Site.
- Wheel washers shall be installed where project vehicles and/or equipment enter and/or exit onto paved streets from unpaved roads. Vehicles and/or equipment shall be washed prior to each trip.
- Prior to final occupancy, the applicant shall reestablish ground cover on the construction site through seeding and watering in accordance with the Shasta County Grading Ordinance.

This seems like a general plan that is not guaranteed to be implemented. It is vague and no substantial evidence that any of this will work. No performance measures, no adoption by County needed except in issuing the grading ordinance and no way to know how this will help. This should at least give a little bit more discussion about why these steps may be effective in reducing levels. I am especially curious how you can limit fugitive dust alerts from travel on unpaved surfaces by 85% of the unpaved surfaces. Or how you can reduce fugitive dust disturbance by 55%. I know you used CalMODEE but looking at that appendix it doesn’t really



P45-104 cont.

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explain to me how this achieves what you are saying it does. Obviously it can't reduce it to below significant thresholds but what threshold are you going to try to keep it to, or is this going to be required and is the county going to monitor this or is this just going to be left to the contractor and applicant to implement? It sounds like a lot of water is going to be needed to do some of these mitigation factors. How much water will you need? Will you have enough water for these activities and how? How much land is going to be disturbed? How did you calculate that you can reduce it to 55 percent if you do not know how much land will be disturbed to begin with, slopes etc? I am just curious how you reached this conclusion. It seems that in the short term going over a little of the threshold is justified, the 2,800 lbs. would not be acceptable and I'd like to be assured that this is reduced as much as possible by at least some monitoring program and some compliance. Nothing in here seems to specify a performance standard, set a monitoring plan or agency oversight.

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P45-104
cont.

c) Whether the Project would expose sensitive receptors to substantial pollutant concentrations.
Impact 3.3-4: Project activities would generate emissions of toxic air contaminants, potentially exposing sensitive receptors to harmful pollutant concentrations. (Less Than Significant Impact)

The report states that sensitive receptors can be impacted by it at short amounts and short intervals (asthma, lung problems etc.) – contradicts your earlier discussion.

"The EIR should have provided the concentration levels at which pollutants would trigger the identified symptoms. In addition, even though the EIR provided some detail about ozone concentration levels, it did not provide the anticipated parts per million that would have resulted from the Project. As the court put it, after reading the EIR, the public would have no idea of the health consequences that result when more pollutants are added to a nonattainment basin.

P45-105

If an environmental impact cannot be analyzed or fully analyzed, in an EIR, the EIR, needs to say that and explain why. The EIR "must adequately explain what the agency does know and why, given existing scientific constraints, it cannot translate potential impacts further

With regard to the Project's significant air quality impacts, the EIR stated that the proposed mitigation measures would "substantially reduce" that significant impact, but not to a level that was insignificant. This "bare conclusion" was not supported by any explanation or factual support. The court determined this was unlawful because it did not satisfy CEQAs disclosure requirement. (*Sierra Club v. Fresno* 2019).

Further, sensitive receptors may be affected all along the transportation route even if for a short period of time if it increases levels near schools like Montgomery Creek School or the Bella Vista School. Cancer is not the only potential problem of exposure but it is the only impact that seems to be considered. There are no thresholds or baselines this is compared to but I imagine a significant amount of trucks above normal could impact sensitive receptors all along the routes from I-5 to the project site. There is no discussion of this.

This can apply to almost all sections in this chapter.

d) Whether the Project would result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.
Impact 3.3-5: Project construction, decommissioning, site reclamation, and operation would not create objectionable odors adversely affecting a substantial number of people. (Less than Significant Impact)

P45-106
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This includes no significant evidence or research cited that reaches this conclusion. Are there no other emissions besides the ones discussed earlier besides “odors” which the project narrows this potential impact to? What are the “odors” you refer to? Is this just emissions from trucks or something else? Do certain conditions like geography or wind that may make the odor or other pollutants last longer, trap it or even make them hazardous? While Moose Camp is the closest residences to the project site they are not the only residents within close proximity. Can you explain further why no other emissions were looked at (or if there were) and how you concluded this and why Moose Camp is considered the only place potentially impacted. How was the 400 feet picked as the radius?

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P45-106
cont.

Biological Resources

Sadly, I did not have sufficient time to address this. I did read it and have multiple concerns with it. I do not find how it is justified that the main and only citations come from those who prepared this report, were hired as contractors to do the report and have every reason to reach the conclusions of those paying them want them to. They are not independent non-biased researchers. The parameters and standards set by their studies and future studies are set by their own standards and not some other regulatory agency or scientific standard. They have no reason to, nor do I blame them, for not wanting to produce results that will lead to rejection of this project or others. The main companies Avangrid (its parent Irbdrola) and Stantec are literally involved in almost every infrastructure and energy project (renewable and nonrenewable) around the Nation and the World. It would not be in their best interest to frustrate the desires of these companies as they will simply not be given more contracts. If these companies do almost every project than they would have no income and they would go out of business.

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P45-107

Thus, I request that the County holds them to the same standards they hold the public to which is scientific evidence and even “peer-reviewed.” If all I quoted was myself the remarks would wholly be dismissed. In fact, I will support this statement... In the case of one peer-review study that studied carcass removal by scavengers they agree with my concern. They state that “... wind energy companies and their consultants have substantial freedom in terms of how they interpret and implement...” studies on the risk of wildlife at wind energy companies.” They further stress the validity of these studies since “...wind farms rarely incorporate knowledge from the ecology literature regarding factors influencing carcass use by scavengers and decomposers” and also express caution in the quality of studies “...that are maintained as confidential business data” (Devault, T.L.; Seamans, T.W.; Linnell, K.E.; Sparks, D.W. and Beasley, J.C., 2017). Yet, in this industry it is the standard and it ignores that the companies responsible for this project set the standard. If this project is accepted the County should base allow an unbiased third party that relies on scientific research and not the standards set by the companies themselves. The research is simply unreliable.

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P45-108

In Canada, Stantec (where their main headquarters are based) were hired to consult for a natural gas project. Stantec conducted research in the normal accepted standards that the Industry has set for themselves but this time there research was proven false. Their few field studies claimed that it was a temporary migration stop not a critical rearing habit for juvenile salmon. In this instance though Simon Fraser University was able to also study the area. They

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however spent three to four months on site during migration season. They were able to document behavior, collect the salmon and study their isotopes. Despite strong evidence that the research was wrong and could significantly impact salmon Canada approved the project. The evidence was significantly there that this part of their study was not done very scientifically (McSheffrey, 2016). Sadly, looking at other EIRs this type of poor research is the standard and it was set by companies like Stantec because of the sheer multitude of projects they are involved in. I am sure that if the scientific was found to be faulty after the project is approved of course we know that it would be explored much more thoroughly.

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P45-108
cont.

Similar language is used in this document besides the acknowledgement that it is a major migration path, just a temporary stop, just a quick stopover. I am sure they are much more knowledgeable than I am on the subject but they do not live bordering the site to see it every day. The waters they claim they can't find documented on other maps are the same waters that magically appear on our property very close to site and is in fact our spring. The Willow Spring System flows down from the Cow Creek and eventually reaches the Pitt River I believe. It flows in a definite channel and you can see places very close to the top of the soil where the water drains into that channel. It then goes down through parts of Terry Mill and in one spot flows in two directions. Part of It reenters my property boundaries where if viewed on The State Water Boards Site appears to flow all over my property. At times it is on the surface and others it is not seen while the rest of it continues down the road. It is a definite creek or above ground stream at this point and a favorite spot for the Canadian Geese during migration. Though they note it is not a "stopover for waterfowl or water birds" (3.4-25) perhaps they were not where the field researchers were when they were there but they do stopover here I can assure you of that and they are not miles away they are right there next to the project boundaries. It is also not uncommon to see Yellow Warbler. When they take off they head straight in the direction of the turbines. Once per month for 2 years seems hardly adequate for scientific research but seems to be good enough for establishing a baseline in CEQA.

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P45-109

I am concerned that the habitat loss and degradation is will be temporary. I do not believe that the habitats will simply return after construction because they will have more powerlines and of course the turbines themselves to increase mortality and eventually lead them to seek new habitat. Do you have any evidence to support that this happens. Solid evidence and not just some random study done by a consultant after decommissioning. Though once the site is decommissioned the project is over and it seems no further study is done after that to know whether this is true or not. This is not like a wildfire moving through an area that destroys the habitat and regenerates. Fire is an actual natural occurrence in forests and may temporarily destroy habitat it grows back naturally. When will people learn that they can't restore nature back to its natural state? The Forest Service and this state and the whole world have changed natural habitat. It doesn't return to what it was. I imagine the effects will be the more weeds and species that compete with forests and are brought in with more vehicles and more roads. The deer and other animals will look for a new home elsewhere. It will be tragic.

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P45-110

The state and environmentalists destroyed the timber industry that killed the economy and areas like this that believe it or not once thrived and the excuse chosen was the Northern

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P45-111
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Spotted Owl. I find it absolutely hypocritical and a complete contradiction that somehow killing off endangered species based off the standards the Wind Industry was allowed to set for itself, along with cutting down the thing that stores carbon better than any manmade attempt to fix it, is somehow a good solution. Sadly, it doesn't matter much to the big companies that are behind this – they aren't green they are involved in every sector of energy whether it is renewable or not. I am not concerned with these larger companies- they have no interest in protecting this area. However, how can this county keep letting others destroy what is becoming a rarer and rarer commodity. Our forests need protection, they need to be taken care of as do our wildlife. How does literally changing the environment stop climate change? It doesn't it contributes to it in ways yet to be seen. When people use up their resources and kill habitats they never think about the unintended consequences. Certainly, your legal teams can all argue that but it's sad those who are experts on biology and land management give so little thought to it. Please stop killing all our wildlife and our environment. Renewable energy does not outweigh these effects to the environment. Do not rush into something justifying this will fix the problem – I am sorry but if wind or solar was the answer to climate change their literally would be no land or wildlife habitat left.

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P45-111
cont.

Communications Interference

The contractor performing the study in the Appendix mention these recommendations that are not addressed in this section.

2. Additional due diligence with regard to the microwave antennas on Hatch Mountain are warranted. Many of the underlying licenses are in error with respect to the location coordinates. It is recommended that the microwave path licenses be contacted to ascertain their correct locations so as to determine definitively whether or not any conflicts with turbines occur

3. If an excessive amount of time goes by before the turbines are to be constructed (six months or more), it is recommended that the microwave study be updated in case new paths have been added to the FCC's database.

4. No land mobile transmitting stations are expected to be adversely affected, assuming that their transmitters are located exactly as per their FCC licenses.

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P45-112

What problems would occur if recommendation 2 ended up being a problem and interfering with Hatchet Mountain? Are these antennas specific to that turbine facility or locations like AM/FM/TV/Microwave signals discussed below? How would/could this be addressed?

The introduction to this topic states that the County specifically wanted this information despite it not necessarily having to be addressed by CEQA wanting to understand the impacts on cell reception, radio, television and even possible *meteorological towers*. While it sufficiently notes the possible interference to most of these issues it does not address meteorological issues though it states this is partially why this topic was chosen to be addressed. In a brief search on this topic I found at least 2 "peer-reviewed articles" both with evidence that wind turbines do in

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P45-113
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fact adversely interfere with operational Doppler weather radar data (Norin 2017; Norin 2015). It would be interesting if this impact is already occurring because of the Hatchet Ridge project and how these two wind farms situated as closely as they are may amplify the problem. Perhaps the Hatchet Ridge Wind Project could explain why my area on any weather Doppler map during snow and rain seems to be extremely inaccurate and in some cases indicates no precipitation when in fact there is a significant snow storm occurring. This should further be expanded on to see how this could impact the area since there are residences in higher altitudes that regularly have winter snow and that rely on the accuracy of information to determine if conditions are safe to travel in. If Doppler is obscured as I have tended to notice than it should be understood if this is a result of the turbines already in the area and if this will further exasperate the problem. Was this even explored further in any study or records not cited in this report? Do you know if it in fact does cause problems to meteorological data (has the articles I found indicate it does). What can be done to address the problem if it does have a problem on meteorological towers? Would this problem warrant a significant potential impact? Is it feasible to mitigate this problem?

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P45-113
cont.

a) Whether the Project would cause substantial interference to existing television and radio reception at residences in the vicinity.

Impact 3.5-1: The Project could cause intermittent interference to or freezing of television reception at some residences in the service area of the stations that broadcast over the Project Site. *(Less than Significant with Mitigation Incorporated)*

This does not address how long it would take for this issue to be resolved? Would it cost me money to hire a third party and would that be my responsible to pay for it or the applicants? There is no substantial evidence that is used that states that this mitigation measure actually would fix the problem or how. Appendix D mentions the possibility of some mitigation measures (this should have been included in this section not just the Appendix) it does not supply any evidence that this would occur or help or be feasible. How do you know what the quality of my signal was before the obstruction? How will you resolve this with the property owners? There are no cable services offered in the area – so this is not a feasible mitigation option. How do you know the towers won't block reception if most TV satellite receptors face that direction of the turbines and have no other way of facing do to other geographical conditions already present? Do you know that you can feasibly fix this or is there a chance that after final siting it could block the only signal for some residences? It states this is similar to how Hatchet Ridge handled the situation... Were there issues, how were they addressed and how long did it take after a problem was discovered for it to be rectified?

P45-114
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The report notes that a rough estimation is that 27-60 residences could experience some interference or freezing of television as a result and that it would persist throughout the life of the project. It states that this impact is significant because rural areas depend on these broadcasts to receive information. Of course, they fail to describe what kind of information. In Emergency Management it is well established that local television news are vital in informing citizens of emergencies that may require evacuation or sheltering in place depending on the type of emergency. In this case, the most likely emergency would be in relation to wildfires. Interrupted television broadcasts could potentially mean life or death if this is the only way someone can obtain such information (as I included in a quote by PG&E in the wildfire section). These broadcasts include information on where the fire would be, who needs to be evacuated or

prepared to evacuate and where shelters are located for those who need to evacuate. In the case of a wildfire or other emergencies every minute literally counts. This is something that would need to be addressed immediately if the problem does occur. Is there a standard time frame that we can depend on for this to be addressed?

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P45-114
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Impact 3.5-3: None of the Project turbines would obstruct or prevent known point-to-point microwave relay station transmissions; however, interference could occur due to turbine location adjustments or currently unknown transmissions. (*Less than Significant with Mitigation Incorporated*)

Mitigation Measure 3.5-3: Correct or mitigate conflicts with microwave signals.

Before even examining the mitigation proposed it would seem necessary that the same due diligence done for the original possible siting should be done before construction or placement of such turbines is decided. This would seem to be the most effective mitigation measure. As it was necessary to do a study on the original projections it would seem necessary to require the same due diligence on sites that change during the final design. Not only would that apply to communications it seems that every impact evaluated in this report may need to also be reevaluated before picking a new placement. I do not think that it is appropriate to delay mitigation measures until a turbine constructed since impacts should be known before hand and when possible the best action is to not create an impact. This language gives much leeway to the project applicant to change the project without further understanding possible new environmental impacts and would render this report meaningless if final design were to change where turbines would place since decision-makers and the public would not have the appropriate knowledge to understand the impacts from the new changes.

This does not address how long it would take for this issue to be resolved? Would it cost me money to hire a third party and would that be my responsible to pay for it or the applicants? There is no substantial evidence that is used that states that this mitigation measure actually would fix the problem or how. Appendix D mentions the possibility of some mitigation measures it does not supply any evidence that this would occur. Is this feasible? It states this is similar to how Hatchet Ridge handled the situation? Were there issues, how were they addressed and how long did it take?

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This could be a real public safety issue if emergency responder’s radios don’t work. It also can be a public safety concern for those who only have cell phones and already have limited cell reception in the area.

I find this mitigation and the analysis prior to the mitigation troubling. Since the interference would be to possible emergency communications this could suggest that such interference would not be known until those emergency communications are required. Then once discovered a timely process could begin all while emergency communications is interrupted. This is unacceptable. While TV broadcasts (though an important medium for finding information on emergencies is important) the lack of emergency communications can but the risk of residents, workers and the emergency responders lives at risk until problem is resolved. In a wildfire this could mean a commander would not be able to communicate with firefighters on the line about changing conditions and vis-versa.

Regular communication problems were an impact identified in reports after the Fountain Fire – this was without this additional impediment. Also, radio communications problems were the main reason for the deaths of 343 firefighters in the North Tower on September 11th, when planes caused damage to the main tower. When the South Tower went down the Battalion Commander immediately called for evacuation of the South Tower over the radios – most of

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these were never heard. While I understand that this is an extreme example and worst case scenario that will not happen here as the situation is different. It is a plausible problem in response to any emergency and especially the wildfires that are a threat here in Shasta County. Emergency Responders will expect this to not be a problem – when would it actually be identified. When the first emergency call came out and they realized there were communication problems or would it be able to be spotted before that? There would be no time to implement 3.5-3 as by the time complaints were filed and third party verification was established and the project addressed it with the proposed antennas, that they have not provided evidence would even solve the problem, it would be too late. The rapid spread of the fire occurred on day 1 and 2. Though the fire did take much longer to contain the majority of lives and properties at risk were put at risk within mere hours of the fire starting. In fact, even the approximately 7,000 plus people who had evacuated to Burney were forced to evacuate from the evacuation shelter less than 24 hrs. after they evacuated from their homes even though that center was located approximately 25 – 30 miles away. All of those evacuees lived within the area of the project site.

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P45-115
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That discussion only includes emergency communications and radios but could also impact cell services. This is just as troublesome as the area already has poor reception but as noted in the DEIR many no longer rely on landlines and instead rely on cell phones. The county uses SHASCOM’s code Red System to registered cell phone users so that they can be warned to evacuate or receive other important emergency notices. Significantly, Emergency Management studies have found that news and broadcast television is one medium used to receive information in regards to an emergency near them that many also receive their first news of an emergency situation from phone calls by friends or family members. Thus, another critical way of obtaining information may be cut off and during the amount of time it takes to sufficiently address the issue of cell service problems it could be when a wildfire or other emergency could occur.

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P45-116

I request that DUE DILIGENCE is done in testing (as the report in the appendix suggests) that none of the tower sites obstruct these problems when final placement is decided upon and that the county assures such testing is done prior to construction so that problems can be remedied as quickly as possible.

Cultural and Tribal Cultural Resources

<p>a) Whether the Project would cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines §15064.5.</p> <p>Impact 3.6-1: The Project could cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5. <i>(Less than Significant with Mitigation Incorporated)</i></p>

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Since it is noted that FW11 “qualifies for listing in the California Register under Criterion 4, for its ability to yield additional information in prehistory.” The prehistoric component of F11 is therefore considered a historical resource for the purposes of CEQA.

Madera Oversight Coalition, Inc. v. County of Madera (2011) notes “Guidelines section 15126.4, subdivision (b) addresses mitigation measures related to impacts on historical

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resources. When the particular historical resource is archaeological in nature, the discussion contained in the EIR is governed by subdivision (b)(3) of that guideline

“(3) Public agencies should, whenever feasible, seek to avoid damaging effects on any historical resource of an archaeological nature. The following factors shall be considered and discussed in an EIR for a project involving such an archaeological site:

(A) Preservation in place is the preferred manner of mitigating impacts to archaeological sites. Preservation in place maintains the relationship between artifacts and the archaeological context. Preservation may also avoid conflict with religious or cultural values of groups associated with the site.

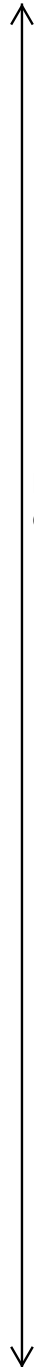
(B) Preservation in place may be accomplished by, but is not limited to, the following:

- 1. Planning construction to avoid archaeological sites;**
- 2. Incorporation of sites within parks, greenspace, or other open space;**
- 3. Covering the archaeological sites with a layer of chemically stable soil before building tennis courts, parking lots, or similar facilities on the site.**
- 4. Deeding the site into a permanent conservation easement.**

Madera Oversight Coalition, Inc. v. County of Madera (2011) in its introductory sentence to subparagraphs (A) through (D), Guidelines section 15126.4 subdivision (b)(3) states that “[t]he following factors shall be ... discussed in an EIR....” Subparagraph (A) mentions preservation in place, which is described as “the preferred manner of mitigating impacts to archaeological sites.” Subparagraph (B) lists four methods of accomplishing preservation in place. *Because the introductory sentence uses the word “shall,” the discussion of the factors set forth in subparagraphs (A) through (D) is mandatory.* (Guidelines, § 15005, subd. (a) [“shall” and “must” are mandatory].) Also, we interpret the word “factors” to include preservation in place generally as well as the four methods listed in Guidelines section 15126.4, subdivision (b)(3)(B). Therefore, the EIR’s discussion of mitigation measures for impacts to historical resources of an archaeological nature must include preservation in place, and the discussion of preservation in place must include, but is not limited to, the four methods of preservation in place listed in subparagraph (B).

What must be included in an EIR’s discussion of the factors referenced in Guidelines section 15126.4, subdivision (b)(3)? Because the regulation requires the factors to be discussed without regard to whether or not they are feasible, the discussion must state whether the factor is a feasible mitigation measure and the reasons for that determination. This interpretation is derived in part from the general requirement that EIR’s describe feasible mitigation measures that could minimize significant adverse impacts. (Guidelines, § 15126.4, subd. (a)(1).)

Furthermore, when more than one of the factors referenced in Guidelines section 15126.4, subdivision (b)(3) is available to mitigate an impact, the EIR’s discussion should include “the basis for selecting a particular measure.” (Id., subd. (a)(1)(B).) Also, the discussion



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must distinguish between those measures that are proposed by the project's proponents and those proposed by other persons. (Id., subd. (a)(1)(A).)

Thus the first mitigation measure that should have been addressed was preservation in place.

Stated otherwise, we interpret “preferred manner” to mean that feasible preservation in place must be adopted to mitigate impacts to historical resources of an archaeological nature unless the lead agency determines that another form of mitigation is available and provides superior mitigation of the impacts. Furthermore, we interpret the regulatory language that includes preservation in place among the factors that “shall be considered and discussed in an EIR” (Guidelines, § 15126.4, subd. (b)(3)) to mean that, when the preference is not followed, the EIR shall state why another type of mitigation serves the interests protected by CEQA better than preservation in place. We use the broad concept of “interests protected by CEQA” here because a particular historical resource of an archaeological nature may be of interest to the public in general and to particular groups for different reasons, and different types of mitigation may protect certain aspects of that resource better than other aspects. For example, the interests protected by capping or covering an archaeological site before building (§ 21083.2, subd. (b)(3)) are different from the interests protected by relocating the resource to another location. (*Madera Oversight Coalition, Inc. v. County of Madera* (2011).)

“Preservation in place is the preferred manner for mitigating impacts on historical or archaeological sites, but data recovery is also permitted, especially where the interest is in the information to be obtained regarding history and prehistory. (*Madera Oversight Coalition, Inc. v. County of Madera* (2011).)

“For significant sites that cannot be avoided through redesign, additional excavations may be appropriate mitigation. This type of mitigation is often referred to as data recovery. While information is obtained from a data recovery project, the excavated portion of the site, as well as the entire area impacted by the project, is destroyed. The purpose of Phase 3 is to recover, analyze, interpret, report, curate, and preserve archaeological data that would otherwise be lost due to unavoidable impacts to a significant resource. The method usually involves an archaeologist excavating in a controlled manner part of the site that will be impacted using a Lead Agency-approved data recovery plan that is informed by the results of the Phase 2 test excavations. The recovered materials are analyzed pursuant to specific research issues or questions and the results are included in an analytical report. If Phase 3 data recovery excavations are proposed, the Initial Study question on archaeological sites should indicate that there is a less than significant impact after mitigation and would be identified as a Class II impact in the CEQA document for the project, or that there is a Guidelines for Determining Significance 14 Cultural Resources: Archaeological, Historic, and Tribal Cultural Resources potentially significant impact resulting in a Class I impact. Conducting Phase 3 data recovery excavations may not reduce the impact to the resource to less than significant. The determination whether the impact is Class II or remains Class I after data recovery depends on the nature of the site and the amount that is being destroyed. This determination should be based on careful consideration by professional archaeologists and consultation with the Native American

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community” (https://scahome.org/wp-content/uploads/2020/04/CEQA-Guidelines-for-Cultural-Resources_21APR2020.pdf)

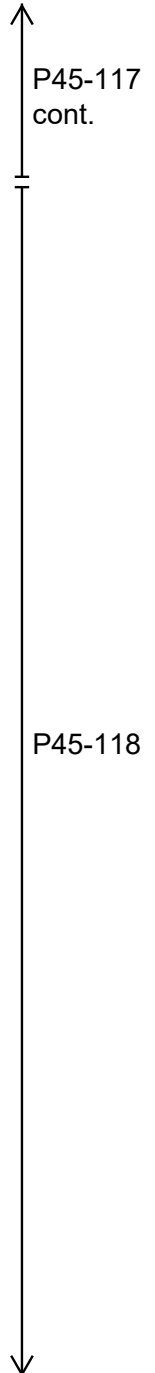
Given the law case above and CEQA regulations above I will assume that will first be considered before the following mitigation measures proposed. I also presume the first option mentioned will be reconsidered as it clearly violates this regulation and the precedent given.

Mitigation Measure 3.6-1: Archaeological Research Design and Treatment Plan.
Prior to receiving a County grading permit for the Project, the applicant shall:

1. Relocate Project components to a location that would not potentially impact the known historical resource.
2. **If relocation is documented to the satisfaction of the County as infeasible** (where “feasible” means “capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors” as defined in CEQA Guidelines Section 15364) and the historical resource would potentially be impacted by the Project, design and implement an **Archaeological Research Design and Treatment Plan (ARDTP)**.

Include:

- Length and depth of excavation
- Type of equipment utilized
- The percent of area investigated
- How the proposed investigation would preserve any significant historical information obtained and identify the scientific/historic research questions applicable to the resource
- The data classes the resource is expected to process and how the expected data classes would address the applicable research questions
- Results shall be documented in a technical report
 - that provides full artifact catalog
 - analysis of items collected
 - results of any special studies conducted
 - interpretations of the resource within a regional and local context
 - Reports shall be placed on file at the North Central Information Center of the California Historical Resources Information System
 - Include recommendations for archaeological and Native American monitoring in Environmentally Sensitive Areas and the protocol to follow should additional cultural materials be identified during construction activities



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What is considered feasible? Is it the applicant’s job to find a location or County’s or someone else? What will be done with the results once they are found? As with most other mitigation “plans” this does not require any specific performance standards, does not require the agency to adopt the plan, and does not include a mitigation monitoring or reporting. This is like the finding in *Gentry v. City of Murrietta* when an agency simply requires a project applicant to obtain a biological report and then comply with any recommendations that may be made in the report. (*Gentry v. City of Murrieta* (1995) 36 Cal.App.4th 1359, 1396-1397, 43 Cal.Rptr.2d 170.) It does not require compliance with such a report.

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c) Whether the Project would cause a substantial adverse change in the significance of a tribal cultural resource, defined in Pub. Res. Code §21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is (1) listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Pub. Res. Code §5020.1(k) or (2) determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in Pub. Res. Code §5024.1(c).

Impact 3.6-3: The Project would cause a substantial adverse change in the significance of a tribal cultural resource. (*Significant and Unavoidable*)

Mitigation Measure 3.6-3a: Implement Mitigation Measure 3.6-1: Archaeological Research Design and Treatment Plan (described above)

See my comments above about the inadequacy of this. No performance standards, no enforcement, no monitoring/reporting. The court also held the EIR’s discussion of mitigation measures was legally inadequate, and the measures “improperly defer the formulation of actual mitigation measures to the future.” According to the Court: “Despite being labeled as mitigation measures in the EIR, these provisions are statements that the County will decide the mitigation to be adopted after it receives the recommendation of a professional archaeologist.” *Madera Oversight Coalition, Inc. v. County of Madera* (2011) 199 Cal. App. 4th 48

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Although mitigation may be deferred if there is a specific performance standard associated with the deferred mitigation, the court found no such performance standard had been adopted. Instead, “the county had committed itself to a specific mitigation goal,” not a specific standard. The court held this was insufficient. *Gray v. County of Madera* (2008) 167 Cal App.4th 1101

An EIR is inadequate if ‘the success or failure of mitigation efforts, may largely depend upon management plans that have not yet been formulated and have not been subject to Analysis and review within the EIR. *Communities for a Better Environment v. City of Richmond* (2010).

Mitigation Measure 3.6-3b: Coordination with the Pit River Tribe during Project Development.

Mitigation Measure 3.6-3c: Detailed Recordation of Features Considered Culturally Significant to the Pit River Tribe.

Mitigation Measure 3.6-3d: Cultural Resources Monitoring Program with the Pit River Tribe during Construction.

The Applicant shall offer and provide the opportunity for cultural resource *monitors from the Pit River Tribe to monitor initial ground disturbing construction activities* in areas identified by the Tribe as culturally sensitive.

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Monitors will have the authority to ensure that discrete sacred sites in the Project Site are avoided or that impacts on such localities are mitigated to the extent feasible, including but not limited to, avoidance or data recovery (as outlined in Mitigation Measure 3.6-1. Archaeological Research Design and Treatment Plan). The Pit River Environmental Office should coordinate with the appropriate Achumawi bands (Itsatawi and Madesi) to assign
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Thought it states it is unavoidable – it still does not explain how any of this is feasible or how it will reduce the impact in anyway as most of the details of the ARDT Plan, left vague, no guarantee the plan will be implemented after the study is done and hold the project to no standards. I also do not understand why some of these things would have been done with the Tribe before this DEIR was released. This seems like improper deferral and that this information could have been discovered before the project approval.

Energy

PG&E Electric Utility Operations

First, the overview of PG&E Electric Utility Operations is lacking in important information which the report, county and entire state would be well aware of. The description would lead one to believe that PG&E is leading on the forefront of providing electric and utility services to its six million customers “... it has improved its electric transmission and distribution systems to accommodate the integration of new renewable energy resources, distributed generation resources, and energy storage facilities, and to help create a platform for the development of new Smart Grid technologies.” (3.7-3) Some of PG&E’s smart technology in fact has been speculated to be the cause of the fires in Santa Rosa. The “reclosers” are devices that are programmed like SCADA to detect problems with powerlines and if no problem is found to automatically restart them but in doing so this sometimes actually results in the start of fires (Palomino 2017). The same technology that in fact was found to be responsible for the Black Saturday Bushfires in Australia (Farley 2017). While it is unclear if these are used on the transmission and power lines near the project site or surrounding area. If it is used it in fact increases the risk of wildfire. Governor Newsom’s Strike Force Report on addressing wildfires that came out in 2019 found that in just 4 years the three largest owned utility companies started over 2,000 fires and states “Despite repeated assurances from management that the company would change, PG&E has failed to implement the fundamental management and cultural reforms to prioritize safety and reliable service. Californians deserve better, and we will demand better. The state simply will not accept a situation where 40 percent of Californians are served by a company that cannot be trusted to provide safe and affordable power. PG&E must be radically restructured and transformed into a responsible and accountable utility” (Strike Force 2019, p. 46). Thus, it makes it important to evaluate whether yet another project adding more transmission lines in remote areas is actually has safe as purported. These fires are not expected to decrease but increase! This description of PG&E and utilities in general by the State differs drastically from that of this project description.

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A glaring omission of the overview of PG&E is the vast amount of negligence which has resulted in a very outdated energy network that has not only started multiple fires but has even made the company plead to 84 counts of manslaughter as a result of the Camp Fire (2018). The Camp Fire is not the only fire as a result of the outdated, neglected transmission as it is estimated that within the past 6 years alone the company has started at 1,600 fires (<https://www.businessinsider.com/pge-caused-california-wildfires-safety-measures-2019-10>). In

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fact, their infrastructure is so outdated and the risks from their transmission lines the company has resorted to shutting off electricity in high wind conditions because they cannot ensure that their lines can withstand the conditions and not cause further fires. PG&E complements themselves for limiting the extent of their power outages to under 48 hours those living within the project last October went as many as 5 days without power). They warn that Public Safety Power Shutoffs will continue for 10 years (<https://www.latimes.com/california/story/2019-10-19/pg-e-ten-years-of-power-shutoffs>) as they try to update their 26,000 miles of high voltage transmission lines and 240,000 miles of distribution lines <https://www.usatoday.com/story/news/nation/2019/10/11/bury-california-power-lines-wildfire-blackout-fix-unlikely-work/3946935002/>. A problem that is compounded by the amount of vegetation not cleared around these lines. Part of the objectives of the project are to connect to already existing infrastructure that is in this area which includes a Substation, 500kV transmission lines and other 220 kv to 287 Kv lines. The project would add up to 12 miles of overhead electrical lines, a collector substation and onsite switching station and the overhead collector system “would be installed on wood poles” but I cannot easily find a number indicating just how many wood poles would be needed. As this entire project continually states that it will seek to meet best standard practices, though both PG&E and Governor Newsom’s Strike Force have spoken of possibly the necessity to move to concrete or steel poles which are more fire resistant (<https://www.sandiegouniontribune.com/business/energy-green/story/2019-04-12/mixed-reaction-to-newsoms-strike-force-report-on-california-wildfires>). Furthermore, while the applicant will build the switching station PG&E would construct the electrical connections and would “ultimately would own and operate the switching station and interconnection components” (2-12). With the above facts, it may not come as much of a surprise that residents in this area may not believe PG&E has the ability to add more to their lines when they haven’t even maintained what they are responsible. Any mitigation to ensure safety and vegetation cannot be proven as these measures were already in place, enforceable and were held to a regulating industry but PG&E did not comply. The result of such mitigation and regulatory bodies over seeing PG&E resulted in over 1,500 fires in 6 years, thousands of lost homes and businesses and at least 84 deaths.

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While I recognize the facts above are not the point of this section as it is more to see what electricity consumption will result from the project itself. However, since PG&E is used as part of the background of this section it is inadequate to praise PG&E’s improvements while neglecting its failures- failures that in fact can be cumulative effects with almost every section of this draft including especially in regards to wildfire. Failures that most would agree well outweigh the improvements. This negligence and the problems associated with Utilities needs to be addressed more thoroughly somewhere in this DEIR. Cumulatively it adds to the impact of this project.

California’s Ineffective Use of Renewable Energy

Further while this section explains the consumption of energy, how much is produced by various sources and the goals of the state to move to more renewable energy it is also missing information that was not available at the time of this report. In August, California was forced to implement rolling blackouts and plead customers to reduce energy consumption during a severe heat wave which left millions without power when they needed it most. Though it is not clear why or how this exactly happened due to energy producing capabilities of the state. It was partially due to the state’s race to meet its goals of relying on renewable energy which do not

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offer consistent energy. Governor Newsom explained that energy produced by solar panels output decrease in the evening when the peak need of energy is demanded. Solar panels are not alone in their inconsistent and unreliable energy outputs as wind turbines also are reliant on weather conditions and are not always producing the power they are capable of. A dire warning was found by a PG&E report last December by themselves that concluded "...the utility's customers could see blackouts double over the next 15 years and quadruple over the next 30" (<https://www.forbes.com/sites/michaelshellenberger/2020/08/15/why-californias-climate-policies-are-causing-electricity-black-outs/#10af54801591>) This should cause some reflection and careful consideration before rushing to produce renewable energy sources since in the rush by California to do so they neglected to consider what would happen if these resources which are often dependent on weather conditions could not keep up with demand. California failed to see that if they wanted to rely on these sources they would need to have a way to store it for times when production cannot meet demand. But they did not and instead rushed to shut down the power plants before they had a reliable back up system i.e. batteries to store the energy they produce.

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Local Energy Infrastructure

A vast amount of energy infrastructure already exists in this area including a 500 kV substation, 500 kV high transmission lines and other transmission lines ranging from 220kV and 287Kv. It also includes the Hatchet Wind Project within just 1 mile of the project site which includes yet more substations, transmission lines and infrastructure connecting to the energy grid. In other words, though this area is already in a Very High Fire Hazard risk area it includes energy infrastructure that creates an even more hazardous situation for those currently living in the area.

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a) Whether the Project would result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction, operation and maintenance, or decommissioning.

Impact 3.7-1: Project construction, operation and maintenance, and decommissioning and site reclamation could result in the wasteful, inefficient, or unnecessary consumption or use of energy. **(Less-than-Significant Impact)**

In *California Clean Energy Committee v City of Woodland* (2014) the Court addressed Title 24 energy efficiency standards and if they were sufficient to satisfy CEQA. The Court found the City's reliance on Title 24 energy efficiency standards insufficient to satisfy CEQA because although the Building Code addresses savings for components of a new commercial construction, it does not address many of the considerations required under Appendix F of the CEQA guidelines. These considerations include whether a building should be constructed at all, how large it should be, where it should be located, whether it should incorporate renewable energy resources, or anything else external to the building's envelope. Here, a requirement that [the project] comply with the Building Code does not, by itself, constitute an adequate assessment of mitigation measures that can be taken to address the energy impacts during construction and operation of the project. While this project is not about a commercial building it does give a valid question. I will substitute the word building with project. So applying these questions they would read "considerations include whether a [project] should be constructed at

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all, how large it should be, where it should be located, whether it should incorporate renewable energy resources, or anything else external to the [project’s] envelope.

Footnote 2 states that it’s construction-related GHG were compared to the Humboldt Wind Energy Project’s GHG emissions citing that it is “the most relevant estimate known of a wind project construction site elsewhere in the state.” While this might be true that it is the most relevant estimate the DEIR proposal for that project the projects construction components differed on size and disturbance. The table below offers a comparison between the details listed in both plans. Though I could not find average length trip for the Humboldt project they expected to receive most materials from a port located in closer proximity than any in relation to this project site. Thus a considerable difference in material delivery of large components from ports would result in a difference of hundreds of miles. Further, the project states that deliveries of materials by truck to the site would be no more than 50 miles, again this is unclear to me from reading related components in Humboldt counties. However, simply based on the fact that the Humboldt location is located much closer to a port would indicate that emissions resulting from that would be significantly different than the impact of delivering components from a port located hundreds of miles away. Anyone looking at the comparisons in the table below and considering the difference in proximity to ports it is clear that there is a drastic difference in the amount of emissions that would be released from the two projects.

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	Humboldt	Fountain
Turbines and Pads	up to 60 (up to 240 acres)	up to 72 (up to 360 acres)
Underground Electrical	maximum length 25 miles	up to 51 miles
Overhead Electrical		Up to 12 miles
Onsite Collector Substation	1 (3 acres)	1 (8 acres)
Onsite Switching Station	1(up to 3 acres)	1 (11 acres)
Access Roads	up to 17 miles	Up to 24 miles of new roads
Widening Existing Rds.		Up to 33 miles of existing roads
O&M Facility	1 (5 acres)	1 - (5 acres)
Temp construction area	1 (5 acres)	1 - (10 acres)
Temporary Laydown areas	2 (10 acres) each	14 (total 28 acres)
Temporary Concrete Batch	1 (3-5 acres)	3 (total 15 acres)

MET Towers	12 (18 acres)	4 (total 4 acres)
TOTAL CONSTRUCTION TRIPS	29,250	93,088

While the end result may in the end be similar to overall effect on total emissions for the state of California I am not sure how they came to conclusion “no unusual project characteristics that would cause the use of construction equipment that would be less energy efficient compared with other similar construction sites in other parts of the state” based on these comparisons. It goes on to say “therefore, construction-related fuel consumption by the project would not result in efficient, wasteful or unnecessary energy use compared with other, similar construction in the region.” I think further explanations on how exactly they came to this conclusion is necessary. Did they compare fuel consumption by total trips, the construction activities all of which vary drastically or did they use something else to compare? While they may have reached an accurate conclusion there is no clear explanation as to how they connect. The citation did not give me sufficient information to understand what they were comparing here. One thing that is obvious however that a project closer to where components are being delivered would seem to result in a significant decrease in emissions and a less wasteful use of energy. Though obviously this project does not have the same benefits of being located closely to a port.

Comparing the two projects however, the argument could be made that energy is being used unwisely. As *California Clean Energy Committee v City of Woodland* (2014) addresses – was it necessary for the building to be made to begin with. In this case, while that argument could still apply to the O&M, it is acknowledged that the project’s goal is for cleaner energy. However, the comparison with Humboldt is actually a comparison of how it could actually be a wasteful use of energy. It is noted that Wind Turbines and utility projects are best to be built closer to where the energy is going to be used. The fact that this energy will likely not be used in Shasta County could be a fair argument that this is indeed wasteful. The construction and transportation of the project components and the decommissioning that requires the project to transport parts like wind blades to the few places that accept them like in Iowa. Furthermore, is it energy efficient to build on steep, rocky topography or more energy efficient on soil that has little to no slope. Is it energy efficient to travel uphill up such steep slopes with heavy equipment or more efficient to use the same equipment where travel does not require going up steep slopes or up mountains. Is it necessary for this project to be located exactly where it is? No. Would it be less wasteful if it was built on a site with better topography and flatter slopes, yes? Is it wasteful to transport very heavy large equipment far away to build turbines for energy that will be transported hundreds of miles away (and energy lines do lose efficiency the further electricity has to flow) or would it be more efficient to build it closer to where the energy will be used and less transportation and excavation is necessary? I think the answer is obvious.

This therefore could be considered wasteful. If like discussed earlier in which San Bernardino County requires most of the energy generated from renewable energy projects to be used for local areas most of the energy would be used in Shasta County - perhaps it would not be wasteful. However, if this energy will be sent hours south or even state’s away as in some cases

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other states buy the energy produced here than it could be argued that the construction and transportation was inefficient and wasted. Plus, I imagine more fuel for heavier construction equipment will be required for grading, widening and making access roads on very rocky terrain and steep slopes. A flatter site with less geological construction challenges would be less wasteful. The hours and miles of trips from the port to this project site (as compared to Humboldt County) does actually sound quite wasteful.

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Furthermore, this technically is inconsistent with the Shasta General Plan Objectives listed – E-2 does not even mention wind and E-4 says to “conserve nonrenewable energy resources, specifically raw materials.” This does not conserve nonrenewable energy resources and trees will be cut down for this project. Their replacement – if feasible, will not be for 40+ years and then its effects on the resource land area in 40+ years are unknown.

Forestry Resources

3.8-4 “land owner’s current and future land use practices” this is no way states their future land practices include restoring any of this land back to forest areas. Or if it is even feasible with Climate Change, wildfires, disease and pests.

It does seem to imply with the zoning ordinance stated but fails to include numerous inconsistencies with both County and State General Plans.

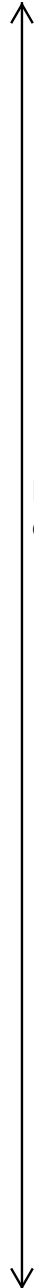
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Plans

<i>California Fire Code 2016</i>	<i>State</i>	<i>4905.03</i>	<i>The establishment of limits for the Wildland-Urban Interface Fire Area's required construction methods shall be designated pursuant to the California Public Resources Code for State Responsibility areas or by a local agency following a finding supported by substantial evidence in the record that the requirements of this section are necessary for effective fire protection within the area.</i>
Shasta County Multi-Jurisdictional Plan 2017 Hazard Mitigation	Shasta	4.38	"WUI vegetation not only enhances community attractiveness but also reduces home cooling costs and air pollution, lessens needed storm water runoff infrastructure, sequesters carbon and provides wildlife habitat.

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Shasta County Multi-Jurisdictional Plan 2017 Hazard Mitigation	Shasta	4.109-110	One of Shasta County's most valuable resources is its timberland... the timber industry is important to the economy of California... In 2002 Shasta County was third ranking Timber county producing a harvest amounting to 152.1 million board feet and valued at \$39.2 million for timber cut
Shasta County Multi-Jurisdictional Plan 2017 Hazard Mitigation	Shasta	4.109-110	Over the long term, nationwide and worldwide demands for timber products may rise faster than available supplies, and higher prices for such products may rise as well. Higher prices can have positive implications for the County as they tend to promote more intensive forest management practices and diversification and wider utilization of wood products
Shasta County Multi-Jurisdictional Plan 2017 Hazard Mitigation	Shasta	5.25	Objective WDF-1.B Facilitate the adoption of building codes that protect existing assets and restrict new development in wildfire hazard areas
California State Hazard Mitigation Plan 2019	State	564	"The goal of the safety element is to reduce the potential risk of death, injuries, property damage, and economic and social dislocation resulting from hazards... Within the safety element, local jurisdiction must address fire-safe standards, including evacuation routes, water supplies, road widths, and clearance around structures... SB 1241(2012) added more specific fire planning requirements to Government Code section 65.302.5 and intensifies the application of OPR's Fire hazard planning Guidelines in SRAs and VHFHSZs (see section 8.1.5.2)
Shasta County General Plan	Shasta	SG-f	Shasta County shall pursue preparation of development standards based on topography and soil erosion potential in revising its land capability standards pursuant to Policy CO-h.



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Shasta County General Plan	Shasta	FS-1	Protect development from wildland and non-wildland fires by requiring new development projects to incorporate effective site and building design measures commensurate with level of potential risk presented by such a hazard and by discouraging and/or preventing development from locating in high risk fire hazard areas.
Shasta County General Plan	Shasta	6.2.01	A conservation element for the conservation, development and utilization of natural resources including...forests...the conservation element may also cover...protection of watersheds.... (Government Code Section 64302(d).
Shasta County General Plan	Shasta	6.2.01	Open space for the managed production of resources, including...forestlands.... (Government Code Section 65560(b)(2).
Shasta County General Plan	Shasta	6.2.01	Parcels zoned as timberland preserve shall be zoned so as to restrict their use to growing and harvesting and to compatible uses and shall be entered as a timber preserve element of the County General Plan. (Government Code Section 51115).
Shasta County General Plan	Shasta	6.2.01	Land dedicated to commercial forest management provides not only building materials, energy for industrial processes, firewood, County revenue for roads and schools, and employment opportunities, but also wildlife habitat, recreational opportunities, aesthetic enjoyment, and watershed. Maintaining timber operations and preservation of valuable timberlands are important to the economic base and the natural resource values of Shasta County. The Timberlands Element, therefore, relates present and future uses of timberlands to the natural resource, economic, and community development plans for Shasta County.
Shasta County General Plan	Shasta	6.2.01	One of Shasta County's most valuable resources is its timberland
Shasta County General Plan	Shasta	T-f	The County should encourage and promote the utilization of wood waste produced in the County.

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Shasta County General Plan	Shasta	T-g	The County should encourage and promote biomass thinning programs in timbered areas with extensive rural residential development for purposes of improving both tree vigor and wildland fire safety.
Shasta County General Plan	Shasta	E-i	The County should support efforts to amend California's timber harvest rules that encourage thinning and harvest of biomass fuels for purposes of improving wildland fire protection and forest productivity in developed areas, such as in the Shingletown area, and which are capable of timber production.
Shasta County General Plan	Shasta	6.9.01	The objectives of the Open Space Element have been clearly stated by the State Legislature and are included in Government Code Section 65561: "... (a) That the preservation of open space land ... is necessary not only for the maintenance of the economy of the State, but also for the assurance of the continued availability of land for the production of food and fiber, for the enjoyment of scenic beauty, for recreation and for the use of natural resources
California Public Resource Code	State	PRC2490(b)	July 1, 2021. These regulations shall include measures to preserve undeveloped ridgelines to reduce fire risk and improve fire protection. The board shall, by regulation, define "ridgeline" for purposes of this subdivision.

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Cumulative Impacts

The DEIR does not take wildfires into account and how much timber fires have destroyed in recent years or the amount of dead trees and timber. With that taken into account how much would that percentage than equal to – and with Climate Change conditions getting worse... what will be the effect in 40 years on the timberland that was taken. It won't be 40 years until trees are planted again. And then it is not known if climate conditions will even exist to grow them productively or at all.

According to 3.1-3 of the document CEQA requires the cumulative impact of the project should include “closely related past, current and reasonably foreseeable possible future projects”. This section does not seem to even adequately address this section. Including “Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time” (CEQA Guidelines 15355 [b], 15130 (a) 1. Considering that the document even quotes a technical paper on timberland conversion that states ““The impact of conversion on timber supply is not significant, but in many local areas, conversions are a major land issue.”” (p. 3-1-5) No other explanation or thought is given on how this might be in relation to this area.

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Since wildfire, pests and disease all have an impact on the timber supply in Shasta County it seems reasonable that more explanation is given.

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Shasta County General Plan E2: Increase utilization of renewable energy resources by encouraging development of solar, hydroelectric, biomass, waste-to-energy, and cogeneration sources.

From this general plan it is obvious that there are foreseeable projects that will include converting timberland areas to utilities. However, there does not seem to be any set threshold for just how much of these projects or how much timberland will be allowed to be cut in order to utilize this energy. However, since the plan is to encourage such development there should be reasonable discussion of what, how many types of project and to what extent the county is willing to convert timberland to be used for such projects and how this would then apply to the cumulative impact of this on timberland.

Furthermore, no adequate discussion on recent projects such as Fountain Wind are even considered. And since this is not simply based on this general site area and instead on county goals any recent projects within the county need to be explained further.

Also, the health of timberlands are unhealthy because of disease or beetles. Cumulatively, if much of the land is diseased or infested by beetles than a larger impact would be feasible. Wildfire also destroys thousands, and hundreds of thousands in forests (this year possibly millions) every year. How much of the land burned by the Carr fire and other recent fires was timberland? With Climate change increasing and more large destructive wildfires expected it is also important to note how that also reduces the amount of forests within the county and its inability to store carbon. This again appears that a seemingly insignificant land conversion could be more important if all of these things taken together are considered.

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While forest fires are known for large releases of emissions into the atmosphere proper fuel treatment and forestry options can reduce the severity of fires and reduce the amount of emissions produced by such wildfires. Rather than replacing forests one of the best assets we have at fighting climate change (see discussion in Greenhouse Gas Emissions) the County should be considering projects that actually affect the health of their tree stands rather than reduce the size of them. Too many other factors contribute to the loss of timber stands and their ability to store carbon. In fact, proper fuel treatment and timber management may temporarily reduce some carbon storage. Fuel treatment reducing wildfire severity and the offset of emissions released in these fires outweighs the carbon loss from the treatment. (Moghaddas, J.J; Roller, G.B.; Long, J.W.; Saah, D.S.; Moritz, M.A.; Stark, D.T. et al. 2018).

Greenhouse Gas Emissions

One of the Project objectives is to assist California in reaching its renewable energy generation targets of SB100 though in its attempt to help assist with this particular senate bill it ignores others such as AB32 which also addresses Greenhouse Gas and Climate Change. Under this bill however it places an importance on Carbon Trading and places the importance of forests in creating large carbon sinks or reservoirs. "Forest management practices set by the state can maximize the potential for the forests to absorb carbon, while at the same time increasing timber

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yields” (Sacramento Area Council of Governments, 2015.) This shows that while the project rushes to complete one goal to reduce carbon emissions it fails to address equally important if not more important goals that emphasize the value of forests and timber management as a strategic part of that goal. Taking trees and replacing them with wind turbines are at odds with each other. In fact, 85% of Carbon Stock inventoried is stored in forests. Sadly, the majority of the loss of Carbon Stock in California is the result of wildfires that burn the trees and forests that store the carbon. While the goal is that this project will offset “128,000 metric tons of carbon dioxide emissions generated by fossil fuels” it ignores the important part - these timberlands already play a strong role in reducing them.

“There are approximately 5,340 million metric tons (MMT) of ecosystem carbon in the carbon pools that CARB has quantified. (To put it into context, 5,340 MMT of carbon in land is equivalent to 19,600 MMT of atmospheric CO₂ currently existing as carbon in the biosphere and pedosphere as carbon cycles through the Earth’s carbon cycle.) Forest and shrubland contain the vast majority of California’s carbon stock because they cover the majority of California’s landscape and have the highest carbon density of any land cover type. All other land categories combined comprise over 35% of California’s total acreage, but only 15% of carbon stocks. Roughly half of the 5,340 MMT of carbon resides in soils and half resides in plant biomass” (CARB 2018, p. 6). Further, area-average carbon densities projected by CARB by ecoregion indicate that in the Sierra/Cascade Region AGL Biomass C MT/hectare = 42, Total biomass C = 121 and Soil C = 105. (ibid, 43). A hectare is the equivalent of approximately 2.47 acres. While this project will temporarily disturb approximately 1,384 acres through construction in a 4,464 acres project site it notes that it will permanently disturb about 713 acres or 288.54 hectares. This would be equal to anywhere between 12,118 MT of carbon stored there up to 34,913 MT if the entire area was as carbon dense as Biomass C. However, we can assume that the number of carbon density lost would be between 12,118MT and 34,913 MT or between 10 to 30 percent of the projects total goal of offsetting of carbon emissions by fossil fuels. If we were to factor in the entire temporary disturbance by construction project site this number could be between 58,128 and 167,464 MT which would equate to roughly half to more than the total number the project goal is set to offset. While the temporary result could be equal to possibly 4 years this would in fact be inaccurate because the disturbed area would be less efficient at storing carbon and carbon is best stored in older denser tree stands. Since, it will take many decades to get trees back to profitable timber and get them to higher storage potential this temporary loss would take decades to recover. However, the rough calculations above do not even equate for the fact that carbon in land is much more efficient at making up for carbon emissions in the atmosphere. As indicated above 5,340 MMT land stored carbon = 19,600 MMT in the atmosphere. Thus, it only takes 27% of land stored carbon to reduce atmospheric MMT released by greenhouse gas emissions. The efficiency of soil and biomass in the forest is much more productive than wind energy’s ability to offset the difference. Further, take note of the effects of the 2018 wildfires on emissions (which burned less acreage than in 2020). According to U.S. Secretary of the Interior Ryan Zinke, the 2018 California wildfires, which include the Camp Fire and Carr Fire, released 68 million tons of carbon dioxide. This equates to 15 percent of all California emissions and equaled the number of emissions produced by electricity for the entire state for an entire year (U.S. Department of the Interior, 2018). Considering wildfires are increasing and this year has

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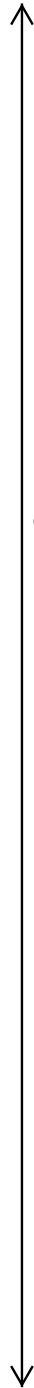
already burned a record setting number of acres it certainly would have released more emissions due to the number of acreage burned - the 128,000 MT the project hopes to offset is completely insignificant.

The loss above does not even equate for diesel use or any other fossil fuel consumption of the project. Nor does it account for the possible impacts that the heat island effects of wind turbines could have on this small and seemingly insignificant area according to the project that could lead to project site small temperature increase.

Land planning is critical in this issue. In a rush to make renewable energy to offset and reach state goals the State and County both also have the policy of maintaining and conserving forestland (discussed elsewhere). This does the opposite. Research shows that changes in climate that create warmer, drier conditions, increased drought, and a longer fire season are boosting these increases in wildfire risk. For much of the U.S. West, projections show that an average annual 1 degree C temperature increase would increase the median burned area per year as much as 600 percent in some types of forests. (Center for Climate and Energy Solutions, n.d.) This being the case, a half a degree or perhaps an entire degree - if you add in Hatchet Ridge could be devastating. This research suggests it could increase the area median area burned in a year by as much as 600%. Add into it all the powerlines, health of forests, and other Climate change that conclude temperatures could increase between 5-8 degrees by the end of a century and this becomes a much more serious problem. By the time that 5-8 degrees kicks in this project will have increased the temperature for forty years which may have already affected the health of the forests in the vicinity of the project site. The plan to get the forest back to where it was before the project may be impossible at that point.

No thought or analyze considers how those temperatures may increase the risk of fire in the forested area of the project and the emissions they release nor does it consider that such a temperature rise could result in an environment that does not allow the conditions to support a healthy forest that can withstand an increase in such temperature. In fact, the composition of vegetation in the area may be entirely changed if trees cannot survive the heat. This may affect the carbon sequestration benefits of trees and forests result in even less of an ability to offset carbon emissions. Furthermore, these increases evaluated at a cumulative level would also affect snowfall that directly effects the supply of water that depends on the snowpack from the higher elevations and specifically is important in the North State. It could very certainly affect the conditions that lead to healthy forests, resulting in more dead trees and make the area even more susceptible to wildfires.

Considering the area is forested, in a severe high fire risk area and has multiple high power transmission lines within the area. Even the slightest change in weather that may affect snowpack and other conditions that would lead to drier forests would only enhance that risk. It could be assumed that more dead and dry fuel would accumulate within the area surround the project site and thus it would not be simply hypothetical that a large and very destructive wildfire could result. The DEIR in fact acknowledges that climate change will result in larger and more destructive wildfires. Thus while Appendix G suggestions evaluated by the project may seem less than significant it seems that those addressing this section failed to find alternative impacts



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not specifically applied to the project when an obvious one was sitting before them in the cumulative effects. I suppose the fact that GHG emissions are usually in relation to the cumulative regionally, statewide and even global a small area like this was considered insignificant. The fact that a temperature increase in a relatively small area of forest could be easily overlooked despite the forest’s important part of sequestering carbon emissions and the potential impact of a raise in temperatures in these forests contributing to an already increasing problem of wildfires. I suggest that the report consider the cumulative effect as potentially significant and try to find any possible solution to this localized area since it is a crucial element in fighting climate change and the potential danger to health of the habitat around it could result in a fire that negates all benefits in reducing carbon emissions and would not justify ignoring the other significant impacts in the forest. This risks are discussed earlier under wildfire but includes the increase risk of pests, dead trees and drier fuels that can burn much more intensely. I would also suggest given the information above the project seems to do the opposite of what it is setting out to achieve even assuming it could actually do what it says it can when statistics show at best Wind Farms only reach between 25-40% of nameplate capacity production in a given year Thus, the loss in carbon would easily outweigh the benefits of this project.

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Furthermore, while the project states that CEQA Section 15126.2(b) does not require a full life cycle analysis (CEQA Guidelines, § 15126.2, subd. (a); see Pub. Resources Code, 18 | Page § 21001, subd. (d) [State policy “[e]nsure[s] that the long-term protection of the environment . . . shall be the guiding criterion in public decisions”]; § 21001, subd. (g) [state policy requires “governmental agencies at all levels to consider . . . long-term benefits and costs, in addition to short-term benefits and costs . . .”]; § 21083 [requiring preparation of an EIR for a project that “has the potential to . . . achieve short-term, to the disadvantage of long-term, environmental goals”].) In some cases, it would be appropriate for agencies to consider a project’s long-term greenhouse gas impacts, such as for projects with long time horizons for implementation. In the fourth sentence of subdivision (b), the Agency clarified that an agency’s analysis must reasonably reflect evolving scientific knowledge and state regulatory schemes. This clarification acknowledges SANDAG, supra, 3 Cal.5th 497. In that case, the California Supreme Court addressed the adequacy of an EIR prepared for a long-range regional transportation plan. In addressing the plan’s greenhouse gas emissions, the Court held the lead agency did not abuse its discretion by declining to analyze the consistency of projected long-term greenhouse gas emissions with the goals of an executive order declaring an emissions reduction goals for 2050. But the Court further stated: “we do not hold that the analysis of greenhouse gas impacts employed by SANDAG in this case will necessarily be sufficient going forward. CEQA requires public agencies like SANDAG to ensure that such analysis stay in step with evolving scientific knowledge and state regulatory schemes.” (Id. at p. 504; see id. at p. 519.) (CNRA 2018).

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CEQA Section 15126.2 (d) says “Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources

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should be evaluated to assure that such current consumption is justified. (See Public Resources Code section 21100.1 and Title 14, California Code of Regulations, section 15127 for limitations to applicability of this requirement.)” This includes gasoline and the removal of tress. The destruction down to slopes etc. will not simply be reversed and it is unclear if climatic conditions in 40 years will even allow the project site to revert back to timber land. This could very well commit future generations to similar uses and live with the impacts of grading and damage to the land outside of greenhouse emissions.

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Hazards and Hazardous Materials

a) Whether the Project would create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

Impact 3.11-1: The Project could create a significant hazard to the public or environment through the routine transport, use, or disposal of hazardous materials or wastes. (*Less-than-Significant Impact*)

b) Whether the Project would create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

Impact 3.11-2: The Project could create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. (*Less-than-Significant Impact*)

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Conclusion is based on special plans and permits that are not in fact part of the project. The Hazardous Materials Plan and the Spill Prevention Control and Countermeasures Plan would not be required if a certain number of these hazardous materials were not present. This makes the information and discussion in this section useless and violates CEQA based on the ruling in *Lotus v. Department of Transportation* (2014) which has become known as one of the standards mitigation measures are held to. Notably the court states “**Simply stating that there will be no significant impacts because the project incorporates ‘special construction techniques’ is not adequate or permissible.**” By explaining that the measures would be of no significance because of the measures proposed they then were not stated as mitigation. The court described mitigation as avoiding, minimizing, rectifying, reducing, and compensating for a significant impact. However, there is no acknowledgement an impact exists in this section because by grouping all their construction techniques together with the significance it does not identify its construction techniques etc. as mitigation. Thus, there is no thoughtful consideration of just how effective or feasible these mitigation measures are. It also leaves out any quantifiable measures to measure the mitigation. Furthermore, “**this short-cutting of CEQA requirements subverts the purposes of CEQA by omitting material necessary to informed decision-making and informed public participation. It precludes both identification of potential environmental consequences arising from the project and also thoughtful analysis of the sufficiency of measures to mitigate those consequences. The deficiency cannot be considered harmless.**” By doing this the “**EIR fails to identify any standard of significance, much less to apply one to an analysis of predictable impacts from the project.**” Further discussion in the case notes whether certain mitigation is infeasible for economic or other reasons. There are many issues raised in the impacts above because the DIER “short-cutted” the CEQA process and leaves out any level of discussion about the real actual impact, nor does it supply factual evidence of

whether or not it is even feasible to comply to building codes, standards or other “legally enforceable” measures they refer to.

Further, according to records kept by the U.S. Department of Transportation 2,661 hazardous material accidents have occurring during the transportation process (as of 9/23/20) and resulted in over \$27 million in damages

(https://portal.phmsa.dot.gov/analytics/saw.dll?Portalpages&PortalPath=%2Fshared%2FPublic%20Website%20Pages%2F_portal%2FYearly%20Incident%20Summary%20Reports). While this number may be low it does not mean that it cannot happen and it does not reflect the level of significance of damage that can be done when accidents do occur. It does not describe what hazardous materials would be used, quantity or even explore the fact that blasting in itself would use a hazardous material (explosives) to do the project (unless I bother to go to Table 2-1 in a different chapter which doesn't explain most of these materials).

The Initial Environmental Study is more forthcoming and lists many of the hazards included in the construction process and also states “construction equipment used to mix and pour concrete will be washed onsite because it would not be practical to remove this equipment from the site for washing.” (p. 30) Thus, how is the problem going to be addressed and if all of the things are not done properly what exactly are the health risks to the surrounding communities, the vegetation and wildlife. This section seems to want to avoid having to discuss this issue when it is wholly necessary to understand the true impact and unless the codes and laws are implemented it would be significant. Thus, they are mitigation measures and may reduce the risk to a less than significant impact but is not a reason to come to this conclusion to being with. How might this affect the water, health and environment? Of course, since this isn't addressed there is no significance standard has to how much of a certain hazardous material would be necessary to cause a significant impact to the public workers or environment. It should also prove that it is feasible that this project can mitigate the risk and explore other mitigation options that can minimize the effects besides just relevant laws.

Otherwise, it is curious that a conclusion can be made that no accident could release toxins into the environment if an HMBP/SPCC are legally required as it seems to contradict this judgement. The Initial Environmental Study also seems to disagree. Simply handling the materials, transporting them and working with them (especially explosives used in blasting) can lead to an accident that can release these materials into the environment. This includes not just at the project site but anywhere between where such materials begin to be transported until they are delivered to the project site. However, if a leak accidentally released from the aboveground storage tanks this could significantly impact the environment through the groundwater and the environment and habitat all around. In 2020 alone, US Department of transportation has noted that as of 9/23/20 incidents involving hazardous materials involved with transportation include : 2,661 in transit, 503 in transit storage, 2,516 while loading and 4,333 in unloading (https://portal.phmsa.dot.gov/analytics/saw.dll?Portalpages&PortalPath=%2Fshared%2FPublic%20Website%20Pages%2F_portal%2FYearly%20Incident%20Summary%20Reports). This is just in the transportation process. Significantly the majority of releases pertaining to hazardous materials in relation to transportation occurred during the unloading part. Yet, the project seems to expect that no accidents are possible and that the project is immune to accidents. Obviously, none of these incidents were intentional and maybe they were not thought probable. They likely included the same safety measures the project refers to in other impacts but not this one and yet it still happened. Note that this is just in the transportation process. Thus, clearly it is foreseeable

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that an accident is possible but the degree of the accident and how much released obviously would be dependent on what the material is involved and where this accident release occurs.

With the amount of hazardous material involved in a 2 yr. construction period, 40 year operation, and 2 year decommissioning I'd say chances are good that at some point something will accidentally be released. The question of how much and its impact obviously is not obvious but a significant impact could be possible with the amount of hazardous material involved and the amount of groundwater in this area that supplies drinking water to residents and eventually makes its way to the central valley. This doesn't even include its impact on biological resources or those working with these materials.

How much fuel at one time could possibly be released? How much fuel on site if accidentally released would there be at a given time? To find some relevant information on this one has to on their own figure out the project description included some idea - 5,000 gallons would be stored on site in aboveground tanks, 500-1000 gallons of propane would be stored in aboveground storage that transformers contain more than 500 gallons of dielectric fluid and that 10,000 gallons of mineral oil will also be contained in onsite transformers. This doesn't even include how many explosives, how they will get into the tanks, how they would be transported and while herbicides are included and may be necessary (and I'd imagine that is most likely necessary) no indication of just how much of pesticide/herbicide would be used at one time. The table however does not address if the wind turbines and nacelles themselves would have hazardous materials in them. There is no specification of how much are expected to be stored in the approximately 72 turbines that may be used or if there are any hazards related to them. The significance level stated here was simply to skirt the fact that the impacts did not want to be further explained despite the fact that the HMBP will requires all of the hazardous materials, their quantities and their adverse effects – why does the project need to wait for compliance with that regulation when it likely has an approximate idea based on other similar projects. Of course, by the time that portion of the project is done it will no longer be subject to public scrutiny and decision-makers will have already made their decision which means the true possible impact will never be known. How can the county not want to understand this impact surely they can understand there is more than a less than significant potential impact to health and water quality. Plans like HMBP/SPCC indicate that at least the state and Federal government foresee the possibility.



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According to a report submitted by the SEC and done in April 2013 concerning O&M at the Hatchet Ridge Facility which had only been operating since December 2010 (less than 2.5 years) Oil leakage was reported from several gearboxes. It did not describe the extent of the leaks only that it did not lead to significant downtime so I do not know how much oil was spilt or if it came into contact with anything besides the turbine pads or if it also came into contact with nearby ground. Not only could this present a problem with exposing the ground to hazardous materials and possible ground and stream contamination if it had been near any equipment or vehicles that were hot this could have caused fires. Considering this was only 2.5 years into operation – clearly this seems to be a problem. The report also noted that one of that many sensors that needed to be fixed included the gearbox oil level sensor (Garrard Hassan America, Inc. 2013).



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Impact 3.11-3: During normal operation, equipment failure or an extreme event could lead to turbine failure, resulting in a potential hazard. (*Less-than-Significant with Mitigation Incorporated*)
Mitigation Measure 3.11-3: Mandatory Setbacks.
A minimum wind turbine setback of two times the total tip height shall be maintained from the exterior Project boundaries where the Project Site is adjacent to existing parcels of record that contain an off-site residence.

Discussion is not adequate and limits the number of ways normal operation and equipment failure can happen. As mentioned in the Wildfire section a report by GCUBE, a major insurer of renewable energy, released its top 5 reasons for insurance claims. Data based on 2012 US reported claims, shows that blade damage and gearbox failure account for the greatest number of losses - accounting for 41.4% and 35.1% of the total claims reported. Meanwhile, damage to generators (10.2%) and transformers (5.1%) ranked third and fourth with damage to foundations coming in fifth. The top two most frequently reported causes of loss were cited as poor maintenance (24.5%), and lightning strikes (23.4%). Design defect (11.5%) wear and tear (9.3%) and mechanical defect (6.2%). Although the majority of wind turbine blade damage can be attributed to lightning strikes; delamination and improper handling during the construction and installation phase are also frequent and need to be addressed. Poor Maintenance contributes significantly to the leading cause of gearbox failure with design defect factoring into loss frequency as well (GCUBE 2013).

Also, the Garrard Hassan (GH GL) Report noted in the impact above lists multiple problems within less than 2.5 years of operation of Hatchet Ridge, some serious. These are the problems they noted from observation and from O&M Maintenance which they explained was generally done when required though some minor deviations from the schedule were identified:

- 1) Potential durability issue related to the tower base grout placement which could lead to cracks
- 2) Two discrepancies with two padmount transformers which will need to be closely monitored including additional oil sampling for degradation, seven gearboxes had excessive wear and tear during end of warranty inspections – 3 intermediate shaft assemblies were replaced, but does not indicate what they did about the other four.
- 3) High speed shaft bearings in two turbines were flagged by monitoring and replaced
- 4) Oil leakage from several gearbox breathers
- 5) Two generators had to be replaced at the site (one was an electrical failure one in response to noise heard by a technician)
- 6) One turbine required a **replacement main bearing** (it is unknown what the root cause of the generators or main bearings were at the time of the report)
- 7) Sensor issues: Three different sensors led to notable downtimes in the early operation of the project including the oil gearbox sensor. These sensor issues were more significant during cold weather
- 8) **Uplift and collapse of transmission line towers** and contact between the upper ground/commercial cables and lower power cables due to excessive snow and ice loads.
 - After retrofits to reinforce the towers (in January 2011 and October 2011) they had more issues with two short outages from extreme wind and significant icing in December 2012 which led to more retrofitting. And the following winter yet more problems were discovered for some wood support structures.
- 9) Pad-mount Transformer Damage – multiple pad-mount transformers were damaged to varying degrees by ice falling from the turbine. In most cases, no severe damage incurred but downtime occurred in three instances ranging from a week to 2 months while waiting replacements.

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10) Ice shedding damage resulted in significant met tower downtime during the initial Project Operation.

11) Weather downtime: 3.8% for 2011; 4.6% for 2012 – primarily due to turbine icing, and in a lesser extent access to the turbines because of snow and ice.

12) Other issues: sporadic faults related to sensor or icing issues and turbine warm-up and restart following power outages.

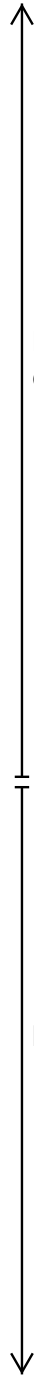
The report concludes that these problems at such an early stage in the process exceeded expectations for the sponsor’s turbine budget and GL GH’s expectations. It expects that because of this they anticipate even more than normal problems in the latter half of the Project life. (Garrard Hassan 2013).

Fortunately, it appears that most of these problems were not a concern to anyone’s safety however they bring to light numerous problems that occurred often and frequently when equipment would be expected to work at its best – when it is new and before wear and tear has degraded performance. Sensors failed – this could lead to fatal problems. The main bearing failing noted in number 6 is troubling since IEC standards defined by IEC require the design life of the main bearing to have more than 90% reliability. (Watanabe and Uchida 2015). The problems noted could have been much more serious and the Hatchet Ridge Project appears to have been lucky. However, it brings to question how many other problems have resulted in the 7 years since that report? I also wonder if the County knew of any of these problems or if they were required to know about any of these problems. My guess is it was proprietary information and was not required in a mitigation or monitoring plan because it was left up to the applicant and its contractors to due required O&M maintenance according to the standards set by the turbine manufacturer as is required in this case. Clearly, however, it demonstrates that in some cases maintenance was not done on time and that despite such maintenance problems resulted. Some of these could have been a risk to life, obviously it was to property even if just the projects and had the right set of conditions unfolded it could have led to fire.

Wind Shear and Turbulence Intensity Study

GL GH’s report also sheds light on problems caused simply by placing these turbines in a location with complex terrain. Most wind turbines in California do not have the problems associated with winter weather. Further, the complex terrain brings many other problems particularly in relation to wind shear and fatigue to blades caused by wind. “In siting wind turbines, the wind speed is one of the primary variables determining the financial viability of a wind farm. However, turbulence intensity (TI), variation in wind direction, inflow angles and low-frequency buffeting from persistent vortices shed from the crest of the cliff affect wind turbine fatigue loading, wind-rotor alignment, and power output” (Rowcroft, J.; Burton, D.; Blackburn, H.M. and Sheridan, J., 2016). Wind turbulence, angles and variation in wind direction are quite obvious at this particular site especially to those who live here. We are well aware of the constant change of directions of wind and wind speed.

This seems that this applicant should have performed a study to see how exactly wind changes and turbulence intensity could make this a viable location. This area cannot simply be compared to Hatchet Ridge who clearly has had problems with wind there because this area will not be a uniform area and subject to turbulence from a variety of factors and differences in terrain. The DEIR describes that various placements at different slopes and locations would be used meaning turbulence intensity and other wind factors would significantly differ at each location. “The persistence of these flow structures downstream will adversely affect wind turbines that are sited downstream of the mean reattachment region, as they will be subjected to



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the buffeting associated with the turbulent recirculation region, and resulting vortex ejections cause a reduction of both instantaneous energy production and increased fatigue loading. Pitch angles, regions of high shear and veer (change of wind direction with height) all impart unbalanced loads across the wind turbine rotor” (Ibid, p. 1470). In the study quoted they found large pitch angles observed at the crest of the cliff and considered to be outside the “design envelope” in the standard IEC 61400 Wind Turbines. Design Requirements set by the International Electrotechnical Commission.

I believe this issue should be addressed before a final EIR and project approval knowing that this area will be on ridges with substantial turbulence intensity and wind changes in both speed and direction – I’m sure the one tower you have already giving meteorological data already told you this problem exists. If not before approval at least as a conditional requirement of approval of the project. A wind study should have been done to consider whether this location was feasible to meet design standards and to ensure that feasible mitigation can be incorporated if necessary. However there is no study included or planned according to this document and thus I have no reason to believe one will be done. Without such a study decision makers do not have enough information to be informed about the true impacts and safety hazards of this project or the reliability or ability to meet its own objective as wind turbulence, shear and speed will have a direct impact on the reliability, turbine wear and tear and the overall hazards that can present if this particular problem is proven to exist here as there is ample firsthand knowledge from those living here to confirm. PGE shutoffs at the very least provide some reason to question how wind will actually be detrimental. If alternatives were turned down because they could not meet the standards to produce enough energy for a certain number of houses than the same standard should have been applied here. If the ridges and complex terrain here are not suitable for wind efficiency or reliability than it should not be considered as a project at all nor the justification for the alternatives being ignored. Micro-siting due to this issue could lead to very few sites suitable for placing turbines. This is a key component to this project and main objective. I believe that if alternatives could be turned down for their inability to meet project objectives than substantial evidence should be provided that prove this can meet project objectives. Wind factors described above are an essential part of the ability of meeting such objectives and thus it is questionable why no study was conducted or provided to show this would not create problems at this site.

Evidence for the need of such a study are supported by the above study findings, performance at Hatchet Ridge Wind Farm and other academic and significant research identifying this problem. “Wind turbines in complex terrain suffer from severer wind fluctuation than in flat terrain. The resultant shorter fatigue life than design life of components has been an issue of siting turbines in complex terrain” (Watanbe and Uchida, 2015). Another article states that there are 3,800 blade failures each year (which is only expected to increase as more turbines are brought into production). These failures can result from multiple factors including failure of control system to detect vibration, imbalance, or insufficient power; failure at root connection leading to a blade throw; extreme load buckling; manufacturing defects; blade over speed striking the tower; **environmental events, including natural perils, outside design envelopes;** and incorrect design for fatigue loads. (Chen 2018). Further, studies in Japan of wind sites on mountainous terrain found that 39% of 259 sites where New Energy and Industrial Technology Development Organization (NEDO) had been able to study the sites with measured data extrapolated to measure data to 80m height, had exceeded Turbulence Class A of IEC 61400-1. Furthermore, reports done by NEDO in Japan between 2004 and 2012 indicate that 84% of 1,516 accidents happened at wind turbines in complex terrains. Accidents were even more common in

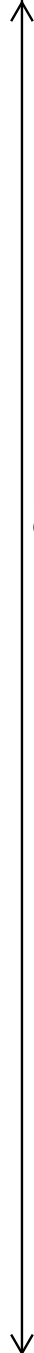
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winter at complex terrains since they reduce access to the turbines and energy density is higher with higher wind speeds. Examining the SCADA of one damaged bearing indicated that extreme loads when wind blew from SSW with extreme wind shear had shortened fatigue life. The study also found that “bearing fatigue life is inversely proportional to the load during rotor rotation. Hence, when the rotation stops for a certain range of wind speed and direction, in other words, when a sector curtailment is applied, the equivalent dynamic load on the bearing declines increasing the fatigue life” (Watanabe and Uchida 2015).

The Hatchet Ridge Report indicated one curtailment in July 2011 when PG&E limited energy to 30 MW for 9 hours to accommodate emergency transmission work but winds were low at the time so it was thought to have little impact on at least project production and three small curtailments occurred in 2012 (Garrard Hassan 2013). Given that in the amount of time we were given to address this DEIR we are now about to have our 3rd Public Power Safety Shutoff curtailment appears that it would be a substantial issue for Hatchet Ridge as well as this Project not including other cumulative projects mentioned in relation to work on the Round Mountain Substation and other infrastructure hardening projects by PG&E to make up for their negligence to power lines. These PSPS events are expected to last for at least 10 years. Each shutoff then would substantially increase fatigue life as would other times power outages occurred or other conditions presented resulting in curtailment. These shutoffs would also mean that conditions would not be suitable wind for turbines to operate anyway as there would be too much wind. Though turbulence from wind speed and shear can also lead to fatigue of components when the blades are not operational.

Due to just these facts alone a study before acceptance of this project or at least conditional upon this study should be necessary to demonstrate it can achieve design standards. If 39% of the sites in mountainous regions in Japan exceeded Design Standards I imagine that there is good reason to believe that this site will as well since it has much variability in slope, and wind changes in both speed and direction. This report should have properly informed us of whether this project could meet that expected design standard and that it could safely and efficiently been constructed. Further, such a study could warrant other mitigation measures besides setback requirements. “The agency [will] not be allowed to hide behind its own failure to gather relevant data. CEQA places the burden of environmental investigation on government rather than the public. If the local agency has failed to study an area of possible environmental impact, a fair argument may be based on the limited facts in the record. Deficiencies in the record may actually enlarge the scope of fair argument by lending a logical plausibility to a wider range of inferences.” (Sundstrom v. County of Mendocino (1988) 202 Cal.App.3d 296, 311, 248 Cal.Rptr. 352; see also Christward Ministry v. Superior Court (1986) 184 Cal.App.3d 180, 197, 228 Cal.Rptr. 868 [fact that initial study checklist was incomplete and marked every impact “no” supported fair argument that project would have significant environmental effects].) Gentry v McMillin Communities (1995) Given that there appears to be no study or evidence indicating that this will not be a problem I think the county should reasonably explain how this will not be a problem or do a study verifying this will not be a problem. This is not a simply soil study to verify micro-siting but a study that verifies the entire ability of the project area to allow for design standards to be met. Deferring it to the future seems problematic if the whole basis of this project is to meet a certain objective and that most mitigation will including adhering to applicable design, building codes and standards. This then should also be judged to see if it can comply with design guidance for Wind Turbines set by International Agencies that have



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addressed this topic and if the site cannot actually meet such standards it should not be placed here.

Hatchet Ridge and other studies cited note that SCADA alone could not make up for this problem. SCADA is designed to warn operators of system failure before problems occur but assumes all sensors work. SCADA cannot make up for defects caused by poor wind turbine siting on complex terrain or variations in wind shear and wind turbulence.

The only mitigation addressed here is turbine setbacks – this would be insufficient for the problems described above. Further, the reasoning for the chosen set back distances is not backed by any substantial evidence. While it’s noted that how far a blade or blade fragment is thrown if it becomes separated from the turbine is affected by multiple variables was a mathematical formula or some other analysis used to project how far based on specific site conditions such as changes of elevations, larger than normal turns, blades rotating faster than smaller ones and up to 300 mph and average wind speed? The setback given here seems to be seen as appropriate given the other jurisdictions setback requirements. However, I am not sure who set this standard or why as it would seem as information given states that variables would be unique to each project. According to CEQA thresholds should be based on significant evidence defined in the CEQA statute to mean “facts, reasonable assumptions predicated on facts, and expert opinion supported by facts” (14 CCR § 15064.7(b)). It appears the study just randomly looked at setbacks required by law in other jurisdictions. Considering that 3 of the jurisdictions had laws that required 3 times and not 2 times the height while other’s had 1.5, it is unclear exactly how this number was picked. Was it arbitrary or was something else used to reach this threshold? How can a conclusion be reached from 5 random laws without understanding how they decided on these setback thresholds? Is there no literature out there that supports the number you came to or offer how to dictate this? This does not seem like significant evidence or that it is in anyway supported.

Thresholds of significance are not conclusive and do not excuse the lead agency from considering evidence that a significant impact may nevertheless occur. *Protect the Historic Amador Waterways v. County of Amador* (2004) 116 Cal. App. 4th 1099:

In my conversation with Devon Tassen he explained one accident where a small residential windmill he had worked on had a 25 ft. blade yet it ended up 1500 ft. away. Without a mathematical equation here to input all the variable described above it would seem that a 25 ft. blade, rotating much faster at a higher elevation and at terrain higher than the residents nearby that the potential distance of a turbine height of 679 feet that it would have the potential to go much further than set back standards included here. In that one example the blade flew 60 times farther than 25 feet. If that 60 times was applied to a 679 foot wind turbine the distance would be 16,975 feet or over 3.2 miles. Perhaps that is a worst case scenario - it is difficult to know considering the wind industry has great reason to keep these things from us and the discussion in this section does not give any examples of how far blades or fragments have been thrown. However, considering the speed of the blades, elevation, and other variables I imagine 3.2 miles is not a worst case scenario. Since I have no idea what the other counties used to make their determination or what other information was used to establish set back besides looking at standards adopted by various counties it is not really clear if this is an appropriate standard or evidence to support this.

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It is also interesting that something that could lead to turbine failure seems more probable than an accident or problem with hazardous materials. According to the project, this document and the wind industry these failures never happen and Wind Turbines are completely safe. “Tower failure and blade through are rare” falling somewhere between 1-100 and 1,000 per year. That is quite a difference in probability. So either there is a 1% chance or a .001 percent chance of failure. Decisions that require risk assessment may vastly differ based on that number. With the first number that would mean if the project had 72 wind turbines and we include the wind turbines from the Hatchet Ridge project than a 1 in 100 means that we could expect 1 to fail each year. Depending on the type of failure, time of year and other conditions of such failure uncertain it is uncertain what the impact of that 1 turbine failure is. Of course, if it is 1 out of 1000 in a year than we should feel pretty safe as the number of turbines is smaller since that means failure would be 1 every 10 or 100 years resulting in maybe just 4 failures in the 40 years of the operational period. I’d be curious if incidents increase or decrease based on the size of the turbine and other factors. Of course, I am sure the American Wind Energy Association’s confirmation of this vast range of failure rates is completely unbiased as I am unaware of any agency they are required by law to report to. As noted in earlier comments nuclear and other energy is held to strict safety standards and reporting standards. This has yet to be implemented in the Wind Industry and since companies like to keep that information to themselves sufficient studies have likely been kept to themselves unless a large problem can’t be hidden. According to one study only 10 percent of turbine accidents and failures are reported. That would drastically change the information provided here. Also in personal conversation with Devon Tassen, who owned a wind turbine business for over 40 years he states that accidents happen much more often than we think. His turbines were much smaller in size compared to these turbines. Further, he has been involved in wind and hydroelectric power and stated from his experience accidents occurred much for frequently with wind than the other two methods of renewable energy production he had experience with.

Further setbacks fails to address that fires account for a significant portion of accidents/failures at wind turbines. Setbacks do not address the safety hazard of blades falling and potentially sparking a wildfire or a bird colliding with the turbine catching on fire and being projected from the turbine. Considering it would be in proximity to heavy fuel load in a high fire risk area if lightning or a failure at the nacelle level occurred what potential is there for the blades to throw fire off them into the forested area and start a wildfire? And would an extreme event that could be considered as leading to turbine failure a wildfire coming from outside the project area? What type of failure or problems could be possible if that (a large possibility and not some worst case scenario) happened?

Research has also uncovered that near miss lightning strikes can, over time, damage the blade as much as an actual lightning strike. But absent from this discussion is the fact that the wind turbines actually draw lightning to them because of their height and the materials they are made of. If this year is not a good enough example of how lightning can result in massive wildfires I am not sure what other evidence would be needed to state that there is no good reason to attract more lightning to the vicinity around a forest in a very high risk fire area. Even if lightning does not result in damage to the turbine the indirect effect of attracting lightning that made it surrounding areas should at least be addressed somewhere. I include it here simply because there is mention of lightning.

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Impact 3.11-4: During normal operation, weather conditions could lead to ice shed from turbine blades, resulting in a potential hazard. (*Less-than-Significant Impact*)

This conclusion is not supported with sufficient evidence. The report I referenced above on Hatchet Ridge indicates that ice shed led to various problems. This seems to only evaluate the problems of ice shedding to safety of individuals however that is not the only potential hazard. In fact, it notes that a number of pad-mount transformers were damaged to various degrees from ice shedding, that ice shedding led to damage that led to significant downtime to met tower downtime and at times made the area less accessible to workers. (Garrard Hassan 2013). This should address hazards to the turbines, transformers, transmission lines and operation and maintenance of the project. The impacts and possible maintenance. Safety is not the only hazard that exists. The DEIR states SCADA would detect any problems the report at Hatchet Ridge found that in fact SCADA and sensors were impaired and were more likely to be faulty in such weather conditions.

Security such as those listed in this document such as no trespassing signs were not enough to stop a break in at Hatchet Ridge Wind. . In March of 2016, three people broke into the site. During their break in they stole a truck worth \$48,500 and another \$15,000 in stolen property though it is unclear if the items found stolen were from other places or from the Hatchet Ridge Wind Farm (Hill 2016).

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Hydrology and Water Quality

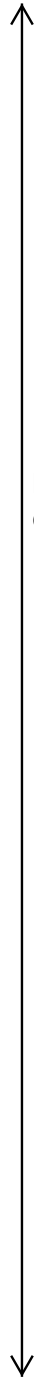
This section is not addressed adequately. It improperly evaluates water availability and quality based on a total of 33 wells for an area with a population that needs much more water than 33 wells. It states that groundwater storage and groundwater basin is not well understood. . “However, well yields in these rocks are relatively low and range between 1.5 and 63 gallons per minute (gpm) based on available well completion report data (DWR, 2018) for wells located within 1 mile of State Route (SR) 299 and within 2 miles of the proposed O&M facility” Appendix I p.1.3

“It is understood and believed that water demand from other uses overlaying this fractured volcanic bedrock terrain is very low and is limited to scattered residences. The County is not aware of any historic or current concerns about groundwater shortages for any existing users and is not aware of any future development that is planned for this area that would create a new large source of demand for groundwater.” Further, According to State Water Resources Control Board Division of Water Rights (SWRCBDWR) there is one surface water rights adjudication in the southern portion of the Project for Cedar Creek and North” (1.3). With a document attached I will show this assumption to be false. The attached Court document from the Superior Court of California Shasta County Decree No. 87524. This is from a water board’s court case pertaining to the Willow, Minnow and Dunn Creeks and other water tributaries from

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their headwaters to the outflow of into Montgomery Creek in Shasta County CA. It also include water in subterranean streams which flow in known and definite channels and which contribute to the Willow Creek System (p. 2). The water refers to a map (not actually included, but said to be included) was prepared in 1978, 1979 and at the time of the hearing in 1983. Riparian rights known for this system were known pre-1914. It also states “Future activation of unexercised riparian rights and rights of future appropriation are subject to the maintenance of a minimum flow of 0.5 cfs in Willow Creek at the Fender’s Ferry Bridge upstream of the confluence of Willow Creek with Montgomery Creek to provide protection of fish life. It then lists approximately 25 names under Schedule 1 and 5, 25 under section 2, 9 under schedule 3 and 3 under schedule 4. Some of these state how much of the riparian rights are specific amounts and it is noted that those with riparian rights are entitled to the Entire Flow of the Spring but mentions how many acres they serve. For example, Schedule 3 which is Willow Creek. 3 diversions are given to Buffington, L, Jr. and Bull, Charlie E both have entire flow of spring. The rest under them are classified by first and second priority and how much water allotments in Cubic feet per second they can get. It also states how many acres served.



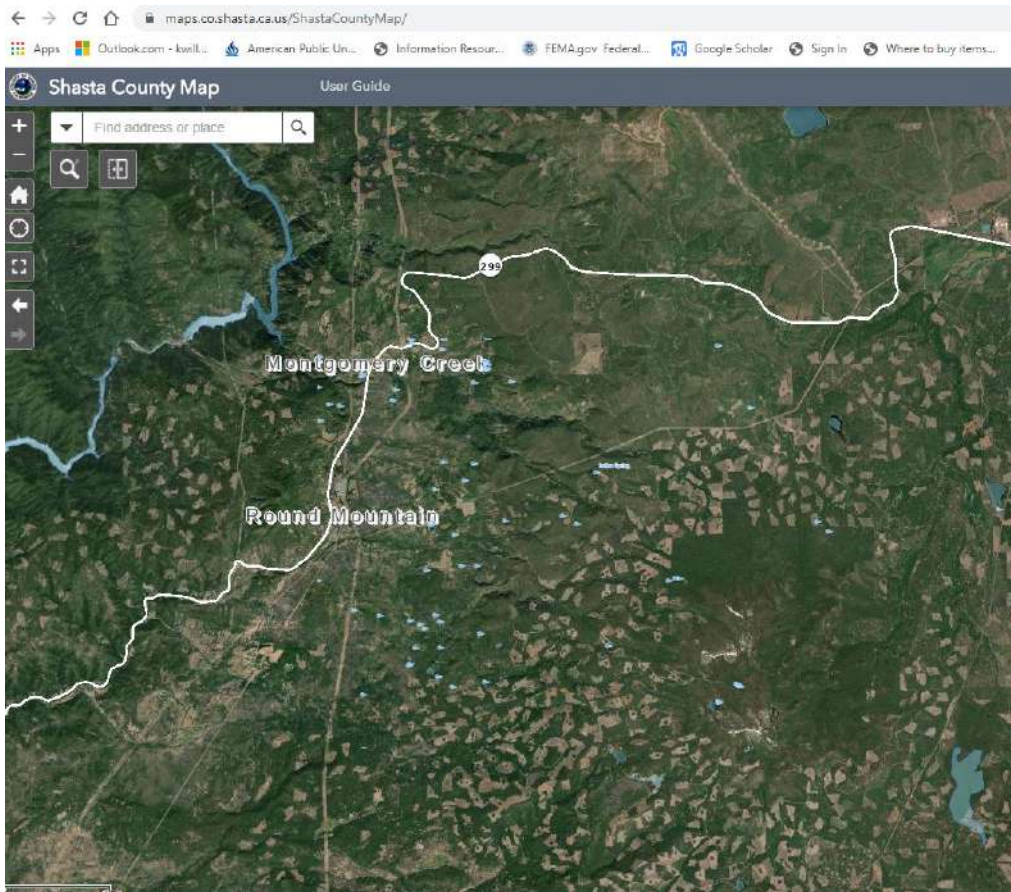
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cont.

Schedule 3				
Allotments to Various Claimants From Willow Crrek				
Allotments in Cubic Feet Per Second				
Name	Use	Area Served in Acres	First Priority	Second Priority
Buffington	Domestic		Entire Flow of the spring	
Buffington	Irrigation	8	Entire Flow of the spring	
Buffington	Domestic		Entire Flow of the spring	
Bull	domestic, irrigation, Fire	10	Entire Flow of the spring	
Stanbaro	Domestic , Stockwatering Irrigation	8	0.01	
Colbert	Irrigation	15		0.13
Gates	Domestic Irrigation and Rec.	6		0.15
Gabriele	Domestic Irrigation	30	0.01	0.06
Pacific Gas and Electric II Co	Stockwatering		350 Gallons a day	
Bertagna	Domestic Irrigation and Stockwatering	10	0.01	0.1
Harber	Domestic Irrigation	1	0.01	0.01

The other schedules show location of diversion point, claimants from Minnow and Dunn Creeks and post-1914 Appropriative Water Rights. I included just the last name and as many of these owners have changed since the publication but this gives some idea of the amount of water coming just from Willow Creek System. Considering the creek has been used since before 1914 it is clearly a dependable spring that produce sufficient water needs. People are concerned about activities like blasting, excavation, road building or anything that might divert the creek in a new direction. We depend on this for life. I imagine there are other springs such as this that flow through the area and people rely on. The majority of people do rely on water rights such as this. I have the Buffington property which was originally bought in 1930 by my Great-Grandma). There are definitive clear cut channels where it runs down directly adjacent to this project site. While you can see a defined water on the surface it seemingly comes out of nowhere out of a

very shallow area through the sides of the channels meaning the water is very close to the surface before getting to my spring. This I believe is one of the most important issues for all of those who live here. This issue was essentially ignored in both this section and in the Appendix and instead made conclusions based on 33 wells. The wells do not seem to have been measured for ability or water quality. But most people here do get their supply of water from water rights based on riparian and other types of water rights.

1 The little blue spots indicate spring sources and does not include all known springs.



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cont.

We cannot survive without this water. It is a gravity fed spring so we do not pay electricity to get the water. We are very concerned that the water can be contaminated through the construction process not limited to but especially the blasting aspect of it or that the water flow may shift the direction and leave us without water altogether. Sadly, this section does not take any account for what would happen if the water supply is somehow adversely affected and

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how the situation should be remedied. People who have rights to water and experience no expense to have such water should not be expected to than pay for water if the project results in a change to the flow or quality of water. There is no compensation or mitigation for the loss of such water. This needs to be addressed.

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cont.

a) Whether the Project would violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality.

Impact 3.12-1: The Project would, unless mitigated, violate water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality during construction and decommissioning. (*Less than Significant with Mitigation Incorporated*)

Activities in and near Water.

To avoid and/or minimize potential impacts on water quality (and jurisdictional waters) during construction- and decommissioning-related project activities that would be conducted near (i.e., within 50 feet), in, or over waterways, the project contractor shall implement the following standard construction BMPs to prevent releases of hazardous materials and to avoid other potential environmental impacts:

1. In-stream construction shall be scheduled during the summer low-flow season to minimize impacts on aquatic resources. If instream construction takes place during higher flow seasons, the following measures shall be implemented:
 - a. Minimize mechanized equipment use below top of bank of streams;
 - b. Perform activities in accordance with all permit conditions and best practices; and
 - c. Have environmental monitors on-site to monitor instream construction to ensure compliance with permit conditions and best practices.
2. All construction material, wastes, debris, sediment, rubbish, trash, etc., shall be removed from the Project Site daily during construction and decommissioning, and an authorized upland disposal area.
3. Consistent with the Project’s Hazardous Materials Business Plan (HMBP) and Spill Prevention Control and Countermeasures Plan (SPCC), construction workers shall receive training prior to construction/decommissioning and protective measures shall be implemented to prevent accidental discharges of oils, gasoline, or other hazardous materials to jurisdictional waters during fueling, cleaning, and maintenance of equipment, as outlined in the Project’s HMBP. Equipment used to perform construction work on the Project Site shall be maintained in accordance with manufacturers’ protocols, and, except in the case of failure or breakdown, equipment maintenance shall be performed off-site. Crews shall check heavy equipment daily for leaks; if a leak is discovered, it shall be immediately contained and use of the equipment shall be suspended until repaired. The source of the leak shall be identified, material shall be cleaned up, and the cleaning materials shall be collected and properly disposed.
4. Vehicles and equipment shall be serviced off-site, or, if on-site service is necessary, in a designated location a minimum distance of 100 feet from drainage channels and other waterways. Fueling locations shall be inspected after fueling to document that no spills have occurred. Any spills shall be cleaned up immediately.

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Will this maintain some monitoring/reporting program? Will it require specific performance standards? How will these best business projects make this less than significant? If you do somehow impact water qualities to springs, or change the flow of the water so that springs that have been established for over 100 years how will this be remedied. It should not have to be with a well with water we have to now pay the electricity to pump or to have no water when the power does go out. This could significantly increase our cost of living if we now have to pay for water when we are not used to this. Regardless though this does not address what will happen if the water does somehow get impacted. Or what standards are considered necessary to maintain quality and flow.

Impact 3.12-2: Blasting, if it occurs, could substantially degrade groundwater quality. (*Less than Significant with Mitigation Incorporated*)

Mitigation Measure 3.12-2: Best Management Practices for Blasting.

All activities related to blasting shall follow Best Management Practices (BMPs) to prevent contamination of groundwater including preparing, reviewing and following an approved blasting plan; proper drilling, explosive handling and loading procedures; observing the entire blasting procedures; evaluating blasting performance; and handling and storage of blasted rock.

(1) **Blasting Plan.** Prior to conducting the first blast on the Project Site, the Applicant shall prepare and submit a detailed blasting plan to the Shasta County Department of Resource Management and the Shasta County Sheriff's Department. The blasting plan shall contain a complete description of how explosives will be safely transported and used at the site; evacuation, security and fire prevention procedures; blasting equipment list; and procedures for notification of nearby receptors. The blasting plan shall explain how the Applicant will comply with the requirements of 30 CFR §§816.61 through 816.68 regarding the use of explosives to be consistent with the technical requirements of the statute. Procedures for notification shall include, but not be limited to, the following: a. At least 30 days before initiation of blasting, the operator shall notify, in writing, all residents or owners of dwellings or other structures located within 0.5-mile of the permit area describing how to request and submit a pre-blasting survey. Notification shall include posting a written notice within the Project Site, and on the County's public website describing how to obtain and submit a pre-blasting survey.

b. A resident or owner of a dwelling or structure within 0.5 mile of any part of the permit area may request a pre-blasting survey. This request shall be made, in writing, directly to the operator or to the regulatory authority, who shall promptly notify the operator. The operator shall promptly conduct a pre-blasting survey of the dwelling or structure and promptly prepare a written report of the survey detailing the results.

c. The operator shall determine the condition of the dwelling or structure and shall document any pre-blasting damage and other physical factors that could reasonably be affected by the blasting. Structures such as pipelines, cables, transmission lines, and cisterns, wells, and other water systems warrant special attention; however, the assessment of these structures may be limited to surface conditions and other readily available data.

d. Prior to finalizing the blasting plan, the County or designated operator shall consult with jurisdictional authorities tasked with protecting waters of the state and implement avoidance and minimization measures, as required by CDFW, USACE, and regional water quality (Section 401) regulatory permits prepared for the Project. Such protective measures shall be included in the blasting plan and/or incorporated by reference.

(2) **Loading practices.** The following blast hole loading practices to minimize environmental effects shall be followed:

a. Drilling logs shall be maintained by the driller and communicated directly to the blaster. The logs shall indicate depths and lengths of voids, cavities, and fault zones or other weak zones encountered as well as groundwater conditions.

b. Explosive products shall be managed on-site so that they are either used in the borehole, returned to the delivery vehicle, or placed in secure containers for off-site disposal.

c. Spillage around the borehole shall either be placed in the borehole or cleaned up and returned to an appropriate vehicle for handling or placement in secured containers for off-site disposal.

d. Loaded explosives shall be detonated as soon as possible and shall not be left in the blast holes overnight, unless weather or other documented safety concerns reasonably dictate that detonation should be postponed.

e. Loading equipment shall be cleaned in an area where wastewater can be properly contained and handled in a manner that prevents release of contaminants to the environment.

f. Explosives shall be loaded to maintain good continuity in the column load to promote complete detonation. Industry accepted loading practices for priming, stemming, decking and column rise shall be attended to.

(3) **Explosive Selection.** To reduce the potential for groundwater contamination when explosives are used, explosive products shall be selected that (a) are appropriate for site conditions and safe blast execution, and (b) have the appropriate water resistance for the site conditions present to minimize the potential for hazardous effect of the product upon groundwater.

(4) **Prevention of Misfires.** Appropriate practices shall be developed and implemented to prevent misfires.

(5) **Blast Rock Pile Management.** To reduce the potential for contamination, the interaction of blasted rock piles and storm water shall be managed to prevent contamination of water supply wells or surface water.

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This inadequately defers mitigation by not setting any specific performance standards. Though some examples of mitigation measures are given they are not supported with any substantial evidence that such a plan will do what it is intended to do. What is considered “substantially degrading groundwater quality?” How can degradation of water occur by blasting? What would the exact impact you are trying to mitigate be? How will this be monitored, when and by whom? “[Impermissible deferral of mitigation measures occurs when an EIR puts off analysis or orders a report without either setting standards or demonstrating how the impact can be mitigated in the manner described in the EIR.” *Clover Valley Foundation v. City of Rocklin* (2011) 197 Cal.App4th 200, “An EIR is inadequate if ‘the success or failure of mitigation efforts, may largely depend upon management plans that have not yet been formulated and have not been subject to Analysis and review within the EIR” *Communities for a Better Environment v. City of Richmond* (2010)

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P45-143
cont.

b) Whether the Project would substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.
Impact 3.12-3: The Project could decrease groundwater supplies or interfere with groundwater recharge such that the project may impede sustainable groundwater management of the basin. (*Less-than-Significant Impact*)

The water study was improperly done and did not adequately take into account water usage or supply. Two options are given either water being delivered from Burney or Wells being constructed. “In context, the Project’s annual water requirements for operation and maintenance would be roughly equivalent to 22.6 households in California.” How many households in the project vicinity could be impacted and what is their usage rate? Known of this information is given. 22.6 households is not significant on a statewide level but 22.6 households is significant on the area around the project site whose water comes from sustainable groundwater management of the basin and specifically where this Project site is located. Without any proper analysis of usage or comparison to this area the water study was inefficient and failed to disclose or find the relevant information it was intended to find. Further, the DEIR fails to give any other evidence to reach such conclusions if a proper water study was not conducted to begin with.

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c) Whether the Project would substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: i) Result in substantial erosion or siltation on- or off-site; ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite; iii) create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff; or iv) impede or redirect flood flows.
Impact 3.12-4: The Project would, unless mitigated, substantially increase siltation of waterways or provide substantial additional sources of polluted runoff during construction and decommissioning. (*Less than Significant with Mitigation Incorporated*)
Mitigation Measure 3.12-4: Implement the water quality best management practices during activities in and near water that would be required by Mitigation Measure 3.12-1.

How will this be monitored, when and by whom? What are the performance measurement standards required? “[Impermissible deferral of mitigation measures occurs when an EIR puts off

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analysis or orders a report without either setting standards or demonstrating how the impact can be mitigated in the manner described in the EIR.” *Clover Valley Foundation v. City of Rocklin* (2011) 197 Cal.App4th 200,
 “An EIR is inadequate if ‘the success or failure of mitigation efforts, may largely depend upon management plans that have not yet been formulated and have not been subject to Analysis and review within the EIR” *Communities for a Better Environment v. City of Richmond* (2010) Stilt is often released into waterways during timber harvesting and road construction projects. How will the best management practices actually help mitigate the impact?

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d) Whether the Project would conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

Impact 3.12-5: The Project would, unless mitigated, conflict with implementation of the Central Valley Basin Plan. *(Less than Significant with Mitigation Incorporated)*

Mitigation Measure 3.12-5a: Implement the water quality best management practices during activities in and near water that would be required by Mitigation Measure 3.12-1.

Mitigation Measure 3.12-5b: Implement the best management practices for blasting that would be required by Mitigation Measure 3.12-2.

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Inadequate discussion of the impacts of what would happen if it conflicts with or obstructs with the Central Valley Basin Plan. In fact does not discuss at all any potential impact. This fails to meet CEQA requirements of being an informational document. Could this also interfere with California’s Safe Drinking Water Act, the Clean Water Act or Senate Bill 200? No performance standards, monitoring, or reporting included. See above comments on inadequacy.

Noise and Vibration

Infrasound or levels of sound with frequencies below the lower limit of 20 hz notes the “potential it may have to cause neurological and physiological disorders resulting in feelings of sea sickness, annoyance, fatigue, pressure of tinnitus (ear ringing), sleep disturbances or sleeplessness, headaches or vibroacoustic disease” and references Appendix J. Appendix J simply is an explanation of scoping comments and has found in other projects of this report it appears that these particularly symptoms were merely copied and pasted from scoping comments in this case concerns of the public (Appendix J p. 17).

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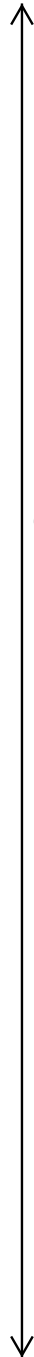
While a very brief discussion follows about infrasound it explains that because frequency of less than 20 Hz or the normal limit of hearing and that “...hearing becomes gradually less sensitive as frequency decreases, the sound pressure must be sufficiently high for humans to perceive infrasound. However, no evidence is used to back this claim nor the claims submitted in the scoping comments. Thus, it inadequately addressed whether this actually is a possible health impact on residents near the project. This becomes significant if there are health impacts since it would mean that both those closest to the turbines and those further away may have some adverse health impacts related to this low audible noise.

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Had they conducted more research on the topic they may have discovered that there are in fact peer review articles that address this issue and that there are court cases that specifically have addressed the issue even though sounds was less than 20 hz. For example, in Falmouth, MA 41 families complained to city leaders that they were experiencing physical symptoms shortly after wind turbines (only 262 ft. tall) were installed. However, when these residents went traveled out of town noticed the symptoms became absent. This concern eventually made its way to court – twice and then eventually to an appeals court. In the original decision ruled by Judge Christopher Muse “ ‘The court finds the Andersens’ claims that they did not experience such symptoms prior to the construction and operation of the turbines, and that each day of operation produces further injury, to be credible... ‘Continued operation of the turbines at previous levels put residents at risk of ‘irreparable physical and psychological harm’” The Judge then ordered that operating hours of the turbines had to be limited to the hours of 7 AM and 7 PM, could not operate on Sundays nor on Thanksgiving, Christmas or New Year’s (Associated Press 2013),

This at least set some legal precedent that in fact low noise levels by turbines even at inaudible levels posed some risk to public health. The same area than faced another challenge on the cities second turbine and to was ordered to halt operations of the 397 ft. turbine in June of 2017. In this case, the Funfars (a different family) complained that Mr. Funfar “suffered increased stress, anxiety, insomnia and nausea. He also experienced panic attacks and suicidal thoughts” but these symptoms subsided when they left they travelled. It was noted that Mr. Funfar did suffer from Post-Traumatic Stress Disorder, depression and alcohol dependence prior to construction of the turbines but Judge Moriarty wrote “ ‘I find that his symptoms have been significantly exacerbated by their operation” (Perkins, 2017). These cases eventually did make it to an appeals court where the decisions were not only upheld but denied that they could be presented further to the Supreme Judicial Court (Legere 2018). Is legal precedent not considered evidence?

One author explains that a body of peer review literature regarding this subject (and might I add other topics addressed in this paper) are lacking since large-scale wind turbines are a relatively new technology and have not yet had time to be properly researched. Furthermore, he notes one expert has indicated that “some effects of chronic noise exposure such as elevated blood pressure could take one or two decades to manifest at significant levels” (Ryan, 2014) Ryan notes that while nonauditory health effects are still lacking sufficient evidence, as in the case of wind turbines, that it has been established that there is a relationship between noise and health impacts. He states that according to the World Health Organization whose definition of health is defined as “ ‘a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity”” and that WHO “concludes that noise issued annoyance “may be considered an adverse effect on health”” (Ibid). He then explains that the annoyance by Infrasound in the case of wind turbines can be attributed to the “swoosh” to “thump” to silence that varies based on wind speed and direction and that “this pulsing uneven quality enables the noise to repeatedly capture the attention and become more difficult to ignore... and that these lower frequencies are likely to travel through walls and windows than higher frequencies” (Ibid).



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Further studies have also indicated that infrasound and wind turbines have perhaps a more profound influence on noise for those living near wind turbines. “Due to the air absorption, the higher low-frequency content becomes even more pronounced, when sound pressure levels in relevant neighbor distances are considered. Even when A-weighted levels are considered, a substantial part of the noise is at low frequencies, and for several of the investigated large turbines, the one-third-octave band with the highest level is at or below 250 Hz. It is thus beyond any doubt that the low-frequency part of the spectrum plays an important role in the noise at the neighbors” (Moller, Pedersen 2011). The fact that noise actually may be more prominent than this report states or addresses is the fact that there is now an “International Wind Turbine Noise Conference” held annually. According to professor Patricia Davis of Purdue University “Noise-con is beginning to see nearly as many sessions organized around wind turbine noise as in all categories of transportation noise combined” (Ryan 2014). That in itself is significant and means that the noise of turbines and its affect are being explored extensively but since this a relatively newer field and turbines are getting larger conclusions may not yet be clear but this in no way means that there is no correlation as the few studies I highlighted above do indicate there is one. One should not forget this is how science evolves. In many illnesses and affects like transportation noise it took many years and in some cases decades to establish the effects and significance. Considering there is some peer-related literature related to the topic and court case decisions validating such concerns this cannot simply be ruled out or diminished.

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The study conducted to evaluate wind speed (Appendix G – p 17. on ambient noise seems insufficient to give an accurate assessment. Conclusions are “Higher wind speed may result in a stronger correlation; however, based on the data reviewed, the noise environment at these sites is not directly correlated with wind speed.” P. 18 Any study requires that multiple measurements are taken at various times of the year to get a clear picture and in order to accurately conclude that it does not correlate with wind speed. In fact, looking at weather information for Round Mountain, which is not exactly where these weather stations are located, but was the closest proximity to the location I could find. The average wind speed is lowest June- August than previous months with April and May having much higher wind speeds. October in fact results in the most PSPS shutoffs due to wind speed perhaps this do could have given better understanding. This would indicate that the sample size for this study is too small to warrant any sort of conclusion and should have studied wind conditions in April in May for better analysis and conclusions on the effects of wind on ambient noise. (https://files.ceqanet.opr.ca.gov/123569-2/attachment/US3S9YwbetXEKWGboRzaXVM9FD3FEHSPq6B_cP5GjSQXuteswFzxKcT3IJCUIEO6pgqHif9agEC5Qkns0.)

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Further it was unclear based on the description if the measurements were taken over a 24 hour period, only during construction peak hours or when exactly during the days listed measurements were taken. Or was it every 10 minutes during the entire days sampled? I also assume that the studies have been concluded that sufficiently analyze the wind in these areas in order to select the site location as an appropriate site for producing wind energy. This data should have been known and I wonder why these statistics would not have been analyzed to see when wind would possibly show higher speeds if the study really wanted to know how ambient noise was affected by wind speed. Also, was any model used to project how this wind effect

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would relate to the noise produced by construction or only to normal levels as according to Figure 3 higher wind speeds certainly increased the sound pressure level over 50 and at times close to 55 where the long term measurement was closer to 35? From my understanding of the analysis this means that during construction times when the Sound Pressure Level is higher than the normal levels in these areas it could increase sound 15 – 20 dBA higher at wind speeds over 6 m/s. Is this explained or accounted for anywhere and what would the results be when wind speeds were higher than what was observed?

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While I realize that the goal was to see these effects where residential structures are the closest and most likely to be affected. It could be useful to see if other weather stations that may not be as close in proximity, yet still close, could confirm that wind would not significantly increase ambient noise levels. Considering there is a base of peer review studies and court cases acknowledging that infrasound can have adverse health effects this too should have been studied from more than just the four locations chosen or given more justification as to why these different conclusions were ignored.

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Furthermore, how was the decision made that noise levels would be assessed based on windows being closed as many people in the area may not have air conditioners and may rely on opening their windows to cool their homes or save money on utility costs. This seems to be a broad assumption and is it just expected that residents should have to close their windows during construction periods if they do not want the noise to affect them- leaving them to choose between a hotter house, higher electricity bills or the annoyance of noise? It also assumes that residents will always be inside their homes during construction periods and does not take into account that a community like Moose Camp where residents occupy the area more regularly during the summer months for leisure and recreation may be outside enjoying the outdoors as do other residents in surrounding areas. Should this be accounted for or are the assumptions used acceptable for CEQA?

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Transportation

This section fails to address possible damage to the road caused by the project, whether the applicant, county or state will be responsible for covering the cost to any road damage incurred by the project. This should have been addressed and I did see on CEQANET that this was a question raised by someone in the planning department but not addressed here. An indirect effect of this project could lead to damaging of roads. This could result in further construction, further travel delays as a result of fixing damaged roads and could in itself have more environmental impacts based on the fact that the roads may need to be fixed. Is there a reason this analysis was not done or options to mitigate such impacts were not addressed in this report. Circulation in the General plan states “A second consideration is associated with limited funds to construct needed road improvements including new construction and maintenance.” (7.4.06) It continues saying “An overview of the road maintenance problems facing Shasta County in the future is described in the 2001 Regional Transportation Plan (RTP) which states ‘... most street and road systems are either deteriorating faster than funding will allow them to be

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maintained, or are becoming overloaded due to population growth and the resultant residential and commercial development.” (7.4.09) And again under C-11b “The County shall consider viable methods and refine its strategy for assessing fees on new development to address the impact of additional development on the County’s transportation system. New development shall provide a prorata share of its financial impact on the County’s transportation system” and C-11e “The County shall assess fees on new development to address the impact of additional development on the County’s transportation system.” Yet, this is not discussed further despite being a great concern to the county?

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cont.

a) Whether the Project would conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.
Impact 3.14-1: The Project could conflict with a program plan, ordinance or policy addressing the circulation system. (*Less-than-Significant Impact*)

There is absolutely no discussion or reasoning included to demonstrate how it complies with the policies the report outlines under the Shasta County General Plan: Policy C-6j, C-6k, and C-6l except for projected level of service under normal. In particular there is no substantial evidence that it will not interfere with C-6j regarding emergency access for emergency responders or provide escape by residents/occupants. This policy states new development will “provide circulation improvements for such.” It is discussed elsewhere in the report that it will have a new road that will help Moose Camp Residents potentially evacuate it does not substantially prove that such improvements will be made or feasibly can be made.

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There is also no discussion if this would impact regional transportation plans or state transportation plans. Further, the discussion of level of service does not include the delays later mentioned when heavy/oversized loads require shutting down traffic lanes.

b) Whether the Project would conflict or be inconsistent with CEQA Guidelines §15064.3(b).
Impact 3.14-2: The Project could conflict or be inconsistent with CEQA Guidelines Section 15064.3(b). (*Less-than-Significant Impact*)

§15064.3(b) (4) Methodology. A lead agency has discretion to choose the most appropriate methodology to evaluate a project’s vehicle miles traveled, including whether to express the change in absolute terms, per capita, per household or in any other measure. A lead agency may use models to estimate a project’s vehicle miles traveled, and may revise those estimates to reflect professional judgment based on substantial evidence. Any assumptions used to estimate vehicle miles traveled and any revisions to model outputs should be documented and explained in the environmental document prepared for the project. The standard of adequacy in Section 15151 shall apply to the analysis described in this section.

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15151. STANDARDS FOR ADEQUACY OF AN EIR: An EIR should be prepared with a sufficient degree of analysis to provide decision makers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation

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of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure.

While the method here may be applicable and useful there is no discussion explaining why it was used, what it calculates or how it helps come to this conclusion. Nor does it discuss if there are any limitations with the model used. While the appendix goes into more detail and CEQA guidelines state more technical analysis is best left for the appendix it would have been helpful to include a short summary of that discussion especially where any mitigation measures that were proposed and why this methodology was chosen.

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c) Whether the Project would substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

Impact 3.14-3: The Project would, unless mitigated, substantially increase safety hazards. *(Less than Significant with Mitigation Incorporated)*

Mitigation Measure 3.14-3: Traffic Management Plan.

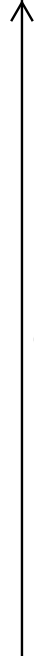
Prior to the issuance of construction or building permits and prior to the removal of materials from the Project Site during decommissioning, the Applicant shall:

1. Prepare and submit a Traffic Control Plan to Shasta County Public Works Department and the Caltrans offices for District 2, as appropriate, for approval. The Traffic Control Plan must be prepared in accordance with both the Caltrans Manual on Uniform Traffic Control Devices and Work Area Traffic Control Handbook and must include, but not be limited to, the following:
 - a. A plan for communicating construction/decommissioning plans with Caltrans, emergency service providers, and residents located in the vicinity of the Project Site.
 - b. An access and circulation plan for use by emergency vehicles when lane closures and/or detours are in effect. If lane closures occur, provide advance notice to local fire departments and sheriff’s department to ensure that alternative evacuation and emergency routes are designed to maintain response times.
 - c. Timing of deliveries to/removals from the Project Site of heavy equipment and building materials;
 - d. Directing vehicles, pedestrians, and bicyclists on SR 299 through the construction zone with a flag person;
 - e. Providing detours to route vehicular traffic, bicyclists, and pedestrians around lane or shoulder closures, if they occur;
 - f. Providing adequate parking for construction trucks, equipment, and workers in the designated staging areas within the Project Site;
 - g. Placing temporary signage, lighting, and traffic control devices if required, including, but not limited to, appropriate signage along access routes to indicate the presence of heavy vehicles and construction/decommissioning traffic, and the placement of traffic cones to provide temporary left-turn lanes into Project driveways as needed;
 - h. Preserving access to existing ingress/egress points for all adjacent property at all times; and,
 - i. Specifying both construction/decommissioning-related vehicle travel and oversize/overweight vehicle haul routes.

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2. Obtain all necessary encroachment permits for the work within the road right-of-way or use of oversized/overweight vehicles that will utilize county maintained roads, which may require California Highway Patrol or a pilot car escort. Copies of the approved traffic plan and issued permits shall be submitted to the Shasta County Public Works Department and Caltrans.

3. Consult with the Shasta County Public Works Department and Caltrans to identify any substantial construction activities on SR 299 that may overlap with construction of the Project (e.g., Caltrans SR 299 resurfacing project from Milepost 60.0 to 67.8). Coordinate with the contractor(s) of any identified project(s) to ensure that overlapping construction activities do not cause unnecessary delays on SR 299 or preclude the ability of large vehicles to access the Project Site.



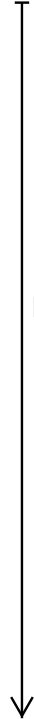
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As discussed above, mitigation can be deferred if acceptable performance standards that are enforceable, specific “feasible measures” are proposed” and a monitoring/reporting plan are implemented. No statement indicates the Lead Agency will adopt the plan only that a plan will be created. None of this is discussed. There is no evidence that the road can feasibly support the load or if/what modifications could be required if the road does need to be altered to transport the larger pieces of equipment. There is no discussion of economic feasibility or that the road can handle such capacity. “An EIR is inadequate if ‘the success or failure of mitigation efforts, may largely depend upon management plans that have not yet been formulated and have not been subject to Analysis and review within the EIR” Communities for a Better Environment v. City of Richmond (2010).

d) Whether the Project would result in inadequate emergency access.

Impact 3.14-4: The Project would, unless mitigated, result in inadequate emergency access. (*Less than Significant with Mitigation Incorporated*)

Mitigation Measure 3.14-4: Implement the Traffic Management Plan that would be required by Mitigation Measure 3.14-3.



P45-155

Above comments – especially under Wildfire. This cannot be deferred. Please prove that an alternate evacuation route and emergency response times are actually feasible and include information on what current response times are. It took 20 minutes for the first truck to reach the Fountain Fire. That area was much more easily accessible than most of the project site as it did not include dirt roads with steep grades and sharp turns. I have watched fire trucks go up my logging road and seen that they are slowed down significantly by the weight of their vehicles, the rough road conditions and the steep inclines. Again, no performance standards listed, no monitoring or reporting plan. This refers to a plan that will be created in the future that has not been proven to be feasible or even possible. This project should not be approved if it cannot substantially prove that the mitigation measures outlined above are achievable as it literally will put people’s lives at risk.

"[Impermissible deferral of mitigation measures occurs when an EIR puts off analysis or orders a report without either setting standards or demonstrating how the impact can be mitigated in the manner described in the EIR." *Clover Valley Foundation v. City of Rocklin* (2011) 197 Cal.App4th 200,

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“An EIR is inadequate if 'the success or failure of mitigation efforts, may largely depend upon management plans that have not yet been formulated and have not been subject to Analysis and review within the EIR” *Communities for a Better Environment v. City of Richmond* (2010)

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Utilities and Service Systems

a) Whether the Project would have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years.

Impact 3.15-1: The Project would have sufficient water supplies available to serve the Project for the reasonable and foreseeable future development during normal, dry, and multiple dry years. (*Less-than-Significant Impact*)

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Not supported on evidence since the water study was done inefficiently as addressed under hydrology and only included 33 wells which is entirely illogical considering the number of people who live here and the fact there is no public utility system providing water. Would this require a permit or would water for sure be supplied by Burney somehow?

Conclusion

This is already too long. In order try and quickly summarize.

I do not support this project as I believe that it creates too much of a risk and the benefits have not proven to justify the impact. The project objectives in fact are unachievable and alternatives improperly ignored. Scientific evidence and government plans were ignored to meet one narrow objective. Biomass is clearly more suitable and efficient use of land and resources than wind in this area. Many plans are left with vague details and insufficient information involving performance standards or even compliance with the plan. Mitigation is not shown how it can mitigate impacts. Improper conclusions were drawn that allowed short-cutting the CEQA process while leaving the public and decision-makers in the dark about many of the impacts involved. Studies in the future do not require any standards or that the applicant or contractors comply with such findings. Further wind studies and geotechnical studies seem necessary to prove the project can even comply with design standards. Multiple areas of State plans and County plans are inconsistent with this project. This document seems to violate CEQA in multiple ways outlined *exhaustively* above. There is a clear lack of transparency. Significant facts that the County knew of were omitted – likely intentionally. Research standards are based on the applicants and their contractors in the current and past wind projects that are not held to scientific standards. Due diligence was not done by the Leading Agency to ensure compliance with CEQA standards. Studies such as hydrology were improperly and insufficiently done. The project itself cannot demonstrate how it meets its own objectives and in fact will worsen the greenhouse gas emission problem more than it will help it. It improperly concludes that wildfires can be reduced to less than significant levels with mitigation (which is vague). It ignores the facts of the Fountain Fire while naming itself after one of the most destructive wildfires in California State History. Multiple conclusions are based on just one particular component of a hazard impact while failing to address the actual impact stated. Mitigation for other problems are misused to treat others i.e. pre fire prevention plan and post fire landslides.

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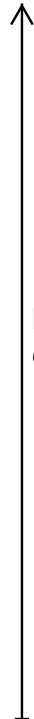
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Cumulative impacts such as climate change and existing utility infrastructure are ignored and improperly used to establish baseline only even though cumulatively they will increase hazards combined with the risks of the project itself.

If the final EIR is accepted it first must address many of the aspects that are inadequately discussed or analyzed and at the least – significant impacts that were not identified need to be recirculated to the public in accordance to CEQA requirements. Further, if the project is approved by the County it should rely more on independent researchers who are not paid by the companies to “verify” that impacts are not significant i.e. bird mortality studies. I hope the County holds itself to a higher standard for further projects – the burden placed on the public to check the Lead’s Agency’s work is not justified. Finally, if the County does approve this project – I expect them to *state that despite the fact that the lives of the people in this area are put at even more risk due to this project that their lives are outweighed by the unreliable and unattainable objectives and benefits of this project. It should also include why this area is expected to carry all of the risks associated with these type of projects for the County. I also put the county on notice that the County will be held liable for wildfires or other hazards that result are a result of this project or that is worsened because of it.* What was it BOS, Les Baugh said? How do you mitigate a life?

Kelly Willett Tanner

Kwillett2@hotmail.com



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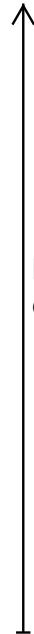
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Letter P45: Kelly Willett Tanner

- P45-1 The commenter’s general opinion is acknowledged. Specific responses will be provided below in the context of specific comments.
- P45-2 See Final Section 2.1.1, *Input Received*, which explains that questions of grid reliability are beyond the scope of this EIR.
- P45-3 The Draft EIR considers the potential impacts of the Project as a whole to wildfire in Section 3.16 (at page 3.16-1 et seq.). The analysis was performed in reliance on professional and environmental standards. It considers input received during scoping (Draft EIR at page 3.16-1, Appendix J, *Scoping Report*), reference materials cited in Section 3.16.5 (at page 3.16-28 et seq.), and the professional technical resource expertise of the preparers of the EIR (Draft EIR Chapter 5). Conclusions are based on facts and analysis, rather than opinions. Acknowledging that the commenter may prefer to see more or different analysis in this regard, the County chooses to rely on the data, other information and analysis documented in the Draft EIR.

The Project’s potential carbon sequestration-related impacts, including from tree removal, are analyzed in Draft EIR Section 3.10, *Greenhouse Gas Emissions*. See pages 3.10-12 and 3.10-12, which describe the methodology used, and the analysis of Impact 3.10-1 (at page 3.10-13 et seq.). See also Table 3.10-2, *Estimated Annual Operational Greenhouse Gas Emissions* (at page 3.10-16), which expressly considers the amortized loss of carbon sequestration over 40 years in the context of the Project.

- P45-4 Contrary to the suggestion in this comment, wind power is not a new development in California. As explained in a fact sheet prepared by the American Wind Energy Association,⁸⁷ “California led the world in wind energy development throughout much of the 1980s and 1990s.” While the proposed towers under consideration in 2021 may be taller than what previously was commercially available, the types of potential impacts that wind projects can cause on the physical environment are known. The County considers those potential impacts in this EIR, the scope of which was informed by requests made to agencies and members of the public for additional information about potential impacts of concern, and potential alternatives and mitigation measures. Input received informs this analysis.

New utility-scale wind turbine technologies do not become commercially available without prior testing and certification. For example, the U.S. Department of Energy’s “Wind Energy Technologies Office invests in and works with partners on the development of testing facilities that support research and certification of wind turbine technologies at the component, turbine, and wind plant levels.”⁸⁸ Further, “Department of Energy test facilities have been used to perform highly accelerated life testing. These

⁸⁷ American Wind Energy Association, 2021. Wind Energy in California. <https://www.awea.org/Awea/media/Resources/StateFactSheets/California.pdf>. Accessed January 12, 2021.

⁸⁸ US DOE Wind Energy Technologies Office, 2021. Wind Testing and Certification. <https://www.energy.gov/eere/wind/wind-testing-and-certification>. Accessed March 11, 2021.

test facilities support office collaboration on industry codes and standards development, including components and system design requirements, testing requirements, measurement techniques (load, power quality, and acoustics), modeling techniques, safety concerns, and conformity testing and certification.” (Id.). The County reasonably relies on the relevant technical expertise of the Department of Energy and need not speculate or make unfounded assumptions about potential safety concerns as part of the CEQA process.

P45-5 All Project workers would be required to comply with the provisions of work safety laws as well as the safety-related mitigation measures and conditions of approval imposed as part of any Project approval. Further, responding to possible concerns about wind project-specific emergency response needs in the context of this EIR, the County requested a call log from the Shasta County Fire Marshal for the time period and area that covers the Hatchet Ridge Wind Project site construction and/or operational periods (approximately 2008 through the date of the request (March 3, 2021). No emergency response services have been needed by that project, which has been in operation for more than a decade. The CAL FIRE Communications Operator’s response to the county’s request for input was as follows: “There are no emergency incidents to report directly related the Hatchet Wind Farm from 01/01/2008 – 03/04/2021. Only incidents to report are 313 OESA (Alarm Testing) notification calls into the ECC to advise of the test status.”⁸⁹ General concerns about a “safety culture” within the industry are acknowledged. However, the comment does not provide enough information about specific concerns for the County to provide a more detailed response.

P45-6 The information regarding wind turbine accidents is acknowledged. However, without more information about what types of accidents are referred to in the article, the County is unable to provide a more detailed response. See generally Draft EIR Section 3.11, *Hazards and Hazardous Materials*, which analyzes the potential for the Project to create a significant hazard to the public or the environment. See, e.g., Impact 3.11-2, involving a release of hazardous materials into the environment (at page 3.11-10 et seq.), Impact 3.11-3, involving tower failure or rotor failure (at page 3.11-12 et seq.), Impact 3.11-4, involving ice shed (at page 3.11-14 et seq.), Impact 3.11-5, involving pesticide application (at page 3.11-15 et seq.), and Impact 3.11-6, involving shadow flicker (at page 3.11-16).

P45-7 The EIR has been prepared by the County, not the company that proposed the Project.

The County has exercised what the commenter refers to as “due diligence” in the preparation of the EIR. The EIR is supported by credible science-based research, reference materials, and informed professional judgments of qualified scientists and EIR preparers. Technical studies and analyses relied upon are cited in each section of the Draft EIR; additional Project-specific or Project Site-specific analyses are provided in the appendices for ease of access and review by other agencies and members of the

⁸⁹ CAL FIRE, 2021b. Email from Aaron Williams, Communications Operator, CAL FIRE – SHU to Jimmy Zanotelli, Fire Marshal, Shasta County Fire Department. March 4, 2021.

public. Materials have been published, peer-reviewed or independently reviewed on the County's behalf, follow applicable protocols, and otherwise are believed to be appropriate for consideration in the EIR.

Representatives of the County and members of the County's environmental consultant team (identified in Draft EIR Chapter 5 as including Environmental Science Associates and subconsultants) who have the relevant professional credentials and experience independently reviewed all Applicant-provided studies and technical reports on behalf of the County. The review included consideration of whether the studies were suitable for reliance in combination with other sources of data informing the analysis of potential environmental impacts of the Fountain Wind Project. In making this determination, the County's reviewers considered whether: the work has been performed in accordance with appropriate standard of skill and care, basic assumptions are reasonable and consistent with the elements of the Project description, the methodology is sound, conclusions reached are reasonable. Any errors or omissions were reported for correction or clarification, or were corrected by the preparers of the EIR in the text of the Draft EIR itself. Corrections or clarifications received from the Applicant similarly were reviewed.

It is not clear what landslide scar the comment refers to. Response P45-71 refers to a turbine location "I5," which is not an attribution included in the Project Description. Regardless of whether the landslide scar mentioned in this comment and in Comment P45-71 are the same, the Draft EIR acknowledges the presence of landslide hazards within the Project Site and assumes that all proposed development would need to evaluate landslide risk whether a scar is present or not. No construction would occur in a turbine location without evaluating landslide hazard risks in accordance with geotechnical engineering practices and building code requirements. See Response P45-71 for additional information about what the commenter refers to as "I5."

It is not clear from the comment what evidence is believed to have been withheld from the public. Without this information, the County cannot include it.

- P45-8 See Response P12-1, which explains that no information that meets CEQA definition of "significant new information" has been developed or received since the issuance of the Draft EIR.
- P45-9 The County disagrees with the suggestion that the EIR "rarely looks outside of Appendix G of CEQA for impacts." To the contrary, the Draft EIR analyzes potential impacts relating to electric and magnetic fields (Section 3.1.4.5), wind turbine syndrome (Section 3.1.4.17), communications interference (Section 3.5), tower failure or rotor failure (at page 3.11-12 et seq.), ice shed (at page 3.11-14 et seq.), pesticide application (at page 3.11-15 et seq.), and shadow flicker (at page 3.11-16). None of these considerations are identified in the Environmental Checklist in CEQA Guidelines Appendix G. The commenter does not identify any specific Project-caused changes that would result in a potential significant impact outside of the Appendix G checklist.

For all potential impacts analyzed, whether or not the consideration is identified in CEQA Guidelines Appendix G, the significance of the Project-caused change is evaluated relative to the environmental setting, which is described on a resource-by-resource basis throughout Chapter 3. See Section 3.1.2.1, *Environmental Baseline*, for more information.

- P45-10 WEST and Stantec are consultants to the Applicant, and provided or contributed to the Applicant-prepared studies provided in appendices to the Draft EIR. The Applicant's consultants are not identified in Draft EIR Chapter 5, *Report Preparation* (at page 5-1 et seq.) because they did not prepare the EIR. See Response P34-49 regarding the County's practice for the consideration of applicant-prepared materials. The County and its consultant team prepared the report and are identified in Draft EIR Section 5.1, Lead Agency, Section 5.2, *Consultant*, and Section 5.3, *Subconsultants*.
- P45-11 The EIR preparation and decision-making process represent the County's independent judgement. The county contracted for SHN's consultation on this Project exclusively for the County as an extension of staff. Bruce R. Grove was specifically assigned to coordinate SHN's consultation services with the County, and his credentials are included in the record. The County disagrees with the suggestion that Mr. Grove's prior employment establishes a conflict of interest in the context of this Project.
- P45-12 These comments about the Applicant's consultant are noted; however, because Stantec did not prepare the Draft EIR and because all Stantec-prepared studies submitted on behalf of the Applicant have been independently reviewed by the County and its consultant team, these concerns are beyond the scope of the CEQA process for this Project. See Response P45-11 regarding the County's consultant, Mr. Grove of SHN.

The analysis of potential impacts to geology and soils in Draft EIR Section 3.9 (at page 3.9-1 et seq.) was performed using the methodology described in Draft EIR Section 3.9.3.1 (at page 3.9-14) and environmental standards. It considers input received during scoping (Draft EIR at page 3.9-1, Appendix J, *Scoping Report*), reference materials cited in Section 3.9.5 (at page 3.9-22 et seq.), and the professional technical resource expertise of the preparers of the EIR (Draft EIR Chapter 5). Conclusions are based on facts and analysis, rather than opinions. Acknowledging the commenter's personal experience, the County chooses to rely on the data, other information and analysis of impacts of the Project within the study area identified in Draft EIR Section 3.9.1.2 (at page 3.9-3) as documented in the EIR. The comment alludes to "landslides located underneath proposed turbines." However, without providing information about which locations are recommended for further investigation, the comment does not provide sufficient detail to allow the County to provide a detailed response. See Response P45-7 and Comment P45-71, each of which references a landslide scar at a turbine location that was unable to be identified in the context of the EIR. Regardless, there is no intent in the Draft EIR to omit, avoid or otherwise minimize the potential landslide hazards present at the site. The Draft EIR concludes that landslide hazards are present and that all proposed development

including the turbines would be required to be evaluated for landslide hazards in accordance with current geotechnical engineering practices and building code requirements.

- P45-13 The Court’s decision in the *Lotus* case speaks for itself. It is unclear from the comment which “certain factors” proposed as part of the project description are of concern to the Applicant in the context of the analysis in Draft EIR Section 3.9. Without some information about which impacts may require additional review, the comment does not provide sufficient detail to allow the County to devote additional attention to resolve the concern.
- P45-14 The county acknowledges this question about County decision-makers’ backgrounds; however, this concern does not bear on the sufficiency of the EIR.
- P45-15 Consistent with CEQA, the Draft EIR summarizes technical data, maps, plot plans, diagrams, and similar information sufficient to permit decision-makers and members of the public to make a full assessment of the potential impacts of the Project and alternatives. Decision-makers will consider all information in the record, including but not limited to studies and assessments developed or received during pre-scoping and scoping process, as well as during the development of the EIR, and in hearings on the EIR following the issuance of the Final EIR. The County acknowledges the holding in the *Sierra Club v. Fresno County* decision, and believes that the EIR satisfies the requirements of CEQA. All of the documents referenced in the comment that were accessible following the County’s receipt of the comment have been posted on the Project website where the Draft EIR was hosted and are available for public review.
- P45-16 The County is well-aware of the fire history within and near the Project Site. See Draft EIR Section ES.2.2 (at page ES-2) and Section 2.2 (at page 2-3), which describe the project location by reference to the Fountain Fire burn scar; Section 3.16.1 (at page 3.16-1 et seq.), which describes the environmental setting for the analysis of potential impacts relating to wildlife; and Section 3.1.3.1 (at pages 3.1-5 and 3.1-6), which describe the area’s fire history as part of the cumulative scenario. See Draft EIR Section 3.1.2.1, *Environmental Baseline* (at page 3.1-1), which explains that the environmental setting also generally is referred to as the “baseline” relative to which Project-caused changes are analyzed to determine whether the change is significant for purposes of CEQA (CEQA Guidelines §§15125, 15126.2). Wildfire considerations are documented in Section 3.16, *Wildfire*, which acknowledges that CAL FIRE has assigned a “Very High Fire Hazard Severity Zone” rating throughout Shasta County, and that Round Mountain, Montgomery Creek, and Burney all are listed as communities at risk by CAL FIRE’s Office of the State Fire Marshal (Draft EIR at page 3.16-1). See also the discussion of Impact 3.16-2 (Draft EIR at page 3.16-16 et seq.), which concludes that the Project would, unless mitigated, exacerbate wildfire risks, and which recommends mitigation measures to reduce the potential impact to a less-than-significant level. By disclosing these impacts in their local and regional

context, the EIR will inform decision-makers about the potential environmental consequences of the Project.

- P45-17 See Response T2-3 regarding project objectives and their role in the screening of potential alternatives. Objective No. 9 is correctly stated in Draft EIR Section 2.3, *Project Objectives* (page 2-6), as to provide emissions-free energy for approximately 100,000 households. Different information about an objective might be stated on the Applicant’s website; however, that does not in itself affect the sufficiency of the EIR. Nonetheless, receipt of this different information (i.e., that the project could power approximately 86,000 homes rather than 100,000) has been included in the record, where decision-makers may consider it as part of their deliberations. See Response P26-8, which explains that County decision-makers will balance the Project’s relative benefits and impacts as part of the decision-making process. It should also be noted that the last paragraph under *Cogeneration* and the first paragraph under *Solar* in Draft EIR Section 2.5.2.3, *Alternative Technologies* (see page 2-32), incorrectly indicate that the objective is to provide emissions-free energy for 86,000 households. Therefore, the last paragraph under *Cogeneration* in Draft EIR Section 2.5.2.3 has been revised as follows:

“A cogeneration alternative to the Project was not carried forward for more detailed consideration because it would not result in a commercial wind energy generation facility capable of generating up to 216 MW of wind energy and would not provide emissions-free energy for approximately ~~86,000~~ 100,000 households, since there is no basis to assume that the energy it would generate would even offset the power required to operate the associated biomass facility much less contribute to other PG&E ratepayers.”

In addition, the last sentence in the first paragraph under *Solar* in Draft EIR Section 2.5.2.3 has been revised as follows:

“A solar project alternative would not result in the development, construction, and operation of a commercial wind energy generation facility capable of generating up to 216 MW of wind energy and, based on geographic considerations, would not reasonably be expected to offset approximately 128,000 metric tons of carbon dioxide emissions generated by fossil fuels or provide emissions-free energy for approximately ~~86,000~~ 100,000 households.”

- P45-18 See Final EIR Section 2.1.1, *Input Received*, which explains that comments about financial matters are beyond the scope of the CEQA process for this Project. The statement about the Applicant’s mission is acknowledged, but does not bear on the sufficiency of the EIR’s analysis of the potential environmental impacts of the Project.
- P45-19 Questions about the Applicant’s experience with wind projects is acknowledged and has been included in the record, where the County may consider it as part of the decision-making process. The comments provided here are beyond the scope of the CEQA analysis for this Project.

P45-20 See Response P20-15, which explains the relationship between the numbers, heights and locations of the proposed turbines, and regarding the adequacy of the project description.

P45-21 The comment correctly states that CEQA does not require an EIR to address Environmental Justice. Such considerations may, however, be considered as part of the County's deliberations on the requested use permit. This comment has been included in the record, where it may be considered as part of that process. With that said, the Draft EIR does analyze the types of human health and environmental considerations generally evaluated as part of an environmental justice analysis. See, e.g., Section 3.3 (Air Quality), Section 3.10 (Greenhouse Gas Emissions), Section 3.11 (Hazards and Hazardous Materials), Section 12 (Hydrology and Water Quality), Section 3.2 (Aesthetics), Section 3.6 (Cultural and Tribal Cultural Resources), and Section 3.13 (Noise).

Separately, potential impacts to bats and other biological resources are analyzed in Section 3.4. As analyzed and disclosed in the Draft EIR, the Project would have a significant and unavoidable impact with regard to potential mortality and injury to raptors as a result of collisions with wind turbines and electrical transmission lines and mortality and injury to bats, including special-status species. These significant unavoidable impacts also would be cumulatively significant and unavoidable. See Impact 3.4-3 (Draft EIR at page 3.4-41 et seq.) and Impact 3.4-18 (at page 3.4-75 et seq.). The suggestion that the related indirect effects on mosquitoes would have a significant adverse impact on human health purposes of CEQA is not supported by the evidence, nor by any information provided in this comment.

P45-22 Impacts to Tribal Cultural Resources are analyzed in Draft EIR Section 3.6. Regarding communications with and consideration of concerns expressed by the Tribe and tribal members, see Final EIR Section 2.3.2, *Responses to Comments from Tribal Entities and Members*. Questions of financial and other community benefits are beyond the scope of CEQA. See Final EIR Section 2.1.1, *Input Received*, for more detail in this regard.

See Response P26-8, which explains that County decision-makers will balance the Project's relative benefits and impacts as part of the decision-making process. While the EIR as a whole is focused primarily on potential adverse impacts, the project description in Chapter 2 does identify potential local economic, social, and infrastructure-related benefits. For example, property taxes would be paid to the County, lease payments would be made to the landowner, and local jobs would be created.

P45-23 See Draft EIR Section 1.4.5, *Findings of Fact* (at pages 1-7 and 1-8) and Response P26-8 regarding the necessary CEQA findings and the County's decision-making process.

P45-24 The County acknowledges these concerns about the potential environmental effects of the Project, which are disclosed and analyzed in the Draft EIR. See Response P8-4, which explains where the Draft EIR analyzes potential impacts on mental and physical health and safety.

P45-25 The comment correctly states that financial questions are beyond the scope of the CEQA process. However, separate from the CEQA process, such considerations may be weighed as part of the decision-making process.

Potential impact related to vehicle miles traveled (VMT) are addressed in Draft EIR Section 3.14, *Transportation*. See, e.g., page 3.14-6, which provides information about the analysis; pages 3.14-7 and 3.14-8, which describe the methodology used; and page 3.14-12 et seq., which evaluate potential impacts in the context of Impact 3.14-2. The analysis concludes that the Project would result in a less than significant impact.

See Response P17-5 regarding the Project's consistency with the Shasta County General Plan and Zoning Plan.

P45-26 See Response P20-15 for more information about the proposed turbines. See also Response P20-25, which responds to the same concerns expressed here about the identity of the manufacturer, turbine components, and the EIR's analysis of the potential environmental impacts. See Response P4-2, which provides that the turbine blades would likely be made of fiberglass.

P45-27 See Response P45-7 regarding the quality of information relied upon in preparing the EIR.

The County acknowledges receipt of these comments, and the commenter's concerns about potential effects of the Project. Nonetheless, without some indication of what the commenter believes to be incorrect or missing, the comment does not provide enough information to allow for a detailed response.

The County values, sought, and has relied upon input received as part of the CEQA process to further inform the research and analyses that are documented in the EIR. See Draft EIR Section 1.4 *CEQA Process Overview* (at page 1-3) and Final EIR Section 1.1, *Agency and Public Involvement*, which describe the public outreach efforts made as part of the CEQA process for this Project. For example, the information provided during the scoping process (Draft EIR Appendix J, *Scoping Report*) was considered on a resource by resource basis and informed the development of Alternatives 1 and 2.

P45-28 These comments regarding the process for the TANC project are acknowledged, but do not bear on the sufficiency of this EIR's analysis and the potential impacts of the proposed Project.

P45-29 The commenter's educational background and degree are acknowledged.

- P45-30 See Response P45-16 regarding the County’s consideration of the area’s relationship with wildfire and how wildfire considerations have been addressed in the Draft EIR. The commenters’ opposition to the Project based on wildfire considerations and thoughts on the relative weight of potential benefits and impacts are acknowledged.
- P45-31 See Response P26-48 which discusses SB 901.
- P45-32 As stated in Draft EIR Section 2.3, *Project Objectives* (at page 2-6), Objective No. 1 is to develop, construct, and operate a commercial wind energy generation facility capable of generating up to 216 MW of wind energy. The comment does not include any data or information to support the commenter’s statement that the Project cannot reliably achieve this objective. The County acknowledges the commenter’s opposition to the Project and has noted it in the record, where the County may consider it as part of the decision-making process. To the extent the comment poses a choice to be made between a healthy forest and climate change energy standards, the balancing of such interests is within the purview of County decision makers.
- P45-33 See Response P17-5 regarding the Project’s consistency with the Shasta County General Plan and Zoning Plan.
- P45-34 The County acknowledges the commenter’s opinion that the wildfire analysis is vague. As further explained in Response P29-4, the EIR (including the wildfire section) is supported by credible science-based research, reference materials, and informed professional judgments of qualified scientists and EIR preparers. The discussion of “significance after mitigation” (at page 3.16-16) explains why the potential significance of Impact 3.16-1 (potential substantial impairment of an adopted emergency response plan or emergency evacuation plan) would be reduced to a less than significant level with the implementation of the Traffic Management Plan that would be required by Mitigation Measure 3.16-1a and the pre-construction coordination with CAL FIRE that would occur as required by Mitigation Measure 3.16-1b. It says, “With implementation of Mitigation Measure 3.16-1b, CAL FIRE would have the information necessary to plan for aerial firefighting with the Project in place. This would allow CAL FIRE to identify locations for retardant or water drops within the Project Site and would allow for the planning of flight plans around the Project Site. With the implementation of Mitigation Measure 3.16-1b, impacts would be reduced to a less-than-significant level.”
- Impact 3.16-2 considers the potential for the Project to exacerbate wildfire risks and expose people to pollutant concentrations or a significant risk of loss, injury or death from a wildfire or the uncontrolled spread of a wildfire. The analysis concludes that the Project’s potential significant impact would be reduced to a less than significant level with the implementation of the fire safety measures that would be required by Mitigation Measure 3.16-2a; the nacelle fire risk reduction measures of Mitigation Measure 3.16-2b; and the Emergency Response Plan that would be required by Mitigation Measure 3.16-2c. The rationale for the conclusion is provided on page 3.16-22, which says, “Implementation of Mitigation Measure 3.16-2a (Fire Safety),

Mitigation Measure 3.16-2b (Nacelle Fire Risk Reduction), and Mitigation Measure 3.16-2c (Emergency Response Plan) would require the Applicant and its contractors to implement fire safety measures to prevent fire and be prepared to respond immediately if a fire should ignite, and would require collaboration with area fire protection agencies to reduce the risk of wildfire ignition and spread. This impact would be reduced to a less-than-significant level.”

Impact 3.16-4 considers the potential for the Project to expose people or structures to significant risks, including adverse water quality effects or downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. The analysis concludes that the Project’s potential significant impact would be reduced to a less than significant level with the implementation of the Fire Safety measures, Nacelle Fire Risk Reduction measures, and Emergency Response Plan. The rationale for the conclusion is presented on page 3.16-24, which says: “With implementation of these measures, the risk of flooding, mudslides, and slope instability associated with post-fire conditions would be addressed with a detailed Fire Prevention Plan, fire risk reduction measures in turbines, and an emergency response plan. Therefore, this impact would be less than significant.”

- P45-35 See Response P45-16 regarding the County’s consideration of the area’s relationship with wildfire and how wildfire considerations have been addressed in the Draft EIR. The County acknowledges that the commenter’s input is based on academic research, and consistent with CEQA, notes that a difference of opinion based on facts does not call into question the validity of the analysis and conclusions documented in the EIR. The identification of a significant impact for purposes of CEQA relies on the impact of a proposed project compared to baseline conditions. The significance of the Project’s impact is the incremental change the Project would cause. Therefore, based on the mitigating effects of the actions required in mitigation measures for wildfire impacts, the County’s conclusion that the Project’s impact would be less than significant with mitigation is appropriate.
- P45-36 These additional details about the Fountain Fire are acknowledged and have been included in the record where they may be further considered by County decision makers; however, they do not indicate that the Draft EIR’s description of existing environmental conditions or analysis of Project impacts is inadequate. Therefore, a more detailed response is not provided.
- P45-37 See Draft EIR page 3.1-22, which discloses that the local fire agencies serving the unincorporated areas of Shasta County include “12 community fire districts (including Burney), 19 volunteer fire companies (including Montgomery Creek).” Receipt of this information about the CAL FIRE Hillcrest Station and the Montgomery Creek Station is acknowledged, has been reviewed, and is included in the record. Because the additional background information does not affect the sufficiency of the EIR’s analysis or conclusions, no revisions to the Draft EIR have been made in response to this comment.

Receipt of the additional information about the number of Shasta County firefighters and funding also is acknowledged. This information is beyond the scope of CEQA, but has been included in the record where it may be considered by decision-makers in their deliberations on the requested use permit. The County further acknowledges the commenter's preference that no new ignition sources be added to the baseline condition.

- P45-38 As noted in Response P45-37, the County acknowledges the commenter's preference that no new ignition sources be added to the baseline condition.
- P45-39 See Response P45-16 regarding the County's consideration of the area's relationship with wildfire and how wildfire considerations have been addressed in the Draft EIR. Information provided in the comment is acknowledged, but does not bear on the sufficiency of the EIR's analysis of Project impacts.
- P45-40 Receipt of this additional information about firefighting resources is acknowledged, but does not bear on the sufficiency of the EIR's analysis of Project impacts.
- P45-41 The comment correctly quotes the Draft EIR's disclosure in the context of its description of the cumulative scenario, which has been considered on a resource-by-resource basis throughout Chapter 3, that "the area near the Project Site 'can expect future fires to be more damaging'" (Draft EIR at page 3.1-6). The County does not, as is suggested in the comment, deny these facts. Instead, these facts pervade the analysis: The potential cumulative effects of the Project in all resource areas are evaluated in the context of the ongoing effect of past projects and events, including the area's fire history and risk trend.
- P45-42 The County acknowledges receipt of this additional input about the Fountain Fire. As explained in Response P45-3, the Project's potential carbon sequestration-related impacts, including from tree removal, are analyzed in the Draft EIR.
- P45-43 The contribution of the area's fire history and past timberland conversion to the cumulative context are described in the Draft EIR (at page 3.15 et seq.) and considered in resource-specific analyses. As explained in Response P45-3, the Project's potential carbon sequestration-related impacts, including from tree removal, are analyzed in the Draft EIR.

The suggested likelihood that "climate change... may make it impossible to revert the environment back to its prior use" is acknowledged. However, the adverse impacts of climate change cannot be attributed to the Project because the Project would provide a net benefit relative to the emission of the GHGs that cause adverse climate change effects. See draft EIR Section 3.10, *Greenhouse Gas Emissions* (at page 3.10-1 et seq.). Further, whether it would be possible to revert the environment back to its prior use is beyond the scope of the EIR, which analyzes the potential environmental impacts of the Project's proposed construction, operation, and decommissioning of a wind project. See Draft EIR Section 2.4.7, which explains the revegetation will be part of the site

restoration process. Draft EIR Section 2.4.7 (at page 2-23) says, in part, “In coordination with the landowner, disturbed areas would be replanted with trees or other appropriate vegetation. The goal of site revegetation would be to develop a vegetation cover, composition, and diversity similar to the area’s ecological setting and consistent with the landowner’s current and future land use practices.”

- P45-44 The concern suggested about the state of the forests is acknowledged. The analysis of potential Project impacts on Forestry Resources presented in Section 3.8 (Draft EIR at page 3.8-1 et seq.). It concludes that the Project would result in a less than significant impact (at page 3.8-3 et seq.). This comment does not question the sufficiency of the analysis or its conclusions.
- P45-45 To clarify, the Draft EIR does not suggest that climate change-related impacts are insignificant, but rather that the Project would not contribute to further climate change-related impacts. As explained in Draft EIR Section 3.10.4, *Cumulative Analysis* (at page 3.10-22), the Project would “offset the total GHG emissions in the state and beyond, and would not contribute to further climate change-related impacts. Therefore, the Project-specific incremental impact on GHG emissions would not be cumulatively considerable.”
- P45-46 The commenter’s opposition to the Project based on the addition of potential ignition sources is acknowledged.
- P45-47 The County acknowledges PG&E responsibility for some of the northern California wildfires. However, this does not affect the sufficiency of the EIR’s analysis of Project impacts, which evaluates the potential impacts of the Project as a whole, including the work that would need to be done by PG&E in order for the Project to proceed. See Draft EIR Section 2.4.3 at page 2-12 and Section 3.1.2.4, *PG&E Interconnection Infrastructure* (at page 3.1-3). Comments about PG&E do not bear on the adequacy of this EIR. The comment provides no information to conclude otherwise. See Response 45-63 regarding the influence of topography, fuels, weather, and terrain on wildfire behavior.
- P45-48 See Final EIR Section 2.1.1, *Input Received*, which explains that PG&E’s role in past fires, ongoing issues with infrastructure management, and grid reliability are outside the scope of this EIR.
- P45-49 See Final EIR Section 2.1.1, *Input Received*, which explains that PG&E’s role in past fires and ongoing issues with infrastructure management are outside the scope of this EIR. Contrary to the suggestion in this comment, the EIR does evaluate potential impacts associated with both accidents and fires. See, e.g., Draft EIR Section 3.11, *Hazards and Hazardous Materials*, which analyzes the potential for the Project to create a significant hazard to the public or the environment through reasonably foreseeable upset or accident conditions. See, e.g., Impact 3.11-2, involving a release of hazardous materials into the environment (at page 3.11-10 et seq.), Impact 3.11-3, involving tower failure or rotor failure (at page 3.11-12 et seq.), Impact 3.11-4,

involving ice shed (at page 3.11-14 et seq.), Impact 3.11-5, involving pesticide application (at page 3.11-15 et seq.), and Impact 3.11-6, involving shadow flicker (at page 3.11-16). Potential Wildfire impacts, as discussed in other responses, are addressed in Draft Section 3.16.

- P45-50 The County acknowledges receipt of this information about the primary and secondary impacts of power line ignitions. As the Draft EIR already analyzes potential impacts relating to air quality, ingress and egress, emergency response, and health, the association of these consequences specifically with power lines does not add new information to the analysis.
- P45-51 The qualifications of the preparers of Draft EIR Section 3.16 are available for review in Draft EIR Section 5.2, *Consultant*, and elsewhere in the County’s record. Conclusions in Section 3.16 are based on facts and analysis, rather than opinions. The commenter’s qualifications and independent research are acknowledged. The commenter’s disagreement with the conclusions in Section 3.16 are acknowledged and have been included in the record where they can be considered by County decision makers.
- P45-52 See Response P45-16, which discusses how high levels of fuel loading, high temperatures, low humidity have created ongoing, major wildfire potential in Shasta County. Specifically, the Draft EIR (at page 3.16-17) acknowledges the potential for seemingly minor activities such as the use of a hammer to ignite a wildfire: “Additionally, construction activities that could result in sparks, such as blasting, welding, or grinding, have a greater likelihood of creating a source of ignition. For example, the Ranch Fire in 2018 was determined by CAL FIRE to have been caused by an individual hammering a metal stake into concrete.”
- P45-53 The Shasta County Fire Department is the first responder for emergencies in the area, is assisted by volunteer companies, and receives mutual aid from other firefighting agencies in the County. Questions about why the County does not have an adopted evaluation plan are beyond the scope of the CEQA process for this Project. See Final EIR Section 2.1.1, *Input Received*.
- P45-54 The specifics of the Traffic Management Plan required by Mitigation Measure 3.16-1a are set forth in Draft EIR Section 3.14.3 (at page 3.14-14 et seq.). Mitigation would not be improperly deferred because, as stated in the measure, “The Traffic Control Plan must be prepared in accordance with both the Caltrans Manual on Uniform Traffic Control Devices and Work Area Traffic Control Handbook and must include, but not be limited to” the components enumerated in the measure. Further, also as stated in the measure, preparation and approval of the plan would be required “Prior to the issuance of construction or building permits and prior to the removal of materials from the Project Site during decommissioning.”
- P45-55 As explained in Draft EIR Section 3.1.4.14, *Public Services* (at pages 3.1-21 and 3.1-22), consistent with “CEQA Guidelines Appendix G Section XV, a project would result in a significant impact to public services if it would result in substantial adverse

physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives” for any of the specified public services. Consistent with CEQA, the analysis does not evaluate changes in response times (which would not be an impact on the physical environment), but rather whether the Project would result in a need for new construction or physical alterations to existing facilities (e.g., a new fire station or an expansion of an existing one). See, for example, page 3.1-23 which explains:

“The Project could increase the demand for fire protection and response services due to the possibility that Project-related vehicles or infrastructure could ignite a fire. However, this increase in potential demand would be moderated by the proposed preparation of a Project-specific Fire Prevention Plan to be prepared consistent with the directives in the Shasta County Fire Safety Standards (Shasta County, 2017), the Forest Practice Rules (CAL FIRE, 2019), CAL FIRE’s Shasta–Trinity Unit Strategic Fire Plan (CAL FIRE, 2017), and maintenance of adequate firebreaks and other fire prevention precautionary measures. Further, increases in long-term demand for fire protection services typically are associated with substantial increases in population, which would not occur as a result of the Project. See Section 3.1.3.6, *Population and Housing, Growth Inducement*. Because no new or modified fire protection facilities would be required, the Project would result in no impact relating to the construction of new or modification of existing governmental fire protection facilities.”

The Draft EIR acknowledges that ingress and egress is limited in the area around the Project Site. However, the Project’s incremental contribution to the cumulative problem has been determined not to be cumulatively considerable. No further mitigation, e.g., the development of an alternative to SR 299, is warranted pursuant to CEQA.

- P45-56 The commenter is correct that while the Project may not conflict with a specific evacuation plan, the Project could still have impacts on emergency evacuation. See Response P45-152, which discusses the potential for the Project to have an impact on emergency access and emergency evacuation. Further, Mitigation Measure 3.16-2c (Draft EIR at page 3.16-22) requires that an Emergency Response Plan be developed that, “describe the likely types of potential accidents or emergencies involving fire that could occur during both construction and operation, and shall include response protocols for each scenario. The plan shall include key contact information and a description of key processes, in the event of an emergency in order to alert relevant responders of the emergency, and how to control the emergency. The plan shall include crew member training in response, suppression, and evacuation.” This response plan would prepare both crew members and local emergency responders in response, suppression, and evacuation in the event of an emergency and would reduce impacts to a less than significant level.

The commenter identifies a number of plans related to emergency evacuation, none of which identifies a designated evacuation route for the Project. The 2019 California Hazards Mitigation Plan, as described in the comment, addresses General Plan Safety

Elements. County General Plan consistency with applicable requirements is beyond the scope of the CEQA process for this Project. OPR's Fire Hazard Planning Guidelines and the National Response Plan also do not address the adequacy or accuracy of the Draft EIR. Compliance with Mitigation Measures would be required as a condition of approval of the requested use permit.

- P45-57 The commenter's opinion that emergency response times cannot be maintained and request for an alternative evacuation plan is acknowledged. However, without more information, evidence, or facts to support this claim, the County cannot provide a more detailed response. See Draft EIR Section 3.1-22 which discusses the potential for the Project to impact emergency response. See also Response P45-55.
- P45-58 See Response P45-152, which addresses impacts to emergency access and evacuation. See also Response P26-63, which addresses how the existing lack of an emergency response plan and limited ingress and egress are considered in the analysis.
- P45-59 See Response P26-55, which discusses impacts to aerial firefighting.
- P45-60 See Response T3-2, which considers potential impacts to the safety of firefighters.
- P45-61 In addition to the 15-foot gravel ring that would be around each turbine, an area between 65 and 95 feet in diameter (depending on site conditions) would be removed from timber production and maintained as low-growing vegetation. This vegetation clearance would substantially reduce the likelihood that a spark or ember from a potential nacelle fire could ignite vegetation near the turbine site, because it would remove ignitable fuels from the area most likely to be hit by sparks or embers falling from a potential nacelle fire. Therefore, any potential spark or ember would be substantially less likely to fall in an area with substantial fuel loading.

In reviewing the Draft EIR in connection with this comment, the County noticed an error. Draft EIR Section 2.4.6 (at page 2-22) has been revised as follows:

“In the event of winds or gusts above the maximum operating parameters ~~or red flag alerts~~, the turbines would automatically shut down.”

- P45-62 The commenter claims without evidence that the conclusion under Impact 3.16.3 is incorrect. However, this conclusion is based on facts and analysis such as the potential for new roads to introduce new sources of ignition and the potential for the electrical collector system to introduce a new ignition source. The analysis concludes that the new roads could result in a significant increased potential for ignition but that implementation of Mitigation Measure 3.16-2a would reduce the increase in fire risk from new roads by requiring controls such as visual inspections for ignitions sources and carrying adequate fire suppression equipment.

The comment suggests that vegetation clearance along roads would happen once and that the analysis does not consider the ongoing maintenance of roads that would be

required. To the contrary, the environmental impacts of ongoing road maintenance is considered in the Draft EIR (at page 3.16-23), which says: “The vegetation clearances that would be maintained around roads, collector lines, turbines, and other Project components would aid in reducing wildfire risk and facilitating emergency suppression of fires should they occur, consistent with defensible space guidelines. Because these clearances are part of the project description, their construction and ongoing maintenance is analyzed as part of the Project where applicable throughout this EIR (e.g., in Section 3.4, *Biological Resources*, as relevant to wildlife habitat that would be removed to maintain clearances).”

The comment also suggests that the water required for operation and maintenance is not considered. To the contrary, the Draft EIR (at page 3.16-23) states, “Similarly, the water storage tank at the O&M facility is analyzed as part of the Project and the environmental impacts of the entire O&M facility are analyzed throughout this document on a resource-by-resource basis. No additional analysis of these fire prevention and suppression components of the Project is warranted in this impact discussion.” As described above, the water required for O&M is analyzed in the Draft EIR (at page 3.15-7), which says: “The Project would require up to 49 acre-feet of water for site clearing and construction and 5.6 acre-feet of water per year for O&M....” As described in detail above and further discussed in the Water Supply Assessment, it is expected that the Burney Water District would have sufficient supplies available to serve the lifespan of the Project even in dry and multiple dry years. Therefore, the impact would be less than significant.”

The Draft EIR concludes that the electrical collector system could introduce new ignition sources; however, the that the risk of exposing surrounding communities to exacerbated risk of the uncontrolled spread of a wildfire that could be caused by the Project and associated impacts would be less than significant. This conclusion is based on the following sources of statewide or region-wide fire prevention and suppression requirements, which would be required during operation of the proposed Project: CPUC General Orders 95, 165, and 166; Senate Bill 1028; and PG&E’s Fire Prevention Plan and Company Emergency Response Plan

Reliance on these statewide and region-wide fire prevention and suppression requirements is further supported by numerous examples in California law, policy, and regulation of support for a statewide, regional, and/or system-wide approach to wildfire management. For example, the 1993 “Bates Bill,” which introduced requirements that local agencies designate CAL FIRE-recommended Very High FHSZs by ordinance, states: “The Legislature hereby finds and declares as follows: ... The prevention of wildland fires is not a municipal affair...but is instead, a matter of statewide concern” (Government Code §51175). Additionally, the CPUC regulates utilities through general orders that identify consistent requirements for power lines based on voltage, vegetation, fire threat, and other factors. PG&E conducts annual system-wide inspections and maintenance to ensure implementation of these requirements. Comments about PG&E’s past safety

record, and decisions to implement PSPSs are beyond the scope of the CEQA process for this Project.

P45-63 See Response T3-2, which considers potential impacts to the safety of firefighters. See also Response P26-48, which discusses SB 901. The steep slopes and rugged topography and its influence on fire behavior is considered on Draft EIR page 3.16-3 under the heading “Topography.” Additionally, the influence of fuels, weather, and terrain on wildfire behavior is considered in the Draft EIR (at page 3.16-2). Specifically, the Draft EIR notes the elevated level of fire risk in Shasta County. The Draft EIR (at page 3.16-2) states, “Periodic droughts contribute to the increase in fires due to drier than normal fuel conditions. The heavy fuel loading, hot temperatures, critically low humidity, and strong north winds characteristic of Shasta County contribute to the ongoing major wildfire potential.” These conditions are considered throughout the analysis of Project impacts on wildland fire as part of baseline conditions. See Response P26-60, which addresses the potential for wind turbine fires.

P45-64 See Response P26-60, which addresses the potential for wind turbine fires. See also Response P26-55 regarding CAL FIRE’s input on the proposed Project. See Response P45-61 regarding vegetation clearance around turbine bases.

The comment suggests that Mitigation Measure 3.16-2a does not include performance standards. To the contrary, the Mitigation Measure includes many specific requirements for the contents of the Emergency Response Plan, including but not limited to the following: 1) the designation of Fire Coordinators; 2) Visual inspections of vehicles for ignitions risks; 3) Coordination with CAL FIRE regarding appropriate fire suppression equipment; 4) requiring that all construction workers receive training on the implementation of the FPP. Additionally, prior to construction, an inspector for the Shasta County Fire Department, or authorized qualified designee would be required to be present onsite to ensure that sufficient fire suppression equipment is present onsite, that the required vegetation clearances have been cleared, that a crew member training program has been created, that construction vehicles are equipped with fire suppression equipment, that spark arrestors are installed on construction equipment, that a fire conditions monitoring program has been developed, that a monitoring and inspection protocol has been developed, that a disabling and re-closing protocol has been developed, and that CAL FIRE was appropriately consulted regarding road improvements and ingress and egress. Additionally, during construction the Applicant would be required to submit a weekly FPP compliance report demonstrating the following conditions have been met: “sufficient fire suppression equipment is present onsite, that the required vegetation clearances have been cleared, that a crew member training program has been created, that construction vehicles are equipped with fire suppression equipment, that spark arrestors are installed on construction equipment, that a fire conditions monitoring program has been developed, that a monitoring and inspection protocol has been developed, that a disabling and re-closing protocol has been developed, and that CAL FIRE was appropriately consulted regarding road improvements and ingress and egress” (Draft EIR at page 3.16-21).

The County acknowledges the summary provided of the *Protect Our Homes and Hills* decision. The Court's holding and rationale based on the fact pattern presented in that case speak for themselves.

Any audit relating to the Hatchet Ridge Wind Project is outside the scope of the EIR for this Project.

P45-65 See Response P20-15, which explains the relationship between the numbers, heights and locations of the proposed turbines. See Response P26-60, which addresses the potential for wind turbine fire. See also Response P26-56, which addresses the potential for lightning strikes. As described on Draft EIR page 2-22, the turbines would be monitored 24 hours a day through the SCADA monitoring system which would allow for self-diagnostic tests, system checks, and to enable shut down of turbines in the event of high winds or gusts. In addition to remote monitoring, routine maintenance would include inspections of turbine components and inspections for leakage of lubricants, hydraulic fluids, and hazardous materials. The information provided regarding SCADA technical issues is acknowledged and is included in the record for consideration by County decision makers.

P45-66 The comment suggests that Mitigation Measure 3.16-2c does not include performance standards and does not explain how the Mitigation would reduce impacts to a less than significant level. To the contrary, the Mitigation Measure includes many specific requirements for the contents of the Emergency Response Plan, including the following: 1) a description of the likely types of potential accidents or emergencies and response protocols to respond to each of these; 2) Key contact information and a description of key processes in the event of an emergency in order to alert relevant responders of the emergency and how to control the emergency; 3) crew member training in response, suppression and evacuation. To ensure the plan includes and meets the requirements, the Applicant would be required to submit a compliance report demonstrating that all crew members have been trained. Additionally, the Applicant shall submit additional compliance reports demonstrating that new crew members have been trained on emergency response. As described on Draft EIR page 3.16-19, Mitigation Measures 3.16-2b and 3.16-2c would reduce impacts to near baseline levels by, "requiring Project turbines to be fitted with fire detection equipment, fire extinguishment equipment, and an automatic shutdown system. The incorporation of these features into turbine design would reduce the potential of a fire igniting within a turbine. Additionally, implementation of these measures would provide the full-time operation workers with the tools and training necessary to respond to a potential fire and prevent it from spreading." The implementation of the Emergency Response Plan would implement fire safety measures to prevent fire and be prepared to respond immediately if a fire should ignite, and would require collaboration with area fire protection agencies to reduce the risk of wildfire ignition and spread. Together, these mitigation measures would substantially reduce the possibility of a fire spreading beyond the Project Site.

P45-67 The commenter's inclusion of satellite imagery of a landslide from 1993 is acknowledged. The commenter inaccurately claims that the analysis under Impact 3.16-4 assumes that the Project would not ignite a wildfire in its analysis of post-fire conditions. On the contrary, the analysis acknowledges that the Project is not likely to result in the uncontrolled spread of wildfire, but identifies that steep slopes are present on the Project Site and the potential for landslides within the Project Site. See Draft EIR (at page 3.16-24), which states: "Additionally, as discussed in Section 3.9, *Geology and Soils*, under Impact 3.9-3, there are steep slopes and soil types within the Project Site where landslides could occur."

The analysis further considers potential changes to drainage patterns on-site and continues by acknowledging how post-fire soil and hydrology conditions can lead to debris flows: "Post-fire conditions influence surface water quality because water flowing through burned areas is likely to carry increased levels of sediment, organic debris, and chemicals (such as residuals from fire suppressants), contributing to degradation of water quality and aquatic resources.... Additionally, post-fire conditions can increase the potential for erosion and flooding due to the loss of vegetation that holds soils in place, causing increased erosion, and the loss of the water-absorbing properties of soils, causing increased runoff." The analysis acknowledges the potential for the Project to create conditions that could result in landsliding ("In the event that a fire were to be ignited on the Project Site and were to spread outside of the Project Site, if significant amounts of vegetation were burned, the resultant change in drainage and soil stability could result in landsliding in downstream or downslope areas.").

Impact 3.16-4 considers the potential for the Project to result in landslides due to post-fire instability. Relevant to this analysis is the potential for the Project to result in landslides unrelated to post fire conditions, as analyzed in Draft EIR Section 3.9.2 under criteria a, ii. With respect to post-fire conditions, that Draft EIR concludes that, because the Project would implement a storm water pollution prevention plan (SWPPP) and best management practices (BMPs) related to erosion control, drainage patterns on-site would be relatively similar to existing conditions. Therefore, the Project would not, as a result of post-fire conditions, result in changes to runoff or drainage patterns which could cause adverse water quality impacts or exacerbate downslope or downstream flooding and thereby expose people or structures to associated risks." Additionally, the analysis finds that, "Implementation of Mitigation Measure 3.16-2a (Fire Safety), Mitigation Measure 3.16-2b (Nacelle Fire Risk Reduction), and Mitigation Measure 3.16-2c (Emergency Response Plan), would reduce the potential for the Project to result in the uncontrolled spread of wildfire and, therefore, would reduce the potential for landslides as a result of post-fire conditions to a less-than-significant level." See Response P45-7 regarding the identification of landslide scars. As indicated in that response, site-specific, Project-specific geotechnical work would be conducted prior to construction as required for compliance with applicable law.

P45-68 It is not clear from the comment what information is available, who submitted it, or in the context of what project. Without some detail about how to access what's identified,

the County does not have enough information to access the source material or to address the suggested oversight. The County acknowledges that other sources of information about soils on and near the Project Site exists. However, additional data was not provided and the comment provides no basis to question the sufficiency of the EIR, including its analysis of impacts to Geology and Soils. See Response P45-76 regarding the initial study completed for this Project.

Nonetheless, see Draft EIR Figure 3.9-1 (at page Section 3.9-2), which identifies regional and local geologic units based on California Geologic Survey data; and the description of soils provided in section 3.9.1.2 (at page 3.9-2 et seq.). Reference materials cited in the Draft EIR have been available for public inspection since the Draft EIR was issued. The County disagrees with the suggestion about the transparency of the environmental review process. See Response P21-21 and Response P45-12 further regarding the analysis of impacts to Geology and Soils.

- P45-69 The County acknowledges the commenter's preference to see more or different analysis in Draft EIR Section 3.12, which documents the County's analysis of potential impacts to hydrology and water quality. The analysis was performed using the methodology described in Draft EIR Section 3.12.3.1 (at page 3.12-11) and environmental standards. It considers input received during scoping from the Regional Water Quality Control Board and members of the public (Draft EIR at page 3.12-1, Appendix J, *Scoping Report*), reference materials cited in Section 3.12.5 (at page 3.12-24 et seq.), and the professional technical resource expertise of the preparers of the EIR (Draft EIR Chapter 5). Conclusions are based on facts and analysis, rather than opinions. Acknowledging the commenter's preference that additional information be included, the absence of the requested data does not affect the sufficiency of the EIR.

For more information about the stormwater pollution prevention plan (SWPPP) and best management practices, see Draft EIR page 3.11-11, which explains that "the Project would require coverage under the Construction General Permit, and so would be subject to the protections included in a SWPPP, which would outline BMPs to contain a potential release and to prevent any such release from reaching an adjacent waterway or stormwater collection system (e.g., erosion control, sediment control, and waste management). Therefore, implementation of the SWPPP would minimize potential adverse effects to groundwater and soils." Requirements for a SWPPP are summarized in Draft EIR Section 3.12.1 (at page 3.12-9) as follows: "For all new projects, applicants must electronically file permit registration documents using the Stormwater Multiple Applications and Report Tracking Systems (SMARTS), and must include a Notice of Intent (NOI), risk assessment, site map, and storm water pollution prevention plan (SWPPP) to be covered by the General Construction Permit prior to beginning construction. The risk assessment and SWPPP must be prepared by a State-Qualified SWPPP Developer (QSD). In addition, the SWPPP must contain a visual monitoring program, a chemical monitoring program for non-visible pollutants, and a sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment." See also Response 45-72.

P45-70 As described in Response P45-16, the fire history near the Project Site is considered as part of baseline conditions (see Draft EIR at pages 3.16-1 and 3.16-2). The changing fire regime and significant increase in the potential for ignition and damage from wildfires is also considered as part of baseline conditions see the following text from Draft EIR page 3.16-2, “The continued urbanization of the Shasta-Trinity Unit’s wildland areas is expected to significantly increase both the ignition potential of and damage from wildfires. About 90 percent of major fires in the county have human-related ignition sources include burning of debris, equipment use, vehicle, and arson. Lightning causes the remaining 10 percent of wildfires in Shasta County (Shasta County, 2018). Periodic droughts contribute to the increase in fires due to drier than normal fuel conditions. The heavy fuel loading, hot temperatures, critically low humidity, and strong north winds characteristic of Shasta County contribute to the ongoing major wildfire potential (Shasta County, 2016).”

While these conditions are considered as part of baseline conditions, they are also considered in the cumulative analysis, see the following section from the cumulative analysis on Draft EIR page 3.16-27, “A very large part of Shasta County has been designated as being within a very high fire hazard severity zone (CAL FIRE, 2007, 2009). Since 2000, Shasta County has been subject to a number of large, severe fire events, such as the Carr Fire, Delta Fire, and Hirz Fire (2018). Given the vulnerability of the County to large severe fires, and the presence of other projects near the Project Site that also could be sources of ignition, a significant cumulative impact exists with regard to wildfire.” Therefore, changing environmental conditions and their contribution to conditions that lead to more frequent and severe wildfires are considered in both the analysis of the direct and indirect effects of the Project, see Draft EIR Section 3.16.3 as well as the cumulative analysis, see Draft EIR Section 3.16.4.

The commenter claims that the Draft EIR’s analysis of direct and indirect impacts violated CEQA; however, the comment does not identify any impacts believed not to have been analyzed. Without more specific information, the County is unable to provide a more detailed response.

The potential for nearby electrical infrastructure to contribute cumulatively to the existing cumulative impacts related to wildland fire are considered in the cumulative analysis on Draft EIR page 3.16-27. The commenter continues to comment on the potential risk of nearby transmission lines creating an increase in risk for the proposed Project. This EIR focuses on the direct, indirect and cumulative impacts of the Project on the environment. The potential for the environment to result in impacts on the Project is outside of the scope of CEQA.

The County acknowledges receipt of map provided of tree mortality near the Project Site, and has included it in the record for consideration by County decision makers. Tree mortality and its impact on fuel loading and wildfire behavior is addressed on Draft EIR page 3.16-3.

The commenter's opposition to the Project is acknowledged and will be included in the record for consideration by County decision makers.

P45-71 Prior to receipt of a building or grading permit by the County, the proposed improvements must be designed in accordance with a final design level geotechnical investigation report which is based on site specific analysis of subsurface conditions consistent with the most recent version of the California Building Code (CBC) and local amendments. The final report would be prepared by a California-licensed geotechnical engineer and include findings from an onsite field investigation which could include drilling soil borings, collection of soil and rock samples, field testing of soil densities, bedrock competencies, and/or test pit excavations, as part of the data collection to determine the underlying geotechnical characteristics and geotechnical measures necessary to accommodate the proposed improvements that meets building code requirements. The design of the proposed buildings, structures and infrastructure would be required by law to comply with CBC requirements which would include such measures as site preparations (e.g., removal of unstable soils, fill placement, drainage improvements, and grading/re-contouring of unstable slopes, as applicable), setbacks, and slope standards and calculated factors of safety (minimum thresholds of safety specified in building code requirements based on the latest geotechnical standards and science). The CBC contains requirements for slope stability and foundation design to ensure that proposed improvements do not cause or otherwise catastrophically damaged by landslides that are triggered by static (non-earthquake) or dynamic (earthquake) forces.

The desktop geologic review conducted by Barr was included as Appendix A of the NOP and much of that information from the limited study was included as part of the environmental setting of Draft EIR Section 3.9. The Draft EIR (at page 3.9-8) acknowledges that landslide hazards are common throughout Shasta County and that the topography of the Project Site indicates a potential for landslides, debris flows, and rock fall hazards to be present. The referenced geologic mapping (Dupras, 1997) was only one source used to evaluate the potential for landslide hazards. This map was used primarily as a source to describe the geologic materials present but also for the presence of any known landslide. However, the potential impact analysis did not rely solely on this source of information and also reviewed topographic maps from United States Geological Survey (USGS), California Geologic Survey (CGS) landslide hazard mapping, and the Shasta County General Plan to determine the potential presence of this hazard. Regardless, the impact analysis for potential landslide hazards assumes that landslide hazards could be present.

The comment references a specific location at turbine "I5." However, there is no such turbine location with this attribution as shown in Draft EIR Figure 2-2. Regardless, as stated above, the analysis of landslides hazards in Section 3.9 assumes that landslide hazards are likely present at the site. As discussed on page 3.9-16, all proposed improvements, as required by law, would be subject to applicable provisions of the California Building Code (CBC). As stated on page 3.9-10 of the Draft EIR [**bold text added for emphasis**]:

“Requirements for geotechnical investigations are included in Appendix J, CBC Section J104, Engineered Grading Requirements. As outlined in Section J104 However, the potential impact analysis did not rely solely on this source of information and also reviewed topographic maps from United States Geological Survey (USGS), California Geologic Survey (CGS) landslide hazard mapping, and the Shasta County General Plan to determine the potential presence of this hazard. Regardless, the impact analysis for potential landslide hazards assumes that landslide hazards could be present.

The comment references a specific location at turbine “15.” However, there is no such turbine location with this attribution as shown in Draft EIR Figure 2-2. applications for a grading permit must be accompanied by plans, specifications, and supporting data consisting of a soils engineering report and engineering geology report. Additional requirements for subdivisions requiring tentative and final maps and for other specified types of structures are in Health and Safety Code Sections 17953–17955 and in 2019 CBC Section 1802. Samples from subsurface investigations, such as from borings or test pits, must undergo testing. Studies must be done as needed to evaluate **slope stability**, soil strength, position and adequacy of load-bearing soils, the effect of moisture variation on load-bearing capacity, compressibility, liquefaction, differential settlement, and expansiveness.”

It is commonplace for a design level geotechnical report to be completed after the CEQA process as the extensive field work, sample collection, test pits, and drilling necessary to obtain site specific data on subsurface materials would be otherwise premature at this stage of the planning process. The data collected to date and presented in the Draft EIR discloses the potential hazards that are present at the site, none of which would make the construction of the project infeasible. Adherence to the building code and grading permit requirements ensures that all geotechnical hazards including slope stability and landslides would be reduced to less than significant levels by incorporating design criteria based on current geotechnical engineering standards and practices that meets minimum factors of safety.

P45-72 As stated in Response P45-71, the Draft EIR acknowledges that landslide hazards potentially exist on the Project Site. All proposed improvements would be subject to the requirements of the California Building Code and be consistent with a design level geotechnical investigation which would include site preparation and foundation design measures to ensure that all proposed improvements are not susceptible to catastrophic damage from landslides under static (non-earthquake) or dynamic (earthquake) forces. The design level geotechnical investigation would be prepared by a California licensed geotechnical engineer.

Related to the potential for erosion, as stated on page 3.9-11 of the Draft EIR, project construction would include implementation of required erosion control best management practices (BMPs) to prevent the potential for erosion to occur. Draft EIR page 3.9-16 describes that the BMPs could include but not be limited to physical barriers to prevent erosion and sedimentation; construction of sedimentation basins; limitations on work periods during storm events; use of infiltration swales; protection

of stockpiled materials; and a variety of other measures that would substantially reduce or prevent erosion from occurring during construction. The required Stormwater Pollution Prevention Plan (SWPPP) would identify the BMPs necessary to comply with the regulatory requirements of the Construction General Permit consistent with current construction requirements that are used throughout the state in similar conditions. Through compliance with these independently enforceable existing requirements, the project would sufficiently address potential impacts related to soil erosion and loss of topsoil during construction, operation, and decommissioning.

- P45-73 As discussed in Response P45-71 and Response P45-72, the Draft EIR acknowledges the potential for landslides, debris flows, and rock fall hazards to be present at the Project Site as well as the potential for project construction and maintenance activities to cause erosion if not managed appropriately. However, existing regulatory requirements provide the means to address both landslide hazards (California Building Code) and erosion (Construction General Permit). Compliance with these regulatory requirements by licensed professionals ensures that these hazards are minimized and potential impacts to the proposed improvements are reduced to less than significant levels.
- P45-74 Page 3.9-8 of the Draft EIR states that the topography of the Project Site includes areas that could be susceptible to landslides, debris flows, or rock falls. This potential hazard is recognized and assumed to be present within the Project Site and as a basis for the impact analysis. However, the mere presence of steep slopes does not preclude the feasibility for development. Site preparations including subsurface improvements and foundation design consistent with building code requirements are proven measures to reduce potential impacts from landslides and slope stability to less than significant levels. The required geotechnical investigation of site specific conditions for the proposed improvements, consistent with these building code requirements, prepared and overseen by California licensed geotechnical engineers would ensure that any identified landslide or slope stability hazards are reduced to less than significant levels.
- P45-75 As stated on page 3.9-18 of the Draft EIR, a current review of the Natural Resources Conservation Service Soil Survey data revealed that a majority of the site soils have a low potential for expansion with minor areas of a moderate expansion potential. Likewise, the soil survey data was also reviewed for corrosion potential which was found to be present at the site. Therefore, both of these hazards were identified as potentially adversely affecting proposed improvements at the site. However, both of these hazards are addressed through standard geotechnical engineering practices and adherence to building code requirements. Expansive soils can be replaced with engineered fill consistent with recommendations contained in a final design level geotechnical report or otherwise treated in place to reduce the potential for expansion. The final design level geotechnical report would also include design measures to address the potential for corrosion either through the use of non-corrosive engineered fill, corrosion protection features, concrete/pipe design, or some combination of these methods consistent with building code requirements (Chapter 18 of the CBC). Therefore, the final design level geotechnical report prepared by California licensed

geotechnical engineers and consistent with building code requirements would ensure that these hazards are minimized and potential impacts would be less than significant.

- P45-76 An initial study is a preliminary determination of potential impacts, the purpose of which is to decide whether or not to prepare an EIR. The County relied on the Initial Study prepared for this Project to determine that the more in-depth inquiry required in an EIR was warranted. The analysis and conclusions in the EIR are based on closer inquiry, more detailed research, evidence cited in the section, and the professional expertise of the County and its consultant team (see Draft EIR Chapter 5). The suggestion that in-depth inquiry resulted in a different conclusion does not affect the sufficiency of the EIR. For more information about how the initial study relates to the EIR, see Draft EIR Section 1.4, *CEQA Process Overview* (at page 1-3 et seq.).
- P45-77 As stated on page 3.9-19 of the Draft EIR, the County approval process for septic systems requires soils that can sufficiently accommodate proposed septic systems. Therefore, the existing regulatory process ensures that prior to construction of any septic system, the proposed location can meet the County's minimum thresholds in accordance with permit requirements which are protective of human health and the environment.
- P45-78 The comment correctly summarizes that, of the potential alternatives initially considered, three alternatives were analyzed in detail. The *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal. 3d 553, 572–73 decision and the *Mira Mar Mobile Community v. City of Oceanside* (2004) 119 Cal. App.4th 477, 492 decision were cited in the discussion to show that the County's decision not to consider an off-site alternative in light of the proposal's consistency with underlying Countywide planning designations is supported by California law. See Draft EIR Section 2.5.2.1 (at page 2-29).
- P45-79 See Response P17-5 regarding the Project's consistency with the Shasta County General Plan and Zoning Plan. Quotations of CEQA are noted; the content of the statute and CEQA Guidelines speak for themselves.
- P45-80 The stated benefits of biomass, suggested preference for a cogeneration or biomass alternative is acknowledged, and opinion of the project objectives are acknowledged and have been included in the record, where the County may consider them as part of the decision-making process. However, they do not affect the sufficiency of the EIR. For more information about the project objectives and how they relate to the screening of potential alternatives, see Response T2-3.
- P45-81 Neither a repowering alternative nor alternative approaches (such as conservation and demand side management) were determined to pass the screening criteria. Accordingly, neither was carried forward for more detailed review. As explained in Final EIR Section 2.1.1, *Input Received*, questions of grid reliability are beyond the scope of the CEQA process for this Project. See Response P45-47 for additional information.

P45-82 As explained in Draft EIR Section 4.3, *Environmentally Superior Alternative* (at page 4-2 et seq.), “The CEQA Guidelines define the environmentally superior alternative as that alternative with the least adverse impacts to the project area and its surrounding environment.” In the context of this EIR, “The No Project Alternative is considered the environmentally superior alternative for CEQA purposes because it would avoid all impacts of the Project.”

The commenter’s opinion of the cumulative analysis is noted, but not supported by evidence. Pursuant to CEQA Guidelines §15204(c), “Reviewers should explain the basis for their comments, and should submit data or references offering facts, reasonable assumptions based on facts, or expert opinion supported by facts in support of the comments. Pursuant to Section 15064, an effect shall not be considered significant in the absence of substantial evidence.”

Contrary to the suggestion in the comment that the Draft EIR “eliminates” the cumulative effects of other projects, the Draft EIR’s cumulative effects analysis first considers whether there is an existing significant cumulative effect. For some resources, the answer is yes. See, e.g., page 3.2-27 (“The Hatchet Ridge Wind Project has an ongoing, significant adverse effect on visual character and quality in the region... and other cumulative projects combine to create a significant and adverse cumulative impact to aesthetic resources”). See also, page 3.3-30 (existing significant cumulative effect regarding ozone and PM₁₀ ambient air quality standards) and page 3.4-75 (significant cumulative effect regarding avian collision risk).

The County also disagrees with the suggestion that the analysis of cumulative effects relies exclusively on a list of projects approach. As stated in Draft EIR Section 3.1.3.1, *Cumulative Scenario* (at page 3.1-3), “The cumulative scenario consists of trends; projections contained in one or more local, regional, or statewide planning documents; and the incremental effects of past, present, and reasonably foreseeable probable future projects summarized below by activity type.” Trend and other non-list-specific information is presented (beginning on page 3.1-4) regarding Timber Management and Harvesting, Timber Land Conversion, Fire History, Weather Extremes, Other wind Projects, Power Lines and Electrical Infrastructure, and Surface Mining and Reclamation Projects.

P45-83 See Response T2-3 regarding the project objectives. The commenter’s questions about the state’s renewable energy goals are acknowledged, but do not bear on the sufficiency of the EIR.

The County acknowledges receipt of the biomass map, and the commenter’s preference for a biomass alternative.

See Response P45-7 regarding the quality of the data relied upon in the EIR. Decision-makers will rely on the data and information in the EIR (including information provided in comments on the Draft EIR) and elsewhere in the record in their deliberations about the EIR and the requested use permit.

- P45-84 See Response P17-5 regarding the Project’s consistency with the Shasta County General Plan and Zoning Plan. This comment does not address the adequacy or accuracy of the analysis of impacts presented in Draft EIR Section 3.2, *Aesthetics* (at page 3.2-1 et seq.).
- P45-85 The County has not formed a design review committee or adopted design review standards that would be applicable to the Project Site. The Project Site is not located in a Design Review (DR) zone district. See Response P17-5 regarding the Project’s consistency with the Shasta County General Plan and Zoning Plan.
- P45-86 The commenter asks what the following statement from the Aesthetics section means, “The KOP-level analysis describes the visual change at each representative viewpoint but does not make CEQA conclusions.” This sentence was intended to clarify that the analysis includes a KOP by KOP analysis of visual change at representative viewpoints; however, the analysis of visual change at each representative viewpoint is not intended to be a CEQA significance conclusion. Rather, the CEQA significance conclusions consider overall changes to visual character and quality from the Project as a whole, not just change in visual character and quality at individual KOP locations.
- P45-87 See Response P34-1, which discusses impacts to nighttime views. See also Response P4-1 which explains the focus of the analysis on evaluating impacts from publicly accessible viewpoints.
- P45-88 The commenter implies that the significance conclusion regarding nighttime impacts at KOP 1-3 is based on the presence of trees and objects which block the lighting on the proposed turbines. However, as demonstrated on Draft EIR page 3.2-45, the analysis of nighttime impacts, including nighttime lighting sources at the substation and other operational structures, at KOP 1-3 is based on the contrast that Project lighting would create compared to existing nighttime lighting conditions as well as the extent of nighttime viewer exposure.
- P45-89 See Response P4-1, which discusses how KOPs were chosen as representative viewpoints for the aesthetics analysis.
- P45-90 The comment correctly states that economic and social impacts are beyond the scope of CEQA. See Final EIR Section 2.1.1, *Input Received*, for more information. Although tourism considerations are beyond the scope of this EIR, the County may consider them as part of their deliberations on the use permit application.
- P45-91 See Response P4-1 and Draft EIR Section 3.2, which discuss how KOPs were chosen as representative viewpoints for the aesthetics analysis, including representative viewpoints that conceptualize views from Lassen Peak and Burney Peak. See also Response P45-90 regarding tourism.
- P45-92 The stated opinion that potential impacts on tourism should be considered is acknowledged and has been included in the record.

- P45-93 The comment suggests that the existing visual quality of views as observed from KOP 3 should be rated low, rather than moderate as indicated in the EIR, and that the degree of change resulting from the Project would be greater than indicated in the EIR. This opinion is noted. The assessment of visual quality was prepared by visual resources specialists who considered key visual resources concepts, and assessed natural harmony, cultural order, overall coherence, and landscape composition and vividness for each view. The Draft EIR (at page 3.2-16) describes the methodology applied to determine the degree of visual change and defines the key factors for determining the degree of visual change in terms of visual contrast project dominance, and view blockage. Draft EIR page 3.2-11 indicates that KOP 2 in Montgomery Creek and KOP 3 in Round Mountain are representative of views to the east from the western slopes. These locations provide intermittent views of the nearby ridgelines and developed communities. Based on the defined methodology, Impact 3.2-1 indicates that the visual quality for KOP 3 would change from moderate to moderately low under the Project. See Response P4-1, which discusses how KOPs were chosen as representative viewpoints for the aesthetics analysis.
- P45-94 The comment suggests that the 30-mile radius used in the Visual Resources Technical Report (Draft EIR Appendix A) and Section 3.2 is arbitrary and suggests that turbines in other wind projects may be visible from a greater distance than 30 miles. The 30-mile radius was chosen as that distance is about as far as the eye would be able to distinguish features of the Project. Beyond that distance, a viewer would not easily be able to discern Project turbines in combination with another project or feature. Therefore, while another Project may be visible to a minor extent at a distance greater than 30 miles, this does not provide evidence to refute the study area chosen for this aesthetics analysis. See Response P27-39 for additional detail.
- P45-95 Section 3.1.4 of the Visual Resources Technical Report (included as Draft EIR Appendix A) indicates that photography site visits were conducted in December 2017, December 2018, and April 2019. Atmospheric conditions during the site visits were described as sunny to mostly cloudy during the 2017 site visit, sunny in valley views to hazy in long-distant views in December 2018, and with a comparatively higher degree of clarity in long-distance views in April 2019. The range of site conditions presents a reasonable representation of visual conditions that may be expected for the Project area for different times of the year and visual/lighting conditions that may be experienced at different times of the day.
- As noted by the commenter, Impact 4.2-1 was determined to be significant and unavoidable, as there is no feasible mitigation that could reduce the visual impacts to less than significant levels. This is a long-term impact that would be sustained during the life of the Project.
- P45-96 See Response P2-1, Response P34-1, and Response P45-91. The comment correctly notes that Shasta County does not have a dark skies ordinance. Accordingly, an analysis of compliance with such an ordinance is not relevant to the Draft EIR's

analysis of Project effects on aesthetic resources. As discussed in Responses P2-1, P34-1 and P45-91, the EIR considers the Project's potential to result in a substantial light and glare impact, and finds the effect to be less than significant.

- P45-97 See Response P2-1, Response P34-1, Response P45-91, and Response PP45-96.
- P45-98 Draft EIR Section 3.2.5.3 describes the effect of cumulative projects, in combination with the light and glare effect of the Project, including the Hatchet Ridge Wind Project, increased traffic along highways, and increased rural and commercial development. The commenter notes that the cumulative analysis of light and glare effects should include a location by location assessment of the degree of change in light and glare conditions. However, that level of analysis is not required to reach a cumulative impact determination. As discussed, the Project would result in an extension of areas along SR 299 where turbine lighting would be visible, resulting in turbine lighting in areas with very limited nighttime lighting. Therefore, the Project would have a cumulatively considerable contribution to an adverse cumulative condition. No reasonable, feasible mitigation measures are available to reduce the Project's incremental contribution to a level that it would not be cumulatively considerable.

Cumulative effects on biological resources also have been analyzed. See Draft EIR Section 3.4.4 (at page 3.4-74 et seq.). the potential for Project lighting to cause an impact to birds, for example, is discussed on page 3.4-54 (“The use of Federal Communication Commission-required lighting on towers during crane migratory periods would increase tower visibility to birds and potentially reduce collisions with towers and turbines during operations”). To the extent this potential beneficial effect could combine with the impacts of lighting from other projects in the cumulative scenario, it would tend to be ameliorative. The potential for adverse impacts to wildlife to result from Project lighting also is considered. See the Applicant-proposed conservation measure regarding Terrestrial Species Conservation proposed to avoid and minimize impacts to terrestrial special-status species – item g) makes the following commitment (at Draft EIR page 3.4-62): “High-intensity lighting will be minimized to the level needed for worker safety.” There is no evidence of an existing significant adverse cumulative effect relating to lighting on species in the regional or local area. To the contrary, the area is known for its dark skies. See, e.g., Comment A2-1, received from United States Department of the Interior Lassen Volcanic National Park and the response provided in Final EIR Section 2.3.1.

- P45-99 As described in the Draft EIR's discussion of *Existing Air Quality* (at page 3.3-5), the closest air quality monitoring stations to the Project Site are the Shasta Lake monitoring station, located approximately 27 miles west-southwest of the southwestern Project Site boundary, and the Redding monitoring station, located approximately 30 miles southwest of the southern Project Site boundary. Given the limited amount of publicly available air quality monitoring data in the vicinity of the Project Site, air quality measurements from these stations offer the best available data to characterize baseline air quality in the local area.

As described in the Draft EIR's discussion of *Sensitive Receptors*, sensitive receptors include facilities that house or attract children, the elderly, people with illnesses, or others who are especially sensitive to the effects of air pollutants, including schools, hospitals, convalescent homes, residences, etc. The proximity to the nearest residences is important for the analysis regarding whether Project activities would generate emissions of toxic air contaminants, potentially exposing sensitive receptors to harmful pollutant concentrations (see Draft EIR Impact 3.3-4, at pages 3.3-26 and 3.3-27). For analysis of cumulative health effects that could result due to exposure to Project-related criteria pollutants, such as ozone, refer to the *Project Contribution to Cumulative Health Effects* discussion (see Draft EIR at pages 3.3-23 through 3.3-26).

- P45-100 As described in the Draft EIR's discussion of *Project Contribution to Cumulative Health Effects* (at pages 3.3-23 through 3.3-26), with certain exceptions and given current air quality modeling tools, calculating an individual project's effect on ambient pollutant concentrations does not yield information that is accurate enough to be useful. In addition, for projects that produce emissions for 2 years or less, this type of analysis is not meaningful because quantities of emissions are too small to have a statistically significant effect on health outcomes.

Ozone is a regional pollutant for which Project-specific concentration modeling is not reliable given current modeling limitations. Because of the complexity of ozone formation and the non-linear relationship of ozone concentration with its precursor gases, and given the state of environmental science modeling in use at this time, it is infeasible to convert specific mass emissions levels (i.e., weight) of nitrogen oxides (NO_x) or reactive organic gases (ROGs) emitted in a particular area (or by a particular project) to a particular concentration of ozone in that area as requested by the commenter. As a result, project-level mass (weight) emission thresholds have been established precisely because it is not possible to readily convert mass emissions at the project-level to regional pollutant concentrations. The AQMD's thresholds for ROG and NO_x are tied to the offset requirements for ozone precursors based on the fact that the Air Basin is not in attainment with the State ozone standards and therefore the Draft EIR's approach to identify the potential to cause further deterioration of ambient air quality, which would be a regionally cumulative significant impact, is appropriate. Attainment of the ambient air quality standard concentrations presented in Draft EIR Table 3.3-2 (at page 3.3-8) can be considered protective of public health, thus providing a strong link between a mass emission threshold and avoidance of health effects. These thresholds provide a connection between a mass emission threshold and avoidance of health effects.

- P45-101 The comment incorrectly states that Impact 3.3-2a does not account for cement truck trips. The criteria pollutant and precursor construction emissions calculations, including those for ROG, account for 109 daily concrete truck trips that would occur over a period of 70 workdays. Refer to the fifth table under *Running Emissions* of the 2021 *Construction Vehicle Emissions* portion of Draft EIR Appendix B, *Air Quality and Greenhouse Gas Emissions*.

P45-102 The discussion of how much Project-related ground removal/disturbance was assumed for the purposes of the PM₁₀ construction emissions estimate is presented in the second paragraph on Draft EIR page 3.3-16. As discussed, it is assumed that all grading and access road work would occur over a period of 160 workdays during the first year of construction. These grading activities would disturb an estimated 1,384 acres, and excavation activities for installation of the turbine foundations are assumed to result in handling of 256,000 cubic yards of excavated material.

P45-103 Consistent with its role as a Responsible Agency under CEQA, the Shasta County Air Quality Management District (AQMD) provided initial input for the County's environmental review process shortly after the requested use permit application was filed. As referenced by the commenter, the AQMD's input requested that the County assess and apply Standard Mitigation Measures and provided a list of the potential mitigation measures. The County reviewed the list of the potential mitigation measures and found them to be applicable and feasible for Project implementation and also found that they would not lead to further environmental impacts.

In addition, pursuant to Shasta County General Plan Policy AQ-2f, the County requires appropriate Standard Mitigation Measures and Best Available Mitigation Measures on all discretionary land use applications as recommended by the AQMD in order to mitigate both direct and indirect emissions of non-attainment pollutants. In this regard, see the Draft EIR Shasta County General Plan discussion on page 3.3-10. It was determined by the County that the AQMD-provided mitigation measures represent appropriate Standard Mitigation Measures and Best Available Mitigation Measures. Therefore, at the request of the AQMD, the measures were included in the Draft EIR as Mitigation Measure 3.3-2c. Further, it is acknowledged that the referenced measures are not regulatory standards; in fact, Mitigation Measure 3.3-2c describes them as AQMD Standard Mitigation Measures, not AQMD standards.

As described in the Impact 3.3-2c analysis on Draft EIR page 3.3-20, based on control efficiencies published by the South Coast Air Quality Management District, implementation of Mitigation Measure 3.3-2c would reduce fugitive dust emissions associated with travel on unpaved surfaces by 84 percent and would reduce fugitive dust emissions associated with ground disturbance by 55 percent. These control efficiencies were used to estimate the total mitigated fugitive dust emissions that would be associated with the Project.

P45-104 The commenter's discussion of *Sierra v. Fresno* is noted, although it has little relevance to the analysis of Project-related fugitive dust emissions because the Impact 3.3-2c determination did not include a "bare conclusion" like that which was found by the court in that case. To the contrary, the Draft EIR Impact 3.3-2a conclusion is supported by clear explanation and factual support, including quantification of the mitigated fugitive dust emissions.

With respect to health effects associated with construction emissions of fugitive dust, the scientific evidence of health effects from particulate matter suggest that combustion-derived components of particulate matter are the strongest drivers for adverse health effects, and that particulate matter from combustion sources are the greatest contributors to particulate matter-related mortality. For additional information on the health effects associated with Project PM₁₀ emissions, see the Draft EIR's discussion of *Project Contribution to Cumulative Health Effects* (at pages 3.3-23 through 3.3-26).

Due to the complex nature of construction-related fugitive dust emissions, it is not possible to verify fugitive dust mass emission performance standards in the field associated with implementation of Mitigation Measure 3.3-2c. See Response P21-12 regarding the MMRP and the County's oversight and enforcement of compliance with the requirements of mitigation measures.

The commenter mischaracterizes the first bullet of Mitigation Measure 3.3-2c. The measure states, "Options to open burning of vegetative material on the Project Site shall be used by the Applicant unless otherwise deemed infeasible by the AQMD. Examples of suitable options are chipping, mulching, and conversion to biomass fuel." Therefore, the subject bullet item prevents open burning of vegetative material unless other options are deemed infeasible by the AQMD, rather than presenting open burning as a mitigation option, as appears to be described by the commenter.

Regarding the second bullet point of Mitigation Measure 3.3-2c that requires implementing the components of the measure in a timely and effective manner, see Response P21-12 regarding the MMRP and the County's oversight and enforcement of compliance with the requirements of mitigation measures.

As stated in the third bullet point of Mitigation Measure 3.3-2c, watering to prevent fugitive dust from leaving property boundaries should occur at least twice daily with complete site coverage. As with all the approved mitigation measures, this measure would be monitored, reported, and enforced by the County and would become a stipulation of the Project.

As with all the approved mitigation measures, the fourth through sixth bullet points of Mitigation Measure 3.3-2c would be monitored, reported, and enforced by the County and would become stipulations of any Project approval. If dust palliatives are not applied to all areas with vehicle traffic, then periodic watering shall occur to the extent that visual confirmation can verify that dust emissions are stabilized. As described in the Impact 3.3-2c analysis on Draft EIR page 3.3-20, based on control efficiencies published by the South Coast Air Quality Management District, implementation of this measure would reduce fugitive dust emissions associated with travel on unpaved surfaces by 84 percent.

Regarding the eighth bullet point of Mitigation Measure 3.3-2c, there are a variety of non-toxic soil stabilizers on the market, including synthetic polymer emulsion

concentrates, that are designed to limit fugitive dust and erosion. This mitigation requirement focusses on previously graded areas. The Applicant would be required to pick a specific type of soil stabilizer and verify to the County that it is non-toxic. The soil stabilizers would not have additional environmental impacts if they are non-toxic.

As mentioned previously, all the approved mitigation measures would be monitored, reported, and enforced by the County and would become stipulations of the Project. See Response P21-12.

Regarding the fugitive dust emission control efficiencies applied for Mitigation Measure 3.3-2c, see Response P45-104. As described in Draft EIR Section 2.4.8.1, *Water and Wastewater* (at page 2-24), Project construction would require up to 49 acre-feet of water for dust control, soils compaction, concrete manufacturing, emergency fire suppression, and other activities. Potable water would be obtained from one or more new onsite water supply wells to be drilled or would be brought to the site via truck from the Burney Water District, which is located approximately 6 miles east-northeast of the Project Site. A Water Supply Assessment has been prepared for the Project in accordance with Water Code requirements, and is available for review as Draft EIR Appendix I. For information regarding how much land would be disturbed by the Project, see Response P45-102.

P45-105 See Response P45-100 for discussion of how the Draft EIR addressed the Project's contribution of criteria pollutant and ozone precursors to cumulative health effects.

See Response P45-104 for discussion of why the County does not believe the Draft EIR's significant and unavoidable Impact 3.3-2c determination amounts to a "bare conclusion."

The Draft EIR's impact discussion associated with exposure of sensitive receptors to harmful toxic air contaminants (TACs) (Impact 3.3-4; pp. 3.3-26 and 3.3-27) acknowledges that construction of the Project would result in temporary generation of diesel particulate matter (DPM) emissions caused by hauling of heavy-duty trucks; however, off-site sensitive receptor exposure to DPM from Project-related truck trips would be limited to several seconds per truck pass by, resulting in a relatively low dose to nearby sensitive receptors. The dose to which receptors are exposed is the primary factor affecting health risk from TACs. Dose is a function of the concentration of a substance or substances in the environment and the duration of exposure to the substance. For example, the diesel particulate matter exhaust emission factor used for haul trucks during the first year of construction when the majority of trips would occur is 0.12 gram per mile travelled, meaning 0.12 gram of DPM would be generated and dispersed along a 1-mile-long segment of roadway for each trip. Based on the air modeling assumption that there would be an average of 326 haul truck trips per day during the first year of construction, this would equate to 0.08 pound per day emitted over any 1-mile segment of roadway. The actual amount emitted along any given 1-mile segment of roadway would be less given that some of the trips would be

expected to come from the west and some would be expected to come from the east. This would result in a relatively low dose of DPM to the sensitive receptors along the haul routes. Therefore, the associated health risk impact of off-site truck trips would not be adverse because the duration and concentration of DPM exposure would be low.

- P45-106 Emissions that would be generated by the Project consist mainly of criteria pollutants, criteria pollutant precursors, and TACs that are addressed in the other portions of the Draft EIR air quality impact analysis (see Impacts 3.3-1 through 3.3-5), and GHGs, which are addressed in Draft EIR Section 3.10, *Greenhouse Gas Emissions*. There are no other types of emissions that would be generated by the Project that could adversely affect a substantial number of people. The odors discussed in Draft EIR Impact 3.3-5 would be associated with equipment and vehicle diesel exhaust. For discussion of the hazards associated with construction equipment and vehicle exhaust emissions, see Draft EIR Impact 3.3-4 (at pages 3.3-26 and 3.3-27). Moose Camp was discussed in the odors impact analysis because it has the highest concentration of people in the vicinity of the Project Site. 400 feet was not picked as a radius; it is simply described as the distance from the closest cabins at Moose Camp to any of the access roads on the Project Site.
- P45-107 The general suggestion of concern in this comment is acknowledged, but not supported by the facts. The comment incorrectly states, “the main and only citations come from those who prepared this report.” To the contrary, Draft EIR Section 3.4.5 provides three pages of citations to information relied upon in the analysis including from regulatory agencies (including CDFW, USFWS, and the Regional Water Quality Control Board) and sources of scientific standards (including the California Native Plant Society, Avian Power Line Interaction Committee, and published literature). See also Response P45-7 regarding the quality of information relied upon in preparing the EIR. As disclosed in Draft EIR Chapter 5, *Report Preparation*, the County and its consultant team prepared the EIR, not the Applicant or its environmental consultants, and the document reflects the lead agency's independent judgment and analysis.
- P45-108 Stantec's other projects do not bear on the sufficiency of the EIR. See Response P45-107.
- P45-109 Stantec did not prepare the EIR. See Response P45-107. Draft EIR Table 3.4-3, *Special Status Species with Potential to Occur within the Project Site* (at page 3.4-12), which states that Yellow warbler has high potential to occur within the Project Site and that it was observed during Project surveys. The Draft EIR also acknowledges that the Project Site contains stopover habitat for waterfowl, but that the majority of waterfowl observations were recorded flying above the estimated rotor swept height of the wind turbines and therefore would not be at high risk of colliding with the Project. In addition, because the Project Site is heavily forested, waterfowl would likely fly at a higher altitude over the trees, and it does not appear that waterfowl or waterbirds use the area as migratory stop-over sites. See Response P40-16 regarding the Draft EIR's analysis of potential impacts to state or federally protected wetlands and waters. With

regard to survey adequacy, the commenter states that two years of monthly avian surveys seems inadequate for scientific research but may be good enough for establishing a baseline in CEQA. The CEC and CDFW⁹⁰ recommend just one year of pre-permitting surveys, which were satisfied by baseline surveys included in Draft EIR Appendices C6 and C7. The two-year survey provides a robust baseline assessment consistent with CEC and CDFW recommendations. See Response P4-7 regarding potential impacts to surface waters and groundwater. CEQA requires a reasonable good faith effort to disclose potential significant impacts. This EIR does so.

- P45-110 The stated concern about habitat impacts and suggested disagreement with the Draft EIR's conclusions in this regard are acknowledged. Pursuant to CEQA Guidelines §15204(c), "Reviewers should explain the basis for their comments, and should submit data or references offering facts, reasonable assumptions based on facts, or expert opinion supported by facts in support of the comments. Pursuant to Section 15064, an effect shall not be considered significant in the absence of substantial evidence." Without further support, the County does not have enough information to provide a more specific response.
- P45-111 The stated general concerns about the timber industry, the spotted owl, forest resources, and climate change are acknowledged. However, because they do not question the adequacy or accuracy of the EIR, no more detailed response is provided. See Final EIR Section 2.1.1, *Input Received*.
- P45-112 Items 2 and 3 cited in the comment, from Section VII of the Evans report in Draft EIR Appendix D, are addressed in Impact 3.5-3, which discloses, "although the third party and FCC databases relied on for this analysis typically are very accurate, it is possible that some microwave facilities have not been accurately represented, and that interference could occur," and accordingly determines that a significant impact could result. To reduce this potential impact to less than significant, Mitigation Measure 3.5-3 requires that the Applicant notify owners of frequency-based communication stations and towers within 2 miles of the Project Site prior to issuance of a construction permit to verify locations and prevent interference, and also requires that the Applicant remedy any interference with microwave communications that may occur despite this precaution. The reference to "Hatch[et] Mountain" in the Evans report (Appendix D) is to a geographic location, not specifically to the Hatchet Ridge Wind Project. A list of the FCC-licensed microwave paths in and near the Fountain Wind Project area are provided on pages 27 and 28 of the Evans report and lists several licensees of paths that originate from and/or transmit to the Hatchet Mountain site (e.g., PG&E, State of California, Southern Oregon University). Recommendation 4 is addressed in

⁹⁰ California Energy Commission (CEC) and California Department of Fish and Game (CDFG). 2007. California Guidelines for Reducing Impacts to Birds and Bats from Wind Energy Development. Commission Final Report. CEC, Renewables Committee, and Energy Facilities Siting Division, and CDFG, Resources Management and Policy Division. CEC-700-2007-008-CMF.

Section 3.5.1.2, which indicates that land mobile transmitting stations are located outside the area of potential impact.

- P45-113 The Draft EIR (at page 3.501) explains that “the County received scoping input about the potential for Project components (e.g., wind turbines or meteorological towers) to cause communications interference that adversely affects residents’ and others’ ability to coordinate with emergency service providers” (emphasis added). Thus, the scoping input received related to the impact of the Project’s proposed meteorological towers on existing other types of communication, not on the Project’s impacts on existing meteorological instrumentation, and the County has responded to that input in the Draft EIR.

The comment raises the new question of whether the Project would affect existing meteorological instrumentation, and specifically Doppler radar, and cites two papers by Lars Norin of the Swedish Meteorological and Hydrological Institute. The 2015 paper⁹¹ states that “It has been shown that wind turbines located in the line of sight of Doppler radars can have a detrimental impact on the performance of both military and civilian radar systems (citations omitted)” and examines 6 years of operational radar data from Sweden’s Karlskrona weather radar, during which time the Brunsmo wind farm was constructed approximately 13 kilometers (8 miles) away. The 2017 paper⁹² reiterates the focus on wind turbines within the line of sight of a weather radar station and examines data from Sweden’s Vara weather radar where “45 wind turbines are located in the line of sight of the radar within a radius of 15 km” (about 9.3 miles). These papers explain that Sweden’s weather radar system consists of 12 Doppler radars covering the entire country. The United States (through the National Weather Service) operates a system of 160 Doppler weather radars. The nearest Doppler radars to the Project Area are KBBX, located south of Chico, and KBHX, located south of Eureka. KMAX, located just north of the California-Oregon border, also provides some coverage of the Project area.⁹³ These are located 80 to 120 miles from the Project Site. The National Weather Services’ Radar Operations Center (ROC) has developed four distance-based zones to address potential effects of wind turbines on radars, from a “No Build Zone” of 4 km (2.5 miles) from a radar to a “Notification Zone” between 36 and 60 km (22 to 37 miles) from a radar. Beyond this “Notification Zone” the ROC indicates that a proposed wind farm would be “clearly out of the RLOS [Radar line-of-sight], would have no impact on the radar data, except in some anomalous propagation conditions, in which case impacts would be low.”⁹⁴ The Project, along with the existing Hatchet Ridge Wind

⁹¹ Norin, L., 2015. A quantitative analysis of the impact of wind turbines on operational Doppler weather radar data. *Atmos. Meas. Tech.*, 8, 593–609, 2015. Available online at: <https://amt.copernicus.org/articles/8/593/2015/amt-8-593-2015.pdf>.

⁹² Norin, L., 2017. Wind turbine impact on operational weather radar I/Q data: characterisation and filtering. *Atmos. Meas. Tech.*, 10, 1739–1753, 2017. Available online at: <https://amt.copernicus.org/articles/10/1739/2017/amt-10-1739-2017.pdf>.

⁹³ National Weather Service Radar Operations Center, 2020. NEXRAD Coverage Below 10,000 Feet AGL. Available online at https://www.roc.noaa.gov/WSR88D/PublicDocs/CONUScoverageNspgsW_TJUA.pdf.

⁹⁴ National Weather Service Radar Operations Center, 2016. How the ROC Analyses Wind Turbine Siting Proposals. Available online at <https://www.roc.noaa.gov/WSR88D/WindFarm/Analyses.aspx>. Accessed January 7, 2021.

Project, are over 80 miles from a Doppler radar and would be within the area considered to have no impact on radar data. No mitigation is warranted or required.

P45-114 As identified in Impact 3.5-1, the Project could cause *intermittent* interference to or freezing of television reception at up to 60 residences in the service area of those television stations that broadcast over the Project Site (emphasis added). This would be a significant impact, and Mitigation Measure 3.5-1 would reduce this impact by providing advance notification of the potential for interference and a method by which residents may file a complaint with the County, and by defining the responsibility of the Applicant to resolve receiver interference through coordination with property owners. This includes the Applicant's financial responsibility for resolving any such interference to ensure that property owners have the same level of reception as under pre-Project conditions. The concept of the same level of reception indicates that the Applicant is not responsible for providing additional channels or other enhanced services which the property owner did not receive prior to the project. The recommendations in Section VII of the Evans report in Draft EIR Appendix D have been incorporated into the body of the Draft EIR in Section 3.5: item 1 is a conclusion, not a recommendation, and has been acknowledged; items 2 through 4 have been addressed as specified in Response P45-112; and item 5 mentions two mitigation options (satellite or cable service installation) that are addressed by Mitigation Measure 3.5-1. The County included a mitigation measure to require resolution of communications interference complaints in its approval of the Hatchet Ridge Wind Project and, to date, it has received no complaints related to communications interference resulting from that project.

P45-115 While the impact analysis and mitigation measure under Impact 3.5-3 contemplates "turbine location adjustments," this does not mean that the locations of wind turbines would change substantially from the proposed locations during final design. Rather, this allows flexibility for micrositing turbines or other Project components to avoid or minimize environmental impacts identified through the impact analysis process. In Final EIR Section 1.2.3.1, *Project Changes*, examples of micrositing are described, including the realignment of access roads and collection lines to reduce direct impacts. To date, no adjustments of turbine locations have been proposed; however, turbine M03 has been eliminated from the Project. Any changes in the locations of Project components would need to be analyzed to determine if new or more severe impacts could occur. However, by incorporating into Mitigation Measure 3.5-3 a requirement to verify locations of frequency-based communication stations and towers in relation to the locations of wind turbines, this ensures that to the extent that any of the information relied on in the EIR is incomplete or if any further micrositing must be done to avoid other impacts, sufficient information would be available to avoid or correct interference with microwave communications. The notification and verification portion of this mitigation measure would be completed prior to issuance of a construction permit (and therefore prior to construction, as recommended in the comment). The purpose of this portion is to ensure, to the extent feasible, that no interference occurs prior to construction. The corrective portion of the mitigation measure, if needed, would necessarily be implemented following construction if unanticipated interference were to occur.

As stated in Mitigation Measure 3.5-3, if unanticipated interference occurs, then the Applicant will resolve receiver interference through coordination with owners of frequency-based communication stations and towers (i.e., not with individual customers of cellular networks). Verification and mitigation would be at the Applicant's expense.

- P45-116 Cellular telephone services, including the SHASCOM Code Red system, are addressed under the category of microwave communications described in Draft EIR Section 3.5.1.2 (at page 3.5-4). Regarding the timing of owner notification and signal verification, see Response P45-115.
- P45-117 The Draft EIR identified mitigation to reduce impacts to FW 11, including the development of an Archaeological Research Design and Treatment Plan, with a first priority to relocate Project components to a location that would not potentially impact the known historical resource (i.e. providing preservation in place or avoidance of the resource). In light of the Applicant's proposed change in the Project (see Final EIR Section 1.2.3, *Changes to the Project Since Issuance of the Draft EIR*, potential impacts to FW 11 would be avoided, thereby providing for "the preferred manner for mitigating impacts on a historical or archaeological site." However, given the proximity of a historical resource to the Project site, revised mitigation for a cultural resources monitoring plan has been included to ensure there are no impacts to known archaeological resources. See Response T5-8 for details.
- P45-118 See Response T5-8, which explains that Mitigation Measure 3.6-1: Archaeological Resources Design and Treatment Plan has been replaced because the Project has been redesigned to avoid a known archaeological resource.
- P45-119 Mitigation Measure 3.6-3a: Implement Mitigation Measure 3.6-1: Archaeological Resources Design and Treatment Plan has been replaced because the Project has been redesigned to avoid a known archaeological resource. See Response T5-8 for more information.

In addition, the following revisions have been made to the Draft EIR's analysis of Impact 3.6-3 (at page 3.6-24):

In the event that construction activities disturb tribal cultural resources, damage would be considered a significant impact. Implementation of ~~Mitigation Measure 3.6-1 (Archaeological Research Design and Treatment Plan) described above, as well as~~ Mitigation Measure 3.6-3 (**Tribal Cultural Resources Interpretive Program**) would ensure that impacts to tribal cultural resources are recognized. In consultation with the appropriate Native American representatives, Mitigation Measure 3.6-3 also would provide for access to the area. However, unless a tribal cultural resource can be avoided and preserved in place according to the provisions set forth by Public Resources Code Section 21084.3, direct and indirect impacts to tribal cultural resources would not be reduced to a less-than-significant level and the impact would remain significant and unavoidable.

~~**Mitigation Measure 3.6-3a: Implement Mitigation Measure 3.6-1: Archaeological Research Design and Treatment Plan (described above)**~~

Mitigation Measure 3.6-3d: Cultural Resources Monitoring Program with the Pit River Tribe during Construction.

The Applicant shall offer and provide the opportunity for cultural resource monitors from the Pit River Tribe to monitor initial ground disturbing construction activities in areas identified by the Tribe as culturally sensitive. Monitors will have the authority to ensure that discrete sacred sites in the Project Site are avoided or that impacts on such localities are mitigated to the extent feasible, including but not limited to, avoidance or data recovery (as outlined in ~~Mitigation Measure 3.6-1a. Archaeological Research Design and Treatment Plan~~ Mitigation Measure 3.6.1a. Inadvertent Discovery Protocol). The Pit River Environmental Office should coordinate with the appropriate Achumawi bands (Itsatawi and Madesi) to assign monitors.

- P45-120 The term “feasible” is defined in CEQA Guidelines Section 15365 to mean “capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors.” Based on this definition, the County believes Mitigation Measure 3.6-3c and Mitigation Measure 3.6-3d to be feasible. However, even if they ultimately are determined to be infeasible, or even if their implementation ultimately does not reduce the potential significant impact, the significance conclusion remains significant and unavoidable. This is disclosed in Draft EIR Section ES.6.2 (at pages ES-6 and ES-7), in Table ES-2 (at page ES-8 et seq.), and Section 3.6, *Cultural and Tribal Cultural Resources* (at page 3.6-1 et seq.). The Draft EIR provides mitigation measures to address those impacts to tribal cultural resources; however, they would not reduce them to a less-than-significant level.
- P45-121 The quoted sentence from PG&E is factual and was included in the Draft EIR to acknowledge that PG&E has accommodated the integration of renewable energy resources, such as the Project, into its system. It was not the intent of the County to “praise PG&E’s improvements while neglecting its failures” as suggested in the comment. To the contrary, the County acknowledges that PG&E failures are widely reported. As noted throughout these responses to comments, however, such failures are outside the scope of the EIR. See Response P15-4 for more information about Project-related wildfire risk. See Draft EIR Section 2.4.3 (at page 2-12), which explains that “four to six new transmission poles” would be required as part of the interconnection facilities.
- P45-122 The commenter’s concerns regarding the reliability of renewable energy sources are noted and have been included in the record, where the County may consider them as part of the decision-making process.
- P45-123 The comment describes existing energy infrastructure in the Project vicinity, including high- and medium-voltage transmission lines and the Hatchet Ridge wind project. These facilities are part of baseline conditions and are acknowledged. The Project would introduce additional energy infrastructure, and the impacts of the Project

facilities on wildfire compared to baseline conditions are analyzed throughout Section 3.16, *Wildfire*.

- P45-124 The comment seems to suggest that Draft EIR Impact 3.7-1 relies on compliance with the building code to address the energy impacts that would occur during construction and operation of the Project. This is incorrect. In fact, Impact 3.7-1 does not mention a building code. Compliance with the California Energy Code and Building Standards Code are discussed in Draft EIR Section 3.1.4.6, *Energy Resources*, in the narrow context of whether the Project would conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

Regarding questions about whether the Project should be constructed at all, how large it should be, and where it should be located; the Draft EIR found that the Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency (see Draft EIR at pages 3.1-16 and 3.1-17) and concluded that Project construction, operation and maintenance, and decommissioning and site reclamation could result in the wasteful, inefficient, or unnecessary consumption or use of energy, but that the associated impact would be less than significant (see Draft EIR at pages 3.7-9 through 3.7-13). Therefore, in the context of this CEQA energy review, no information was identified that would preclude construction of the Project at the Project Site. Regarding the question about whether the Project should incorporate renewable energy resources, the Project would itself be a renewable energy resource.

Comparisons of the Humboldt Wind Energy Project that suggest it could be more efficient than construction of the Fountain Wind Project, such as the mileage required to deliver equipment to the sites from the port of delivery, are noted. However, the comparison of GHG emissions of the two projects was meant to convey that the emissions would generally be similar; supporting the notion that there are no unusual Project characteristics that would cause the use of construction equipment that would be less energy efficient compared with other similar construction sites in other parts of the state. This is a valid assumption since construction of the Humboldt Wind Energy Project would have resulted in approximately 1.0 metric ton of carbon dioxide equivalent per megawatt generated (MT CO₂e/MW) per year annualized over the life of the project (i.e., 157 MT CO₂e/155 MW; based on Humboldt County, 2019, Table 3.8-1) compared to construction of the Fountain Wind Project, which would result in 1.1 MT CO₂e/MW per year annualized over the life of the Project (i.e., 245 MT CO₂e/216 MW; based on DEIR Table 3.10-1, page 3.10-14). The County is aware that the Humboldt County Board of Supervisors denied the Humboldt Wind Energy Project in December 2019; however, Humboldt County's decision is not relevant to the CEQA analysis for this Project.

The Project would connect to the PG&E power grid. As such, it cannot be determined exactly where the energy produced would be used. Although all or some of the energy could be consumed outside of the County, the commenter's statement that the energy

produced by the Project would likely not be used in Shasta County is not supported by facts or evidence.

P45-125 The full text of the excerpted sentence from the analysis of Impact 3.8-1 (at page 3.8-4) is as follows: “Further, as described in Section 2.4.7, *Decommissioning and Site Restoration*, the Applicant proposes to recontour and revegetate the Project Site upon completion of the Project’s operational life to be as similar to preconstruction conditions as possible, including, in coordination with the land owner, replanting disturbed areas with trees or other vegetative cover consistent with the landowner’s current and future land use practices.” The comment is correct that the statement does not mention “restoring any of this land back to forest areas.” The EIR reasonably assumes that the private owner of commercial timberland would resume a forest-related or other use consistent with the General Plan and Zoning designation of the property. The comment provides no evidence to the contrary, and no evidence that the assumption is not a reasonable one.

See Response P17-5 regarding the Project’s consistency with the Shasta County General Plan and Zoning Plan. See Response P26-48 regarding SB 901 and Public Resources Code Section 2490(b).

P45-126 Contrary to the suggestion in this comment, the analysis of cumulative impacts relating to forest resources, as provided in Draft EIR Section 3.8.4, does take into account the contributory effects of timber harvesting, wildfire, and climate change. See, e.g., page 3.8-5, which says: “From a land use planning perspective, the County’s timberland supply is negatively affected by the conversion of timberland to other land uses that are incompatible with timber operations and management, such as rural residential uses and parcelization into lot sizes that are inefficient for economic timber production.” As explained on page 3.1-3, “The cumulative scenario consists of trends; projections contained in one or more local, regional, or statewide planning documents; and the incremental effects of past, present, and reasonably foreseeable probable future projects summarized below by activity type.” Fire history and projections and weather extremes are described on pages 3.1-5 and 3.1-6. For forest resources, the ongoing impacts of past projects are reflected in the baseline condition described in Section 3.8.1.2, *Environmental Setting* (at page 3.8-1). To the extent the Project’s proposed removal of trees could cause or contribute to cumulative effects to wildfire or greenhouse gas emissions, see Section 3.16 and Section 3.10, respectively. While the County acknowledges that the commenter may prefer to see additional information, the analysis presented in the Draft EIR is sufficient to inform decision-makers and the public about the potential environmental impacts of the Project. Therefore, the inclusion of additional information is neither required nor necessary.

P45-127 See Response P17-5 regarding the Project’s consistency with the Shasta County General Plan and Zoning Plan. The opinions on timberland health and statement that disease and beetles are affecting it are acknowledged. Here, the cumulative effects analysis evaluates the fact that trees would be removed as part of the cumulative

scenario as well as by the Project. The analysis of cumulative impacts relating to forest resources also takes into account the contributory effects of timber harvesting, wildfire, and climate change.

- P45-128 For discussion of carbon sequestration that is associated with trees and vegetation that would be removed under Project, see Response P34-32 and Response P34-32.

As stated in the Draft EIR (at page 3.10-16), the Project would result in the permanent conversion of up to 713 acres of timberland to develop power generation facilities that would be used for the duration of the Project's operational timeframe. Based on the CalEEMod forestland carbon biogenic emissions rate of 111 MT CO₂/acre, the Project could result in a loss of approximately 79,143 MT CO₂ of carbon sequestration capacity or approximately 1,977 MT CO₂ per year amortized over the life of the Project. See Draft EIR Section 3.10, *Greenhouse Gas Emissions*.

- P45-129 The comment correctly states that CEQA does not require a full life cycle analysis. However, please note that the Draft EIR does consider the Project's long-term GHG-related impacts. See Section 3.10 (at page 3.10-1), including its discussion of cumulative effects (at page 3.10-21), which concludes the Project would contribute a long-term beneficial effect by offsetting GHG emissions.

The Draft EIR discloses potential irreversible impacts in Section 3.1.5 (at page 3.1-39). See Response P27-37 for more information.

- P45-130 The performance measures by which the adequacy of the proposed Hazardous Materials Business Plan and Spill Prevention Control and Countermeasures Plan (HMBP/SPCC) are set forth in the Health and Safety Code and the California Code of Regulations. Components of the plans (as required by law) would include procedures, methods, equipment, and other requirements to prevent discharges from non-transportation-related facilities into waters of the United States are to be developed in accordance with law, as described in Draft EIR Section 3.11 (see, e.g., pages 3.11-4, 3.11-5, 3.11-9, and 3.11-11). For these reasons, the County disagrees with the suggestion that the Court's decision in the Lotus case, which speaks for itself, has bearing on the sufficiency of the Draft EIR for this Project.

- P45-131 The County does not have access to the Pipeline and hazardous materials Safety Administration page identified at the web address provided in this comment, and so was not able to review the information or include a copy of it in the record for this Project. However, as discussed below, the summary of it provided in the comment is consistent with information provided in the Draft EIR.

Draft EIR Section 3.11, *Hazards and Hazardous Materials*, discloses and analyzes the potential for the Project to create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials or wastes. See Impact 3.11-1 (at page 3.11-9), which concludes that the Project would have a less-than-significant impact in this regard. The fact that on-road accidents could occur is

further acknowledged by the study area defined for this analysis in Section 3.11.1.1 (at page 3.11-1) as including “the Project Site and transportation routes used to deliver or remove any hazardous materials or equipment.” See also Section 3.11.4 (at page 3.11-22), which defines the geographic scope of cumulative effects analysis as including “the Project materials delivery routes.” See Response P4-8 further regarding roads to be used to access the Project Site.

The comment correctly notes that Draft EIR Section 2.4.8.3, *Hazardous Materials* (at page 2-25 et seq.), including Table 2-3, *Hazardous Materials* (at page 2-26), identifies the types, uses, and quantities of hazardous materials that are expected to be used during the site preparation and construction, operation and maintenance, and decommissioning and site restoration phases of the Project. That blasting could be required is disclosed at page 2-17. In the discussion of environmental setting for hazardous materials, page 3.11-1 makes clear that explosions are “reactive,” and therefore are considered hazardous. See also page 3.11-3 under the heading “Blasting,” for more information. Further, the Best Management Practices for Blasting required by Mitigation Measure 3.12-2 (at page 3.12-15 et seq.) would further minimize impacts of blasting, if it occurs, by requiring a Blasting Plan that, among other things “shall contain a complete description of how explosives will be safely transported and used at the site; evacuation, security and fire prevention procedures; blasting equipment list; and procedures for notification of nearby receptors.”

It is not clear from the comment which of the materials the commenter would like to know more about. Without some indication, the County does not have enough information to provide responsive clarification.

- P45-132 Regarding the Initial Study, see Response P45-76. Regarding the types, uses, and quantities of hazardous materials that are expected to be used for the Project, see Response P45-132.

Consistent with the court’s decision in *Tracy First v. City of Tracy* (2009) 177 Cal.App.4th 912, compliance with applicable regulatory standards provides a basis for the County to conclude that the Project would have a less than significant impact especially where, as here, it is reasonable to expect compliance. Therefore, the suggestion that the County explore other mitigation options is acknowledged, but does not affect the sufficiency of the analysis or its conclusions.

To clarify, the analysis does not conclude that “no accident could release toxins into the environment,” but rather that should such a release occur, controls would be in place to limit the effect to less than significant.

- P45-133 This input about oil leakage at the Hatchet Ridge Wind Project and its potential impacts at that project site are acknowledged, but do not bear on the sufficiency of the EIR for this Project. However, as discussed in the Draft EIR (at pages 3.11-9 and 3.11-10), operation, maintenance, and decommissioning of the Project would be conducted in accordance with regulatory requirements and the Hazardous Materials Business

Plan/Spill Prevention Control and Countermeasures Plan (HMBP/SPCC). The HMBP/SPCC would be prepared prior to construction and would include requirements for routine maintenance activities that are expected to include, but not be limited to: checking torque on tower bolts and anchors; checking for cracks and other signs of stress on the turbine tower and other turbine components; inspecting for leakage of lubricants, hydraulic fluids and other hazardous materials, and replacing them as necessary; inspecting the grounding cables, wire ropes and clips, and surge arrestors; cleaning; and repainting. Compliance with applicable federal, state, and local regulations and the applicable BMPs and HMBP/SPCC would ensure that any potential impact would be less than significant during Project operation and maintenance.

- P45-134 The County acknowledges receipt of this additional information about the potential causes of turbine failure. However, in Impact 3.11-2, the issue is whether a turbine failure could result in a potential hazard to the public. Accordingly, it focuses on the potential for tower collapse or blade throw to occur. The comment provides no evidence that the other ways that failure could occur would result in a potential significant adverse impact for purposes of CEQA.
- P45-135 Regarding issues at the Hatchet Ridge Wind Project, see Response P45-133. Operation and maintenance activities proposed as part of this Project are identified in Draft EIR Section 2.4.6 (at page 2-22 et seq.).
- P45-136 See Response P21-3 regarding wind shear, turbulence, and wake effect. The County disagrees that the concerns identified in Comment P45-136 relating to wind shear and turbulence would result in impacts to the physical environment for purposes of CEQA, and the comment does not provide substantial evidence to the contrary.

Neither the reported curtailment in July 2011 at the Hatchet Ridge Wind Project nor grid stability issues bear on the sufficiency of this EIR. See Final EIR Section 2.1.1, *Input Received*.

- P45-137 CEQA grants lead agencies broad discretion regarding the thresholds used to determine whether or not a potential impact is significant. Consistent with CEQA, standards of significance may be based on a determination by the lead agency, including reliance on the judgment of experts who prepare the EIR, and significance standards recommended by regulatory agencies. As disclosed in Draft EIR in the context of Impact 3.11-3 (at page 3.11-12 et seq.), “To address the risk of public exposure to thrown fragments from rotor failure beyond project site boundaries, many jurisdictions have adopted ‘setback requirements,’ which establish minimum distances between wind turbines and neighboring property lines, roads, and occupied structures. Neither the State of California nor Shasta County has adopted setback requirements for wind turbines.” Informed by multiple other jurisdictions’ requirements, the County determined that a project would “have a significant impact relating to turbine or meteorological tower failure or blade throw if it would be set back less than 2 times the overall turbine height (i.e., 1,358 feet) from the lot line of any off-site residence or 1.25 times the overall

turbine height (848.75 feet) from any public road or highway based on the maximum overall turbine height of 679 feet as identified in Chapter 2.” In the absence of adopted thresholds, support for the County’s selection of this threshold is sufficient for purposes of CEQA.

P45-138 See Response P45-137.

P45-139 The stated concerns about potential turbine failure are noted; nonetheless, the comment does not submit data or references offering facts, reasonable assumptions based on facts, or expert opinion supported by facts in support of the comments.

The comment correctly states that setbacks would not address turbine fires. The Draft EIR does not suggest that they would. Regarding mitigation proposed to address turbine fires, see Section 3.16, *Wildfire*. See Response P26-56 regarding lightning.

P45-140 The commenter’s suggested disagreement about the sufficiency of the evidence supporting the Draft EIR’s conclusion that Impact 3.11-4 would be less than significant is acknowledged. However, multiple sources of information are cited in support of the conclusion. CEQA focuses hazards analyses on potential impacts to the public or the physical environment. Potential impacts to the Applicant’s equipment, including theft of property, are not a matter of CEQA concern unless and until they result in an impact to the public or the physical environment.

P45-141 Consistent with CEQA, the Draft EIR analyzes the potential significance of Project impacts relative to existing baseline conditions. Potential impacts to surface waters and wells are addressed in Draft EIR Section 3.12. Page 3.12-2 expressly identifies Willow Creek as one of the relevant surface waters (“Multiple surface waters generally flow from east to west/northwest through the Project Site including... Willow Creek...”). See Response P4-7 regarding potential impacts to surface waters and groundwater, including from blasting, if it occurs. See Response T3-4 regarding water rights.

The County acknowledges that water supply is a critical issue in the Project area, has considered input about area waters received from members of the public during the scoping process, and has addressed related potential impacts with due care under CEQA in the EIR. The analysis concludes that, with mitigation incorporated, a less than significant impact would result. Impact conclusions are supported by substantial evidence. The residual impacts that would remain following the implementation of mitigation measures are identified. For purposes of oversight and enforcement, the County will finalize the draft mitigation monitoring and reporting program (MMRP) provided in Final EIR Appendix G. See Response P21-12 for information about the MMRP. Compliance with conditions of project approval, including mitigation measures, would be separate from and independent of any other remedy that may be available if a property owner should suffer legal harm as a result of the Project.

The commenter's opposition to the Project based on concerns about potential impacts to water supply is acknowledged, and has been included in the record for further consideration by decision-makers.

P45-142 No mitigation has been deferred in connection with Impact 3.12-1. See Response P45-141 regarding impacts to surface waters and groundwater and Response P21-12 regarding the MMRP to be prepared for the Project.

P45-143 The County disagrees that Mitigation Measure 3.12-2, Best Management Practices for Blasting, would improperly defer mitigation. The measure contains sufficient specificity to gauge its effectiveness, and contains standards that would have to be met. It would require an approved blasting plan; proper drilling, explosive handling and loading procedures; observing the entire blasting procedures; evaluating blasting performance; and handling and storage of blasted rock, each of which is further described in the Draft EIR.

A substantial degradation of water quality would be determined on the same basis that the Draft EIR's Hydrology and Water Quality significance criteria a) would be. See Section 3.12.2, Significance Criteria (at page 3.12-10) and Section 3.12.3.2, direct and Indirect Effects of the Project (at page 3.12-11 et seq.).

The potential impact to be addressed by Mitigation Measure 3.12-2 is described in Impact 3.12-2, which concludes that blasting, if it occurs, could substantially degrade groundwater quality. See Draft EIR Section 3.12.3.2 at page 3.12-15. As stated there, "if it occurs, blasting could result in the release of a regulated or unregulated substance to the groundwater (e.g., by spilling or releasing chemicals from blasting materials) or could result in potential impacts to state or private water supplies by causing the subsurface fracturing of volcanic rock and alteration of hydrological conditions for adjacent aquifers. Blasting also could cause a shaking loose of silt, rock, or other particles that line fracture surfaces in the subsurface and, thereby result in increased turbidity in well water. Should they occur, a significant adverse impact to groundwater would result." In combination with Mitigation Measure 3.4-15a, which includes measures to protect aquatic resources, Mitigation Measure 3.12-2 would avoid or substantially reduce releases of substances to surface waters and the alteration of hydrologic conditions for adjacent aquifers.

P45-144 The County acknowledges, but disagrees with, the commenter's opinion that the study "failed to disclose or find the relevant information it was intended to find." The Applicant provided the water supply assessment for the Project that is described in Draft EIR Section 2.4.8.1 (at page 2-24) and included in Appendix I. The County and its consultant team (identified in Draft EIR Chapter 5, *Report Preparers*) independently reviewed the assessment. The assessment considered the proposed water demand, the existing groundwater storage, and the existing demands. Underlying groundwater resources are characterized by a fractured bedrock system and discontinuous layers of weathered volcanic rocks or debris flows. According to the assessment, inflows are

largely derived from the “infiltration of direct precipitation and snowmelt, and infiltration along creeks and downstream flow of spring discharges.” The assessment determined that the potential impact of the Project’s water demand (with respect to groundwater supply) would be negligible and represents a *de minimis* use of groundwater compared to existing production capacity. Artesian springs are created by geologic conditions that create pressure to bring groundwater to the surface. As analyzed, the Project would not alter those conditions and would require *de minimis* use of groundwater. Thus, there would be a negligible effect on all existing springs in the Project Site.

P45-145 Potential impacts to surface and groundwater are analyzed in Section 3.12, *Hydrology and Water Quality*. In the context of Impact 3.12-4 (at page 3.12-19 et seq.), the Draft EIR concludes that the Project, with mitigation incorporated, would cause a less-than-significant impact relating to increased siltation of waterways or substantial additional sources of polluted runoff during construction and decommissioning. Response P21-12 regarding the MMRP to be prepared for the Project.

P45-146 Consistent with CEQA Guidelines Appendix G and the significance criteria identified in Draft EIR Section 3.12.2 (at page 3.12-11 et seq.), the analysis considers whether the Project would conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Such a conflict would, as stated on page 3.12-10, “result in a significant impact to Hydrology or Water Quality” and so be subject to mitigation. The analysis of Impact 3.12-5 concludes that the Project would have the potential to conflict with such a plan, and so identifies mitigation measures. The identified measures would require the Applicant to implement water quality best management practices during activities in and near water and for blasting, if it occurs. Their implementation would reduce the potential for the Project to conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan to less than significant.

P45-147 The portion of the analysis referred to in this comment is within Draft EIR Section 3.13.1.2, *Environmental Setting* (at page 3.13-9). It is introductory text developed to introduce the topic and its presence within the scoping comments. Please note the citation to (Roberts and Roberts, 2013) with respect to declining human sensitivity as noise frequency decreases. A copy of this reference has been available for public inspection since the issuance of the Draft EIR and is included in the record for the Project.

The Draft EIR analyzes potential impacts relating to infrasound in Section 3.13, *Noise and Vibration*. Input received during the scoping period regarding infrasound is summarized on Draft EIR page 3.13-1 and in Appendix J, *Scoping Report*. Infrasound is described on pages 3.13-9 and 3.13-10; impacts are analyzed on page 3.13-18 et seq., pages 3.13-25 and 3.13-26.

By including an analysis of potential impacts relating to infrasound, the County acknowledges the potential for turbine-generated noise to pose a risk to public health. The analysis concludes that, for this Project, it would not. The County acknowledges that the commenter may disagree with the conclusion, and that other conclusions could be reached using a different methodology or assumptions; however, neither the disagreement nor the potential for other outcomes based on different facts undermines the validity of the data or analysis in the EIR.

In the 2013 example from Falmouth Massachusetts, the turbines were over 20 years older than the models proposed by the project and were of questionable integrity. Specifically, the gear-driven turbines were designed in the late 1990s and assembled in early 2004. The turbines were held in storage in Texas for 5 years until the first one was installed in Falmouth (Patch, 2020). In this case, a single judge out of the 49 cases that considered medical information found the wind health impact claims to be credible. This case is now referenced in policy submissions, but may be considered an interesting outlier.⁹⁵ It does not, however, undermine the validity of the data or analysis in the EIR.

P45-148 The wind speed correlation analysis in Draft EIR Appendix G (Noise) was conducted to demonstrate that the existing noise levels as recorded were representative of existing conditions for use as a conservative analysis. The correlation provided in the study showed little variation in noise levels during wind speeds monitored during a one week monitoring period from August 19th to August 27th of 2018, during which noise was monitored in 10-minute intervals over 24-hour periods. As can be seen from Figure 3 of Draft EIR Appendix G, wind speeds during this period varied from calm to 8.5 meters per second with little variation in noise levels during these periods. While there may be times of the year when wind speed is sufficiently increased that noise levels may be elevated compared to those monitored in the Project area, use of a lower noise data points would result in a more conservative analysis, given that one of the methods of assessment is to predict the increase over existing noise levels with the proposed wind turbines operating. If higher existing values were to be used, a smaller increase over existing noise levels would be projected. Therefore, use of the noise monitoring data set of the noise study would result in a conservative estimate of operational noise impacts.

P45-149 Noise contours for turbine operations are presented in Draft EIR Figure 3.13-3 (at page 3.13-24). As can be seen from this figure, the 50 dBA noise contours extend up to approximately 1,000 feet from each turbine. The figure also shows how topography and the cumulative contributions of some adjacent turbines can create 50 dBA noise levels (observe the ring of contour approximately 10,000 feet southwest of the proposed substation), and these contours provide the reader with a reasonable indication of the geographical extent of potential noise impacts given that 50 dBA is the County's threshold for significance. The County selected the specific monitoring locations to

⁹⁵ Energy and Policy Institute (EPI), 2021. "Falmouth Wind Farm Case: The Outlier". January 2021.

represent the closest residences to construction/decommissioning and operational elements of the Project. Additionally, the project proposes turbines in an area with limited clusters of rural residential uses and therefore, unlike turbines in the study cited in Comment P45-147 in the urban environment in the City of Falmouth Massachusetts, the potential for localized variations in impact is lessened by the lack of existing noise sources such as freeways.

P45-150 Consistent with CEQA Guidelines Appendix G and Draft EIR Section 3.13.2, *Significance Criteria* (at page 3.13-14), a project would result in a significant impact to noise or vibration if it would result in generation of a substantial temporary increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. As there are no noise standards for construction-related activities established by either the Shasta County Code or the Shasta County General Plan Noise Element, the analysis relies on the professional judgement of the County's consultant team and previous studies prepared under CEQA to evaluate the potential for disturbance. In recognition that construction is an inherently noisy but temporary activity, it is a general practice to either exempt construction noise from regulations during daytime hours or to apply more lenient standards than those of permanent sources. In this case, a more lenient assumption is applied to temporary construction noise than to permanent noise sources for the purposes of establishing a reasonable threshold appropriate for construction.

P45-151 The Draft EIR discusses the use of oversize/overweight vehicles for Project construction in Section 3.14.3.2 (at page 3.14-13). During Project construction, heavy construction equipment and wind turbine components (e.g., blades, nacelles) would be delivered to (and during decommissioning would be removed from) the Project Site using area roadways, some of which may require transport by oversize/overweight vehicles. The transport of these materials would require transportation permits from Caltrans for oversize/overweight vehicles (see Draft EIR Section 2.6, *Permits and Approvals* [at page 2-41]). Such permits deal primarily with safety, and do not address pavement condition; however, unlike local, non-arterial roadways, State Highways are designed and constructed to handle a mix of vehicle types, including heavy trucks. Therefore, oversize/overweight truck trips generated by the Project to transport heavy construction equipment and wind turbine components would not result in abnormal or unexpected wear-and-tear to SR 299.

Caltrans Office of Pavement Management regularly reviews pavement conditions on State Highways and addresses deficiencies as part of maintaining the State Highway System.⁹⁶ Shasta County, the Lead Agency for the Project, does not have jurisdiction over SR 299 or any State Highway. Therefore, it does not have the authority to place any conditions on the Project with respect to pavement damage that may occur as a

⁹⁶ Caltrans, 2021.

result of the Project. Regarding the mitigation of potential impacts to County roads, see Response P35-4.

- P45-152 The Draft EIR discusses emergency access in Section 3.14.3.2 (at pages 3.14-15 and 3.14-16). The Project's proposed use of oversize/overweight vehicles during construction and decommissioning would not cause a significant adverse impact on emergency access to or near the Project Site if oversize/overweight vehicle permits and related requirements are complied with. Because Mitigation Measure 3.14-3 includes a plan for communicating construction/decommissioning plans with emergency service providers that operate in the vicinity of the Project Site, and drivers of emergency vehicles can use sirens to clear a path of travel, emergency access would be maintained and response times would be comparable to delay experienced under baseline conditions during other traffic control scenarios that occur on the highway, such as road construction, during Project construction and decommissioning.

The Draft EIR discusses local access to the Project Site in Section 3.14.1.2 (at page 3.14-2). Three existing access roads currently used for logging that intersect with SR 299 would provide local access to the Project Site, which are identified in the Draft EIR as West Access, North Access, and East Access. Neither Moose Camp Road nor Moose Avenue would be used for Project Site access during project construction or operation. See also Response P4-8, clarifying that Moose Camp Road would not be used for Project purposes. Therefore, the Project would not impede access for Moose Camp residents.

The Draft EIR discusses highway (SR 299) and intersection (Project driveways) level of service conditions on SR 299 and on pages 3.14-10 through 3.14-12 for site clearing construction, operation and maintenance, and decommissioning and site reclamation. The analysis concludes that the level of service would remain within the parameters established for operating conditions by Caltrans and Shasta County for all Project-related vehicle activity. The discussion of Impact 3.14-3, beginning on page 3.14-13 of the Draft EIR, specifically addresses the potential for delays resulting from possible lane closures on SR 299 due to use of oversize/overweight vehicles to transport certain wind turbine components to/from the Project Site. While the Draft EIR does not quantify the delay and/or level of service results that could result from such closures due to their unknown duration and limited frequency, the Draft EIR determined that the implementation of Mitigation Measure 3.14-3: Traffic Management Plan, would minimize the impact of Project-related delays to motorists traveling on SR 299 to a less-than-significant level.

- P45-153 The Draft EIR discusses the County's approach to criterion b), CEQA Guidelines Section 15074.3(b) on page 3.14-6. The commenter does not provide any substantial evidence that the County's approach to this criterion related to VMT is incorrect or yields inaccurate results. The Draft EIR provides a summary of the VMT analysis results and the significance determination on pages 3.14-12 and 3.14-13. The Draft EIR provides the assumptions used to calculate Project-generated VMT, and appropriately

refers the reader to Draft EIR Appendix H where detailed information is provided in tabular form. The amount of detail provided in the Draft EIR is limited to that which is necessary or at least useful for the public and agency to understand the project, consistent with CEQA Guidelines Section 15124.

- P45-154 The text for Mitigation Measure 3.14-3: Traffic Management Plan on page 3.14-14 of the Draft EIR states that: “the Applicant shall...Prepare and submit a Traffic Control Plan to Shasta County Public Works Department and the Caltrans offices for District 2, as appropriate, for approval.”

The commenter’s assertion that this plan only needs to be prepared, but not necessarily adopted, by the Lead Agency is inaccurate. As stated in the text above, “for approval” indicates that both the County and Caltrans would need to approve the Traffic Control Plan in order for Project construction to be permitted. The approval process would allow for the County and Caltrans to work with the construction contractor to ensure that all elements of the plan are adequately addressed. Mitigation Measures are required to be implemented and are not optional. See Response P21-12 regarding the MMRP and the County’s oversight and enforcement of compliance with the requirements of mitigation measures.

The commenter asserts that Traffic Management Plan has not been formulated and analyzed in the EIR. Mitigation Measure 3.14-3 provides a detailed list of required elements that must be implemented to address traffic safety and delay. These elements were developed in order to specifically address the specific aspects of the Project that have the potential to introduce hazards/delay, and were considered in the impact determination. The level of detail provided in Mitigation Measure 3.14-3 provided the County with enough information to determine that its implementation would reduce the impact to a less-than-significant level. Furthermore, the level of detail is consistent with the requirements of CEQA in that it cannot be further developed/adopted until: a) the project is approved, and b) a construction contractor is selected.

- P45-155 See Response to P45-154 regarding the legal adequacy of Mitigation Measure 3.14-3 and the requirement that it be implemented prior to Project construction. With respect to emergency response times, see Response to P44-55. See the Draft EIR’s description of proposed road construction and improvement activities. As stated on page 2-17, “The existing logging road network within the Project Site would be widened and modified according to the aforementioned specifications to safely accommodate turbine component delivery vehicles and heavy equipment” Thus, the Project would improve emergency access conditions relative to baseline conditions with respect to existing roads. Regarding new roads, see page 2-18, which says (with emphasis added), “As new roads are built and existing roads are modified, existing culverts would be upgraded or replaced as needed to maintain a functional stormwater drainage system *and meet fire safety and access standards.*”

- P45-156 See Response P45-144 regarding the adequacy of the WSA.

P45-157 The County acknowledges the commenter’s opposition to the Project based on the opinions expressed about the relative potential benefits and impacts that would result.

The general statements of concern about project objectives and alternatives, required plans and mitigation measures, the adequacy of support provided for conclusions reached, and perceptions about General Plan consistency are addressed in greater detail in prior responses to comments in this Letter P45. Regarding what the commenter refers to as “due diligence” and regarding the quality of data relied on, see Response P45-7.

Based on the analysis provided in the Draft EIR and the reasons explained in these responses to comment, the County disagrees with commenter’s opinion that the Project would “worsen the greenhouse gas emission problem more than it will help it.” To the contrary, as analyzed in the Draft EIR’s analysis of cumulative effects relating to GHG emissions (Section 3.10.4 at page 3.10-21 et seq.), the Project as a whole would offset carbon emissions. That the commenter may disagree with conclusions or prefer to see different or additional analysis does not undermine the validity of the data or analysis in the EIR.

This comment generally suggests that significant impacts (which are not identified in the comment) were not identified and need to be recirculated to the public. Acknowledging the opinion, the county disagrees that recirculation is required. See Response P12-1, which identifies all potential reasons for requiring recirculation. None is triggered here.

P45-158 The commenter’s citation to these reference materials is acknowledged. To the extent that copies readily could be located online, the County has obtained and considered them. To the extent that the County was not able to locate the references cited, it assumes that the commenter has provided the relevant information in the text of Comments P45-1 through P45-157.

This letter includes lengthy exhibits. The exhibits themselves are provided in Final EIR Appendix D5, Exhibits to Letter P45, Kelly Tanner. Responses addressing the exhibits are provided below.

P45-159 The County acknowledges receipt of the August 8, 2013 report regarding the Hatchet Ridge Wind Project. See Final EIR Section 2.1.1, *Input Received*, which explains that comments that do not mention, or are not specific to the Draft EIR or the CEQA process for this Project, are beyond the scope of this EIR.

P45-160 The County acknowledges receipt of the Shasta County Superior Court’s July 1986 Decree in the Matter of the Determination of the Rights of the Various Claimants to the Waters of Willow Creek Stream System, Shasta County, California. See Final EIR Section 2.1.1, *Input Received*, which explains that comments that do not mention, or are not specific to the Draft EIR or the CEQA process for this Project, are beyond the scope of this EIR.

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CHAPTER 3

Revisions to the Draft EIR

3.1 Introduction

The following changes have been made to the previously published text of the Draft EIR. Changes to the Draft EIR include minor corrections made to improve writing clarity, grammar, and consistency; clarifications, additions, or deletions resulting from specific responses to comments; and changes to update information in the Draft EIR. These text revisions are organized by the chapter and page number (provided on the left-hand side of the page, below) that appear in the Draft EIR. An explanation of the change, including identification of where it would be made, is presented in *italics*. The specific additions and deletions use the following conventions:

- Text deleted from the EIR is shown in ~~strike-out text~~.
- Text added to the EIR is shown in underline text.

3.2 Text Changes to the Draft EIR

3.2.1 Executive Summary

Revisions to the mitigation measures provided in Draft EIR Table ES-1, *Summary of Impacts and Mitigation for the Proposed Project* (p. ES-6 et seq.), have been made as set forth on a resource-by-resource basis, below.

Page ES-1 Section ES.2.1 has been revised as follows:

Access to the Project Site would be provided regionally and locally by Interstate 5 (I-5), approximately 35 miles to the west of the Project Site; State Route (SR) 139, approximately 60 miles to the east of the Project Site; SR 299; ~~Moose Camp Road~~; and three existing, gated logging roads that would be used to enter the Project Site.

Page ES-2 Section ES.2.2 has been revised as follows:

The approximately 4,464-acre Project Site is located within an approximately 29,500-acre area that comprises 76 Shasta County Assessor's parcels (APNs). The 76 APNs consist exclusively of private property operated and managed primarily as forest timberlands. There are private properties that occur within the

vicinity of the 29,500-acre leasehold area, including seven parcels that are managed pursuant to an LLC operating agreement that emphasizes natural and wildlife resources conservation and recreational values and enjoyment. These properties are not associated with the Fountain Wind Project. The Project Site is located approximately 1 mile west of the existing Hatchet Ridge Wind Project, 6 miles west of Burney, 35 miles northeast of Redding, immediately north and south of California State Route 299 (SR 299), and near the private recreational facility of Moose Camp and other private inholdings.

3.2.2 Chapter 1, Introduction

No text changes have been made to Chapter 1, *Introduction*.

3.2.3 Chapter 2, Description of Project and Alternatives

Page 2-3 Section 2.2 has been revised as follows:

Access to the Project Site is provided locally by SR 299, ~~Moose Camp Road~~, and three existing, gated logging roads, and would be provided regionally by highways that provide access to SR 299, including Interstate 5 (I-5), which is approximately 35 miles to the west of the Project Site, and SR 139, which is approximately 60 miles to the east of the Project Site.

Page 2-8 Objective No. 8 has been modified as follows:

8. Offset approximately 128,000 metric tons per year of carbon dioxide emissions generated by fossil fuels.

Page 2-22 Section 2.4.6 has been revised as follows:

In the event of winds or gusts above the maximum operating parameters ~~or red flag alerts~~, the turbines would automatically shut down.

Page 2-32 Section 2.5.2.3 has been revised as follows:

A cogeneration alternative to the Project was not carried forward for more detailed consideration because it would not result in a commercial wind energy generation facility capable of generating up to 216 MW of wind energy and would not provide emissions-free energy for approximately ~~86,000~~ 100,000 households, since there is no basis to assume that the energy it would generate would even offset the power required to operate the associated biomass facility much less contribute to other PG&E ratepayers.

Page 2-32 Section 2.5.2.3 has been further revised as follows:

A solar project alternative would not result in the development, construction, and operation of a commercial wind energy generation facility capable of generating

up to 216 MW of wind energy and, based on geographic considerations, would not reasonably be expected to offset approximately 128,000 metric tons of carbon dioxide emissions generated by fossil fuels or provide emissions-free energy for approximately ~~86,000~~ 100,000 households.

3.2.4 Chapter 3, Environmental Analysis

3.2.4.1 Section 3.1, Introduction to Environmental Analysis

Page 3.1-19 Section 3.1.4.10 has been revised as follows:

The Shasta County General Plan designates the Project Site as Timberlands (T). The zoning designations are Timber Production (TP) (approximately 4,457 acres) and Unclassified (U) (approximately 6 acres). In accordance with Shasta County Zoning Plan (Zoning Plan) section 17.88.035, wind energy systems that do not meet the requirements for small scale wind energy systems or, in the absence of an established term for such systems, “large scale wind energy facilities,” may be permitted in all zoning districts with the approval of a use permit (Shasta County, 2019c).

Furthermore, the Applicant is a private energy producer as defined by Zoning Plan Section 17.02.415 and both the existing Hatchet Ridge Wind Project and the Project constitute private energy production as defined by Zoning Plan Section 17.02.420. To implement the Zoning Plan, private energy production is further considered and defined as meaning “public utility” pursuant to Zoning Plan Section 17.02.430. The Zoning Plan provides that a public utility is also permissible in all zone districts provided a use permit is approved pursuant to Zoning Plan Section 17.88.100.B. Additionally, for that portion of the Project within the U zone district, Zoning Plan Section 17.64.040 conditionally permits uses not otherwise prohibited by law and not inconsistent with any portion of the General Plan. Finally, in addition to Zoning Plan section 17.88.035, which addresses wind energy systems that involve tower heights more than 80 feet tall, Zone Plan Section 17.814.030.B.4 allows structures that exceed the height limit established for the zone district in which the structures are located.

Pursuant to General Plan Policy 6.24 T-b, in addition to uses permitted within a Timber Production Zone by the Forest Taxation Reform Act other related and compatible uses may be conditionally permitted under the applicable provisions of the Zoning Plan. Pursuant to General Plan Policy 6.2.4, T-d, the primary use of timberlands not within a Timber Production Zone shall be forest management and production with secondary uses consisting of those which do not significantly impede forest management or the or the process or utilization of timber; this policy identifies power generation facilities as a potential secondary use of property. Therefore,

power generation facilities may be permitted on properties designated Timberlands.

~~Consistent with General Plan Policy 6.2.4, T d, the proposed power generation facilities are an allowed use. Regarding the TP district, Shasta County Code Section 17.08.030(D) conditionally allows the construction of “gas, electrical, water, or communication transmission facility, or other public improvements, in accordance with Government Code Section 51152.” Regarding the U zone district, Code Section 17.64.040, conditionally permits wind energy systems so long as the system is not otherwise prohibited by law and would not be inconsistent with any portion of the General Plan. Code Section 17.88.035, requires a Use Permit in all districts for all large scale wind energy facilities, like the Project, that would be larger than 50 kilowatts (Shasta County, 2019e). Consistent with Code Section 17.92.020, the Applicant has submitted a Use Permit application for the County’s consideration. Consistent with the Zoning Plan sections described above and Zoning Plan Section 17.92.020 governing applications and procedures for use permits, the Applicant has submitted a Use Permit application for the County’s consideration, including consideration of the required use permit findings applicable to the Project. Consistency with other relevant General Plan policies and regulations adopted for the purpose of avoiding or mitigating an environmental effect are considered in the context of the relevant resource area elsewhere in this Chapter 3. For these reasons, no impact would result from the Project or from Alternative 1 or 2.~~

Page 3.1-29 Section 3.1-5 has been revised as follows:

For the Fountain Wind Project, the use permit period ultimately would be established by County decision-makers; a 40-year permit duration has been requested. Upon the expiration of the use permit period, the Project would be decommissioned and the Project Site restored to a condition suitable for commercial timber land use (see Section 2.4.7, *Decommissioning and Site Restoration*). The removal of turbine components and related infrastructure would be restricted to a depth of approximately 3 feet below grade. Infrastructure below that depth would remain in place. Internal roads that would not be needed to serve the future timber land use of the site would be removed and the area restored, including by natural recruitment. Therefore, the Project-specific commitment of non-renewable resources (e.g., oil, gas, and other fossil fuels) would not preclude the removal of Project infrastructure or the site’s future use in a way that is comparable to its current use. Irreversible impacts also can result from damage caused by environmental accidents caused by a proposed project (CEQA Guidelines §15126.2[d]). Potential impacts relating to hazards and hazardous materials are analyzed in Section 3.11, which identifies no significant unavoidable adverse effect. For these reasons, the Project would not, if implemented, result in significant irreversible impacts.

3.2.4.2 Section 3.2, Aesthetics

No text changes have been made to Section 3.2, *Aesthetics*.

3.2.4.3 Section 3.3, Air Quality

Page 3.3-2c Mitigation Measure 3.3-2c has been revised as follows:

- All areas (including unpaved roads) with vehicle traffic should be watered periodically or have dust palliatives applied for stabilization of dust emissions. Use of dust palliatives (e.g., dust suppressant or dust control binder) shall not occur in any location where transmission to a waterway or sensitive habitat could occur, such as within 100 feet of a wetland or body of water.

3.2.4.4 Section 3.4, Biological Resources

Page 3.4-11 The status of the northern spotted owl has been updated in Table 3.4-3 from “SSC” to “ST”

Page 3.4-11 The status of the foothill yellow-legged frog has been updated in Table 3.4-3 has been updated from “SC” to “CSC”.

Page 3.4-11 The status of the American peregrine falcon in Table 3.4-3 has been updated from “SE” to “- -” (i.e., no status).

Page 3.4-12 The following text in Table 3.4-3 has been revised as follows:

High. Observed during surveys (Appendix C9). Year-round resident species with historical nesting within 10 miles of the Project Site. Non-resident species likely may additionally pass through the Project Site during migration. Likely to pass through Project Site during migration.

Page 3.4-12 The following description of the lesser sandhill crane has been added to Table 3.4-3

<u>Lesser sandhill crane</u> <u><i>Grus canadensis</i></u>	<u>-/CSC</u>	<u>The summer breeding grounds for the Pacific Flyway population is southcentral Alaska. Population overwinters in California's Central Valley near shallow lakes or freshwater marshes.</u>	Moderate. <u>May pass through the Project Site during migration but does not nest there.</u>
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Page 3.4-12 The status of the following non-listed birds has been clarified as follows:

<u>Lewis' Woodpecker</u> <u><i>Melanerpes lewis</i></u>	<u>-/BCC, SSC</u> <u>BCC/SSC</u>
<u>Olive-sided flycatcher</u> <u><i>Contopus cooperi</i></u>	<u>-/BCC, SSC</u> <u>BCC/SSC</u>

Page 3.4-13 The status of the Cassin’s finch has been clarified as follows:

Cassin's finch <i>Haemorhous cassinii</i>	-/BCC, SSC <u>BCC/SSC</u>
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Page 3.4-14 The following definition has been added to the notes at the end of Table 3.4-3

BCC: Bird Species of Conservation Concern

Page 3.4-15 The following statement regarding sensitive natural communities has been deleted:

~~Based on focused rare plant surveys and natural community vegetation mapping performed in 2018 and 2019, sensitive natural communities do not occur on the Project Site (Appendix C3).~~

Page 3.4-16 et seq. The setting description of the western pond turtle has been revised as follows:

Western Pond Turtle

The western pond turtle (*Emys marmorata*), a medium-sized turtle, is a California SSC. The species occurs in a variety of aquatic habitats including streams, rivers, irrigation ditches, ponds, and marshes. Western pond turtles prefer habitats containing ample amounts of aquatic vegetation, muddy or rocky bottoms, and sparsely vegetated banks for basking. The species occurs throughout various elevations in northern California, ranging from sea level to nearly 7,000 feet. Suitable habitat is found within the Project Site, though it is limited to small ponds and/or stream pools (Appendix C1). Within the Project Site, a total of 10.04 acres of aquatic habitat resides within ponds, perennial streams, and intermittent streams (Table 3.4-1). These three aquatic habitat types are most likely to contain suitable western pond turtle habitat. Other aquatic habitat types such as riparian wetlands, freshwater emergent wetlands, wetland meadows, and wetland seep/springs may support western pond turtle populations during wetter years. Approximately 27 acres of potentially suitable aquatic habitat types are present on-site (Table 3.4-2).

In perennial lentic habitat, they may hibernate under water in the benthic layer; and in lotic habitat, dependent on stream flow conditions, may hibernate on land, migrating upland in fall and winter months and returning to water in spring.¹ Nesting occurs on land, five to 400 meters or more from water.²

While no known populations of the species exist within the Project Site, there is a known CNDDDB occurrence from 2004 just outside of the

¹ Holland, D. C. 1994. The western pond turtle: habitat and history. Unpublished final report, U. S. Dept. of Energy, Portland, Oregon.
² Jennings, M. R. and Hayes, M. P. 1994. Amphibian and Reptile Species of Special Concern in California. California Department of Fish and Game, Sacramento, California.

southwestern boundary. This species has a moderate potential to occur within the Project Site.

Page 3.4-17 The following statement regarding the foothill yellow-legged frog has been revised:

“Foothill yellow-legged frog (*Rana boylei* [FYLF]) is a California SSC, a candidate for listing as threatened under the California Endangered Species Act (CESA) and is currently being reviewed for potential listing as threatened or endangered under the FESA.”

Page 3.4-21 The following text regarding Appendices C6 and C7 has been revised as follows:

“All three observations of golden eagles were made during the spring and suggest the presence of a breeding territorial pair whose territory overlaps with the proposed wind Project migration season (Appendix C4 Appendices C6 and C7).”

Page 3.4-22 The following text regarding the willow flycatcher has been revised:

“Willow Flycatcher

In ~~2018~~1991, the willow flycatcher was designated as State Endangered (CDFW, 2020).”

Page 3.4-25 The following text regarding Lewis’s woodpecker has been revised:

“Lewis’s woodpecker (*Melanerpes lewis*) is a ~~California SSC~~ USFWS bird species of conservation concern (CDFW, 2020).”

Page 3.4-32 The description of the Migratory Bird treaty Act has been revised as follows:

Federal Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (MBTA) (16 U.S.C. §703 et seq.) is the domestic law that affirms and implements a commitment by the United States for the protection of shared migratory bird resources. Except as permitted by regulations, the MBTA makes it unlawful to intentionally pursue, hunt, take, capture, or kill migratory birds anywhere in the United States. The law also applies to the intentional disturbance and removal of nests occupied by migratory birds or their eggs during the breeding season. ~~In December 2017, the U.S. Department of the Interior issued memorandum M-37050, which redefined “incidental take” under the MBTA such that, “the MBTA’s prohibition on pursuing, hunting, taking, capturing, killing, or attempting to do the same applies only to direct and affirmative purposeful actions that reduce migratory birds, their eggs, or their nests, by killing or capturing, to human control.” The current interpretation of the MBTA’s definition of “take” does not prohibit or penalize take of migratory birds that results from actions that are not intentional.~~

Page 3.4-34 The description of the California Oak Woodlands Conservation Act has been added as follows:

California Oak Woodlands Conservation Act

Oak woodlands are protected at the state level by the California Oak Woodlands Conservation Act (Public Resources Code §21083.4), which requires a county to determine whether a project in its jurisdiction may result in a conversion of oak woodlands that will have a significant effect on the environment, and would require the county, if it determines there may be a significant effect to oak woodlands, to require one or more of specified mitigation alternatives to mitigate the significant effect of the conversion of oak woodlands.

Page 3.4-40 et seq. Mitigation Measure 3.4-2 has been revised as follows:

Mitigation Measure 3.4-2: Avoid and minimize construction-related impacts to nesting eagles (January 1 to August 31).

To prevent adverse impacts to nesting eagles, the Project Applicant shall implement the following measures if construction activities are to occur during the nesting season:

- a) Conduct terrestrial preconstruction eagle nesting surveys ~~of known previously active nest sites~~ to determine whether eagles are actively nesting or maintaining territories within 2 miles of the Project construction boundary. Surveys will be designed and carried out by a qualified biologist with experience in the natural history and nesting behavior of eagles, following USFWS and CDFW guidelines and protocols. Terrestrial surveys will include all suitable eagle nesting habitat within a 2-mile buffer surrounding the Project construction boundary, as accessible, and subsequent observations at known nests to assess territory occupancy and nesting activity by adult eagles.
- b) Results of preconstruction eagle nesting surveys will be reported to the Shasta County Department of Resource Management, Planning Division, USFWS, and CDFW by August 31 of the year in which the survey was conducted. The Shasta County Department of Resource Management, Planning Division shall, in coordination with resource agencies, determine whether or not the survey(s) were conducted in accordance with ~~appropriate~~ USFWS and CDFW guidelines and protocols. Construction shall not begin in the surveyed area until the Shasta County Department of Resource Management, Planning Division has confirmed that the survey(s) were conducted in accordance with appropriate protocols and, if necessary, that measure 3.4-2c has been implemented.
- c) If surveys document active eagle nests within the 2-mile survey buffer, the Project Applicant will coordinate with the County, USFWS and CDFW to define and implement recommended protective measures. Typical measures for working within 2 miles of eagle nests are to

establish construction buffers (e.g., with flagging, rope, signage, or other similar barriers) in accordance with USFWS recommendations (National Bald Eagle Management Guidelines, 2007; Golden Eagle, 2013) for specific activities (e.g., vehicular traffic, construction work, etc.); and may be adjusted downward based on site-specific conditions following coordination with the USFWS Migratory Bird Program and CDFW.

Significance after Mitigation: Less than significant.

Page 3.4-41 The statement of Impact 3.4-3 has been clarified as follows:

Impact 3.4-3: Operation of the Project could, ~~unless mitigated,~~ result in significant adverse impacts to or direct mortality of bald and golden eagles (Significant and Unavoidable)

Page 3.4-43 Mitigation Measure 3.4-3b has been revised as follows:

Mitigation Measure 3.4-3b: Monitor avian and bat mortality rates during project operations.⁵

To accurately assess operational Project impacts on all avian species, including bald eagle, golden eagle, other raptors, and bats, and ensure the effectiveness of avian protection measures, the applicant will design and implement a post-construction mortality monitoring (PCMM) study. The PCMM will include the following elements:

- a) The duration of PCMM monitoring to assess ongoing impacts of operation will include post-construction monitoring for all avian species, with particular attention to eagles, other raptors, and bats. The PCMM monitoring will commence immediately following the beginning of commercial operation and continue for three years following the incorporation of all planned turbines and power generation.

Page 3.4-43 The last bullet in Mitigation Measure 3.4-3b has been revised as follows:

- Bats – injury or mortality to three or more bats of a single species identified as Western Bat Working Group (WBWG) high priority (red) species (i.e., pallid bat, Townsend’s bat, spotted bat, western red bat, or western mastiff bat) in any given year; or injury or mortality to six or more bats of a single species identified as WBWG medium priority (yellow) species (i.e., hoary bat or ~~spotted bat~~ silver-haired bat), in any given year.

Page 3.4-44 The following bullet has been added to Mitigation Measure 3.4-3b:

- Other special-status birds – documented injury or mortality that suggests a population-level impact to other special status bird species.

Page 3.4-44 The last paragraph of Mitigation Measure 3.4-3b has been revised as follows:

If thresholds are exceeded, the Applicant will implement minimization measures recommended by these County, CDFW, and/or USFWS agencies to limit mortality. Which Precise measures that are applicable will depend upon the type and magnitude of the identified impact based on the behavior of the impacted species and Project-specific attributes that may be leading to increased mortality, and may include one or more of the following operational modifications, or other identified adaptive actions:

- Specific may include Operational modifications such as “Informed curtailment” of turbine speed (rapid shutdown of turbines when raptors are seen approaching.
- Curtailment of operations during high risk periods for bats (low wind nights) or birds.
- The possible use of low-intensity ultraviolet light and ultrasonic deterrence systems to deter birds and bats from approaching (AWWI, 2018).
- The use of bird-specific visual cues, such as marking/painting, UV coating, reflectors, minimal turbine lighting, visual deterrence or lasers.
- Habitat alterations that affect habitat quality or food availability on- or off-site, or alter availability of breeding habitat or roosts.
- Removing select turbines that are problematic for target species.
- Altering turbine speed to reduce mortality.
- Temporary shutdown of select turbines during sensitive periods.
- Operating select turbines only during daylight hours.
- Acoustic cues such as acoustic harassment or an audible deterrence.
- Other sensory cues, such as electromagnetism or olfactory cues.

Page 3.4-49 Mitigation Measure 3.4-6 has been revised as follows:

Mitigation Measure 3.4-6: Avoid and minimize construction-related impacts on nesting raptors (~~March 1 to August 15~~ February 1 to September 15)

- a) Where feasible, tree and vegetation removal activities shall be avoided in potential raptor nesting habitat during the avian nesting season (~~March 1 August 15~~ February 1 to September 15) during each year of construction.

If construction is planned to occur during the avian nesting season from ~~March 1 August 15~~ February 1 to September 15, pre-construction raptor nesting surveys shall be conducted by a qualified biologist to identify raptor nests within 500 feet of proposed work areas. ...

Page 3.4-50 Mitigation Measure 3.4-6 has been revised to include the following:

e) Specific to any proposed blasting activities, a qualified biologist will evaluate areas within 1,320 feet (1/4-mile) of blasting sites to identify nesting raptors. If active raptor nests are found during pre-construction surveys nest buffer distance that is applied during blasting activities may range from approximately 500 feet to 1,320 feet, depending upon the time of year, sensitivity of any identified nesting species, and site-specific conditions such as topography or dense vegetation. The determination of fledging or cessation of nesting shall be made by a qualified biologist with experience in monitoring raptor nests. Any sign of nest disturbances shall be reported to the Shasta County Department of Resource Management, CDFW and USFWS. In coordination with CDFW and/or USFWS, the County may modify the size of the exclusion zone depending on the raptor species and type of construction activity occurring near the nest.

Page 3.4-52 Impact 3.4-9 (at page 3.4-52, et seq.), has been revised as follows with the songbird setting and impact discussion from Draft EIR Appendix C6:

Other Resident and Migratory Birds

Waterfowl and Other Avian Species

Impact 3.4-9: Operation of the proposed project could result in mortality and injury to waterfowl and other avian species as a result of collisions with wind turbines and electrical transmission lines. (*Less than Significant Impact*)

The majority of waterfowl observations (about 78 percent in Year 1 surveys) comprised three species: snow goose, greater white-fronted goose, and Canada goose, all of which are abundant species in the Pacific flyway (Appendix C7). An analysis of collision risk to birds using the first year of avian data collected within the Project Site was conducted (Appendix C7). During Years 1 and 2 of the avian surveys at the Project Site the mean flight height for waterfowl was 1,679 feet (511.79 meters), with 99.1 percent of observed birds flying higher than 656 feet (200 meters) (Appendix 7, page 7). Under the project, a range of turbine heights are being considered; however, the maximum possible height would be 679 feet from ground level to the vertical turbine blade tip. At Hatchet Ridge, waterfowl comprised up to 50 percent of bird mortality, primarily attributed to species making localized movements under high wind and/or low visibility conditions which may cause the birds to fly at a lower altitude and encounter turbines (Tetra Tech 2014). Nonetheless, the overall rate of waterfowl mortality at the Hatchet Ridge Wind Project was still comparatively low for the region and nationally, ranging from 0.27 to 0.39 birds/MW/year (Tetra Tech 2014). In addition, because the Project Site, like Hatchet Ridge, is heavily forested, waterfowl would likely fly at a higher altitude over the trees, and it does not appear that waterfowl or waterbirds use the area as migratory stop-over sites.

In the same avian risk of collision review, waterbirds, including the American white pelican, did not appear to be particularly susceptible to collision with wind turbines. In addition, suitable breeding and stopover habitat for American white pelican is also absent from the Project Site. From Project Site-specific studies (Appendix C7), it can be concluded that the majority of waterbirds, including the American white pelican, would fly well above the rotor swept height and height of electrical transmission lines within the Project Site. Based on observed species use of the site and review of species habitats, the potential risk of substantial waterfowl mortality is considered low. Because the level of waterfowl collision related injury or mortality is not anticipated to occur at levels which would adversely affect population levels, operational impacts on waterfowl and waterbirds would be less than significant.

During two years of small bird surveys, 2,408 small bird observations were recorded in Year 1 consisting of 71 species, while in Year 2, 1,711 small bird observations were recorded consisting of 50 species (Draft EIR Appendices C6 and C7). As discussed in the Draft EIR (at page 3.4-24), the most abundant species were common forest birds: dark-eyed junco, mountain chickadee, western bluebird, Steller's jay, and woodpeckers. The seasonal abundance and species richness results in Draft EIR Appendix C6 suggest that small bird use is moderate and relatively consistent across seasons and across the Project Site. To date, overall fatality rates for birds at wind energy facilities in California and the Pacific Northwest with publicly available data have been variable, ranging from 0.16 to 17.44 birds/MW/year (Draft EIR Appendix C7). The only wind energy facility in the western United States with habitats and topography similar to the Project is Hatchet Ridge, located less than 3.2 km (2.0 mi) northeast of the Project Site. During three years of post-construction fatality monitoring conducted at the Hatchet Ridge Wind Project from 2011 to 2013, annual all bird fatality rates ranged from 0.84-2.50 birds/MW/year (Tetra Tech 2014). The results of post-construction monitoring at that site suggest low impacts to non-listed passerines and other small bird species at the facility, and no apparent disproportionate impacts to nocturnal migrants. As cited in the Draft EIR (at page 3.4-55), the majority of songbird species using the Project Site including special-status species, olive-sided flycatcher, Cassin's finch, and Lewis' woodpecker, are generalists that do not require hard to find specialized nesting habitat. Hence, the analysis (at page 3.4-55) concludes that the potential effect on any individual songbird species population would not be substantial and that the impact on most songbird species including olive-sided flycatcher, Cassin's finch, and Lewis' woodpecker from operation of the project would be less than significant. As summarized in Appendix C6 (at page 32), given the proximity of the Project Site to Hatchet Ridge, as well as similar topographic and habitat characteristics and species assemblages at the two sites, impacts to passerines and other small birds at the Project site, including nocturnal migrants, are expected to be similarly low, and less than significant.

Mitigation: None required.

Page 3.4-54 The following text has been added to the Sandhill Crane Conservation Measure:

3) To minimize impacts on birds moving at night, tower and turbine night lighting shall use the minimum number of required lights at the minimum required lighting intensity, and the minimum number of flashes per minute (i.e., longest duration between flashes and “dark phase”), with lights synchronized to flash simultaneously or as required by the Federal Aviation Administration.

Page 3.4-55 et seq. The Conservation Measure for Nesting Songbirds has been revised as follows:

Conservation Measure for Nesting Songbirds: Avoid and minimize construction-related impacts to nesting songbirds

Prior to any disturbance of nesting habitat during breeding season (February 1 through August 31~~March 1 to August 15~~), a qualified biologist will survey the area to be impacted to locate any active bird nests. If construction activities are delayed or suspended for more than two weeks after the preconstruction survey, the site shall be resurveyed. Active nests will be avoided by a suitable buffer distance (e.g., 100 to 250 feet). If nests are found and cannot be avoided, construction activities shall cease within the buffer area and the applicant shall coordinate with CDFW and/or the USFWS, as appropriate, to ensure compliance with state and federal regulations. Specific to any proposed blasting activities, a qualified biologist will evaluate areas within 1,320 feet (1/4-mile) of blasting sites to identify nesting songbirds. If active nests are identified, the buffer distance that is applied during blasting activities may range from approximately 500 feet to 1,320 feet, depending upon the time of year, sensitivity of any identified nesting species, and site-specific conditions such as topography or dense vegetation.

Page 3.4-60 Impact 3.4-13 has been revised as follows:

Bats

Impact 3.4-13: Operation and maintenance of the Project could result in direct mortality and injury to bats, including special-status species. (Significant and Unavoidable); construction and decommissioning could result in mortality of or injury to bats, including special-status species (Less than Significant with Mitigation Incorporated)

Operations. Bats have low reproductive rates and require high adult survivorship to avoid population decline (Thompson et al. 2017). Operation of the Project poses a risk of direct injury and mortality to bats, including special-status species, as a result of wind turbine operation in areas where the flight altitudes of foraging, migrating, and transiting bats coincides with the height of wind turbine blades. Based on the 3-year monitoring completed for the Hatchet Ridge Wind Project (Tetra Tech, 2014) and the Project-specific bat acoustic survey report (Appendix C6), the likelihood of injury risk is considered low for special-status bat species, but risk is higher

for other bat species such as hoary bat. Recent mortality estimates (Arnett and Baerwald 2013) and models (Frick et al. 2017), have identified potential population-level effects from wind operations on particular bat species, including hoary bat. Surveys confirm hoary bat as one of the most common species on the Project Site (Appendix C6) and surveys at the Hatchet Ridge Wind Project site confirm that hoary bat are particularly vulnerable to wind operations in the region (Tetra Tech 2014). Based on this date it is anticipated the operation of the Project would result in adverse effects on bats, potentially affecting bat populations. As a result, the injury and mortality of bats resulting from Project collisions with turbines would result in a significant effect.

Maintenance of the Project would be unlikely to result in a significant adverse impact to bat species, unless unforeseen circumstances arise, for example, if repair work is conducted at night under artificial lighting that attracts flying insects.

To monitor any adverse effects to bats, including special-status species, the Project shall implement Mitigation Measure 3.4-13, which would document and report bat mortalities from the Project, identify appropriate mortality minimization measures, and implement all recommended minimization measures to reduce mortality. Implementing this measure would reduce operational impacts on bats, but impacts would remain significant and unavoidable.

Construction and Decommissioning. Roost sites are important habitat features for bats and can be a limiting resource for bat populations. Disturbance to roosts, and loss of roosting and foraging habitats could occur from construction activities. Human disturbances including noise, land clearing, and the level and duration of disturbance activities (approximately 18 to 24 months), could increase stress for day roosting bats, maternal roosting bats, and hibernating bats, potentially leading to roost abandonment, reduced productivity, and increased mortality, respectively. While temporary, the long duration time of construction activities could impact bats over multiple breeding and migratory seasons. Similar impacts would be expected to occur when the Project is decommissioned. The colonial roosting habits of some bat species make local populations more vulnerable during sensitive periods, like winter hibernation. Accidentally removing a maternity roost when in use could cause complete colony failure because bats will abandon rather than return to the roost. If the disturbance level is high enough to cause abandonment, an entire generation of non-volant pups (flightless young) would be lost. Removing or disturbing an occupied hibernaculum and awakening hibernating bats during the winter could deplete their energy reserves and potentially cause mortality. Implementation of the Bat Conservation Measure discussed under Impact 3.4-13, as revised below, would reduce potential impacts to active bat roosts during construction and habitat removal to less than significant levels.

Mitigation Measure 3.4-13: Implement Mitigation Measure 3.4-3b (Monitor Avian and Bat Mortality Rates During Project Operations).

Bat Conservation Measure: Avoid and minimize impacts to active bat roosts during construction and decommissioning.

The Applicant will implement the following measures to minimize and monitor impacts during both construction and decommissioning phases:

1. Conduct a habitat assessment for potential bat roost sites. Prior to removing or altering any trees, rock outcroppings, and structures, an assessment for potentially suitable colonial roost habitat will take place. The assessment shall be conducted by an experienced and qualified biologist who is able to identify bat roosts.
2. Time tree removal to minimize impacts. When possible, removal of potential trees identified during the habitat assessment shall occur in the fall (September 1 to October 31) to minimize impacts on foliage-roosting bat species like the pallid and western red bats, and on any colonial tree-roosting species not detected during the habitat assessment and surveys. The Applicant shall conduct tree removal of potential roost under the guidance of the qualified biologist who has experience identifying bat roosts. In the absence of identified roosts during surveys, tree removal may occur at other times of year.
3. Delay work around active maternity roosts until spring or fall when all bats would be volant and could fly away from the disturbance area. A 100-foot buffer may suffice, depending on site specifics; although the buffer size may be adjusted upward or downward by the qualified biologist.
4. For active roost trees identified within the Project Site, a two-step process will be used to allow bats to leave on their own prior to full removal of the roost. Initial trimming on Day 1 will remove non-habitat vegetation including shrubs and small diameter trees as well as specific limbs and branches of active roost trees. Final removal of the remaining branches and main tree trunk may proceed on Day 2 or later.

Significance after Mitigation: Implementing Mitigation Measure 3.4-13 would allow the identification of potentially hazardous towers to bat species, if present, which would facilitate adaptive management approaches such as curtailment and deterrence to deter bats if, as a result of post-construction monitoring, it is determined that multiple individuals of a particular bat species are being injured or killed by collisions with turbines consistent with the thresholds identified in Mitigation Measure 3.4-3b. Though implementation of this measure would reduce impacts on bat species, impacts on bats would remain significant and unavoidable.

Implementing the Bat Conservation Measure would further reduce potential impacts to active bat roosts. Direct mortality would be minimized because potential bat roost habitat would be identified and assessed, and disturbance would be avoided or reduced where feasible.

Page 3.4-61 et seq. The following measure has been added to the Terrestrial Species Conservation Measure:

- i) To avoid take of gray wolf, if an active den or rendezvous site for this species is observed, all operations within a 0.25-mile radius shall be suspended until CDFW is contacted for further consultation. Incidental gray wolf sightings or evidence shall continue to be reported to CDFW at the following website: <https://www.wildlife.ca.gov/Conservation/Mammals/Gray-Wolf/Sighting-Report>.

Page 3.4-61 The Terrestrial Species Conservation Measure has been revised as follows:

- a) Applicant will design and implement a Worker Environmental Awareness Plan (WEAP) plan for all construction personnel. The education program shall include the following aspects:
 - i. Biology and status of special-status wildlife species that occur on-site;
 - ii. CDFW and USFWS regulations relative to wetland, habitat, and species protections;
 - iii. A description of mitigation and conservation measures designed to reduce potential impacts on special-status wildlife species, and function of flagging designating authorized work areas;
 - iv. Reporting procedures to be used if a special-status wildlife species is encountered during construction; ~~for workers encountering injured or dead special-status terrestrial species during construction,~~ to include a stop-work order within 50 feet, notification of a qualified biologist, and notification of CDFW and/or USFWS as appropriate.
 - v. Exterior lighting fixtures associated with Project construction and operations will be downward-facing and fully shielded to minimize light trespass beyond the immediate construction area or Project facility.
 - vi. Any special-status species detected during surveys will be reported to the California Natural Diversity Database at the following link: at the following link: <https://www.wildlife.ca.gov/Data/CNDDDB/Submitting-Data>

Page 3.4-63 The significance of Impact 3.4-15 after mitigation has been revised as follows:

Significance after Mitigation: With implementation of these mitigation measures, impacts on sensitive vegetation communities and riparian habitat would either be avoided, minimized or impacts would be compensated at a 1:1 or greater ratio, consistent with any resource agency commitments discussed in Mitigation Measure 3.4-15b ~~Waters~~). Therefore, following mitigation, this impact would be less than significant.

Page 3.4-63 Mitigation Measure 3.4-15b has been revised as follows:

“The Rocky Mountain Maple Riparian Scrub Habitat mitigation and monitoring plan shall be written by a qualified biologist and shall include the following elements, at minimum:

- a) goals of the plan and permitting requirements satisfied;
- b) planned R-riparian habitat restoration activities and locations, including the restoration of temporarily affected riparian habitat to preconstruction conditions;
- c) monitoring and reporting requirements (including monitoring period), and criteria to measure mitigation success; ~~and~~
- d) the plant species to be used, container sizes, and/or seeding rates, and a planting/seeding schedule;
- e) a schematic drawing depicting the location of plantings within mitigation areas;
- f) a description of the irrigation methodology, if needed;
- g) invasive weed control measures within Rocky Mountain Maple Riparian Scrub Habitat mitigation areas;
- h) a detailed monitoring program, to initially include quarterly or more frequent visits tapering to annual maintenance;
- i) remedial measures, should mitigation efforts fall short of established targets; and
- j) identification of the party responsible for meeting the success criteria and providing for long-term conservation of the mitigation site.

The ~~County may~~ Applicant shall consult with CDFW about the adequacy of the plan and may consult with other agencies, if the plan aims to fulfill multiple permitting and mitigation requirements.”

Page 3.4-66 The following text has been added to Mitigation Measure 3.4-16c:

- “e) Restored wetland and riparian habitat shall achieve at least 85 percent survival of individual plants and show progress toward achieving 100 percent of the required mitigation acreage following 5 years of site monitoring and maintenance.

The ~~County may~~ Applicant shall consult with USACE ~~and~~ CDFW about the adequacy of the plan and may consult with other agencies, if the plan aims to fulfill multiple permitting and mitigation requirements.”

Page 3.4-76 The third paragraph has been revised as follows:

“For goshawk, no recent breeding activity has been locally described locally and low number of goshawks have been detected at the Project Site

or the Hatchet Ridge project site. Sandhill cranes do not use the Project Site for roosting and breeding, and but sandhill cranes have been detected at the Project Site and the Hatchet Ridge project site during migration. ~~Use of the Project Site by smaller bat species is limited, and mortality from turbines appears low at Hatchet Ridge, compared to other wind facilities.~~ Several conservation measures are suggested to further reduce several less than significant impacts to California spotted owl, nesting songbirds and greater sandhill crane, include conservation measures for Impact 3.4-11 (Conservation Measure for Nesting Songbirds; Conservation Measure for Vaux’s Swift, and Conservation Measure for Willow Flycatcher and Yellow Warbler), one conservation measure for Impact 3.4-10 (Sandhill Crane Conservation Measure), and one conservation measure for Impact 3.4-5 (California Spotted Owl Conservation Measure).”

Page 3.4-77 The text has been revised as follows:

“When considered in combination with the impacts of other projects in the cumulative scenario, the Project’s incremental contribution to waters of the U.S. and avian and bat mortality and impacts to sensitive natural communities would not be cumulatively considerable because implementation of Project’s mitigation measures would reduce the impacts to less than significant under CEQA.”

3.2.4.5 Section 3.5, Communications Interference

No text changes have been made to Section 3.5, *Communications Interference*.

3.2.4.6 Section 3.6, Cultural and Tribal Cultural Resources

Page 3.6-21 The following revision has been made to the analysis of Impact 3.6-1:

Based on the results of the cultural resources analysis completed for the proposed Project (Stantec, 2019), 8 previously recorded cultural resources and 12 newly discovered cultural resources were recorded in the ADI and evaluated for significance as historical resources eligible for listing in the California Register. Based on those evaluations, one cultural resource (the prehistoric component of FW 11) qualifies for listing in the California Register under Criterion 4, for its ability to yield additional information in prehistory. The prehistoric component of FW 11 is therefore considered a historical resource for the purposes of CEQA. In accordance with CEQA Guidelines Section 15126.4(b)(3), the Applicant recognizes that preservation in place is the preferred manner of mitigating impacts to archaeological sites and has redesigned the Project to avoid FW 11. ~~Project-related disturbance of a historical resource would be a significant impact and could occur, for example, during grading and excavation associated with construction of turbine foundations, pads, or domestic water wells; trenching for the underground electrical collector lines or other below-ground facilities and infrastructure; or the soil borings that would be collected to an approximately 50-foot depth to ensure that the proposed turbine foundations would be stable.~~

The potential for such impact would be reduced to a less than significant level through implementation of Mitigation Measure 3.6-1 (Archaeological Research Design and Treatment Plan). This measure sets forth protocols and procedures for implementing a data recovery program to provide for the establishment of Environmentally Sensitive Areas; treatment and recovery of important data contained within the portions of the historical resource located within and adjacent to the ADI; construction worker cultural resources sensitivity training; archaeological and Native American monitoring; inadvertent discovery protocols; and provisions for curation or reburial of recovered materials.

However, given the proximity of known archaeological resources to the Project site that are considered historical resources for the purposes of CEQA, the potential to impact unknown archaeological resources cannot be entirely discounted. Impacts to unknown archaeological resources would be a significant impact. This impact would be reduced to a less-than-significant level by implementing Mitigation Measure 3.6.1a. Archaeological Monitoring Plan and Mitigation Measure 3.6.1b. Inadvertent Discovery Protocol. These measures would require development of an archaeological monitoring plan to provide appropriate monitoring during construction in the vicinity of significant archaeological resources, and outline protocol to follow in the event of an inadvertent discovery of previously unknown archaeological resources. With implementation of Mitigation Measures 3.6.1a and 3.6.1b, impacts to archaeological resources would be less than significant.

Mitigation Measure 3.6-1: Archaeological Research Design and Treatment Plan.

Prior to receiving a County grading permit for the Project, the applicant shall:

1. Relocate Project components to a location that would not potentially impact the known historical resource.
2. If relocation is documented to the satisfaction of the County as infeasible (where “feasible” means “capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors” as defined in CEQA Guidelines Section 15364) and the historical resource would potentially be impacted by the Project, design and implement an Archaeological Research Design and Treatment Plan (ARDTP).

The investigation would be completed under the methods and research design outlined in an ARDTP to be prepared in accordance with the California Resources Agency’s Guidelines for Archeological Research Designs (California Resources Agency, 1991). A qualified archaeologist (defined as one meeting the Secretary of the Interior’s Professional Qualification Standards for archaeology) shall prepare the ARDTP in consultation with the culturally affiliated Native American tribe(s). The

~~ARDTP shall address, at a minimum, the following: the establishment of Environmentally Sensitive Areas; treatment and recovery of important data contained within the portions of the historical resource located within and adjacent to the Project Site; construction worker cultural resources sensitivity training; compensated archaeological and Native American monitoring; inadvertent discovery protocols; and provisions for curation or reburial of recovered materials.~~

~~The ARDTP shall include the specific methods that will be employed (e.g., the length and depth of excavation, the type of equipment utilized, the percent of area investigated). The ARDTP shall identify how the proposed investigation would preserve any significant historical information obtained and identify the scientific/historic research questions applicable to the resource, the data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. The results of the investigation shall be documented in a technical report that provides a full artifact catalog, analysis of items collected, results of any special studies conducted, and interpretations of the resource within a regional and local context. All technical documents shall be placed on file at the North Central Information Center of the California Historical Resources Information System. The results report shall include recommendations for archaeological and Native American monitoring in Environmentally Sensitive Areas and the protocol to follow should additional cultural materials be identified during construction activities.~~

Mitigation Measure 3.6-1a: Archaeological Monitoring Plan.

Prior to receiving a County grading permit for the Project, the Applicant shall retain a qualified archaeologist, defined as an archaeologist meeting the U.S. Secretary of the Interior’s Professional Qualification Standards for Archeology, to prepare an archaeological resources monitoring plan. Monitoring shall be required for all subsurface excavation work within 500 feet of the recorded boundaries of known archaeological resources. The plan shall include the following:

1. Training program for all construction personnel involved in ground disturbance;
2. Person responsible for conducting monitoring activities, including Native American monitors;
3. Person responsible for overseeing and directing the monitors;
4. How the monitoring shall be conducted and the required format and content of monitoring reports;
5. Physical monitoring boundaries (e.g., 500-foot radius of a known archaeological resource) and maps;
6. Schedule for submittal of monitoring reports and person responsible for review and approval of monitoring reports;

7. Protocol for notifications in case of encountering of archaeological resources, as well as methods of evaluating the encountered resources (e.g., identification, evaluation, arrangements);
8. Methods to ensure security of archaeological resources;
9. Protocol for notifying local authorities (i.e. Sheriff, Police) should site looting and other illegal activities occur during construction.

If archaeological materials are encountered, all soil disturbing activities within 100 feet shall cease until the materials are evaluated. The archaeological monitor shall immediately notify the County of the encountered archaeological materials. The monitor shall, after making a reasonable effort to assess the identity, integrity, and significance of the encountered archaeological materials, present the findings of this assessment to the County. During the course of the monitoring, the archaeologist may adjust the frequency—from continuous to intermittent—of the monitoring based on the conditions and professional judgment regarding the potential to impact resources.

Mitigation Measure 3.6-1b: Inadvertent Discovery Protocol.

If prehistoric or historic-era archaeological resources are encountered during Project implementation, either during monitoring or otherwise, all construction activities within 100 feet shall cease, and a qualified archaeologist, defined as an archaeologist meeting the U.S. Secretary of the Interior’s Professional Qualification Standards for Archeology, shall inspect the find within 24 hours of discovery and notify the County of their initial assessment.

If the County determines, based on recommendations from a qualified archaeologist and a Native American representative (if the resource is Native American related), that the resource may qualify as a historical resource or unique archaeological resource (as defined in CEQA Guidelines Section 15064.5) or a tribal cultural resource (as defined in PRC Section 21080.3), the resource shall be avoided if feasible. Consistent with Section 15126.4(b)(3), this may be accomplished through planning construction to avoid the resource; incorporating the resource within open space; capping and covering the resource; or deeding the site into a permanent conservation easement.

If avoidance is not feasible, the County shall consult with appropriate Native American tribes (if the resource is Native American-related), and other appropriate interested parties to determine treatment measures to avoid, minimize, or mitigate any potential impacts to the resource pursuant to PRC Section 21083.2, and CEQA Guidelines Section 15126.4. This shall include documentation of the resource and may include data recovery (according to PRC Section 21083.2), if deemed appropriate, or other actions such as treating the resource with culturally appropriate dignity and protecting the cultural character and integrity of the resource (according to PRC Section 21084.3).

Page 3.6-24 The analysis of Impact 3.6-3 has been revised as follows:

In the event that construction activities disturb tribal cultural resources, damage would be considered a significant impact. Implementation of ~~Mitigation Measure 3.6-1 (Archaeological Research Design and Treatment Plan) described above, as well as~~ Mitigation Measure 3.6-3 (**Tribal Cultural Resources Interpretive Program**) would ensure that impacts to tribal cultural resources are recognized. In consultation with the appropriate Native American representatives, Mitigation Measure 3.6-3 also would provide for access to the area. However, unless a tribal cultural resource can be avoided and preserved in place according to the provisions set forth by Public Resources Code Section 21084.3, direct and indirect impacts to tribal cultural resources would not be reduced to a less-than-significant level and the impact would remain significant and unavoidable.

~~**Mitigation Measure 3.6-3a: Implement Mitigation Measure 3.6-1: Archaeological Research Design and Treatment Plan (described above)**~~

Mitigation Measure 3.6-3d: Cultural Resources Monitoring Program with the Pit River Tribe during Construction.

The Applicant shall offer and provide the opportunity for cultural resource monitors from the Pit River Tribe to monitor initial ground disturbing construction activities in areas identified by the Tribe as culturally sensitive. Monitors will have the authority to ensure that discrete sacred sites in the Project Site are avoided or that impacts on such localities are mitigated to the extent feasible, including but not limited to, avoidance or data recovery (as outlined in ~~Mitigation Measure 3.6-1a. Archaeological Research Design and Treatment Plan~~ Mitigation Measure 3.6.1a. Inadvertent Discovery Protocol). The Pit River Environmental Office should coordinate with the appropriate Achumawi bands (Itsatawi and Madesi) to assign monitors.

Page 3.6-26 Section 3.6.3.3 has been revised as follows:

“Impacts to tribal cultural resources would be less-than-significant with the implementation of Mitigation Measure 3.6-1a: Archaeological Monitoring Plan, Mitigation Measure 3.6.1b: Inadvertent Discovery Protocol, Mitigation Measure 3.6-2: Inadvertent Discovery of Human Remains, Mitigation Measure 3.6-3b: Coordination with the Pit River Tribe during Project Development, Mitigation Measure 3.6-3c: Detailed Recordation of Features Considered Culturally Significant to the Pit River Tribe, and Mitigation Measure 3.6-3d: Cultural Resources Monitoring Program with the Pit River Tribe during Construction. ~~the same as the Project as a whole: significant and unavoidable with the implementation of Mitigation Measure 3.6-3a (implementation of the Archaeological Research Design and Treatment Plan that would be required by Mitigation Measure 3.6-1) and Mitigation Measure 3.6-3b (Tribal Cultural Resources Interpretive Program).~~”

3.2.4.7 Section 3.7, Energy

No text changes have been made to Section 3.7, *Energy*.

3.2.4.8 Section 3.8, Forestry Resources

No text changes have been made to Section 3.8, *Forestry Resources*.

3.2.4.9 Section 3.9, Geology and Soils

No text changes have been made to Section 3.9, *Geology and Soils*.

3.2.4.10 Section 3.10, Greenhouse Gas Emissions

Page 3.10-13 The text has been revised as follows:

The potential loss of sequestration capacity from tree removal and offset of emissions from fossil-fuel powered energy sources are also considered for the Project in determining whether there would be a net increase in GHG emissions as a result of the Project. The CalEEMod forestland carbon biogenic emissions rate was used to estimate the potential loss of sequestration capacity. Other methodologies to estimate carbon sequestration and carbon release from soils, such as that contained in CARB's Compliance Offset Protocol U.S. Forest Projects, were considered, but may require on-site plot sampling to determine actual on-site carbon inventories (CARB, 2015). Thus, CalEEMod values for forestland with trees were used to calculate sequestration capacity which is more generalized, but results in conservative modeling. However, for full disclosure the amount of released CO₂ from the soil due to the removal of trees could equal the amount of carbon sequestration loss due to the removal of trees.

3.2.4.11 Section 3.11, Hazards and Hazardous Materials

Page 3.11-11 The last paragraph on this page has been revised as follows:

As stated in Section 3.9, *Geology and Soils*, the depth to groundwater is variable and ranges from 5 to more than 230 feet below ground surface; therefore, the potential risk of Project-caused transport of naturally occurring arsenic to groundwater would be remote for most areas where the groundwater is relatively deep. Regardless, the SWPPP discussed in Section 3.12, *Hydrology and Water Quality*, would provide further assurance that any construction runoff that might contain naturally occurring arsenic in the rocks would not contaminate the groundwater.

Page 3.11-19 The following typographical error has been corrected:

These further actions, if determined appropriate based on the updated receptor-specific shadow flicker analysis, would further assure that

potential impacts to non-participating residences would be less than significant ~~specific~~.

Page 3.11-22 The cumulative analysis in Section 3.11-4 has been revised as follows:

The geographic scope for cumulative effects relating to hazards and hazardous materials would be the Sacramento Valley Air Basin, watershed and groundwater basin boundaries (see Section 3.12, *Hydrology and Water Quality*), and the Project materials delivery routes, including I-5 (approximately 35 miles to the west of the Project Site), SR 139 (approximately 60 miles to the east of the Project Site), SR 299, ~~Moose Camp Road~~, and the three existing, gated logging roads that would be used for direct Project access.

3.2.4.12 Section 3.12, Hydrology and Water Quality

Page 3.12-16 Item 1.d in Mitigation Measure 3.12-2 has been revised as follows:

d. Prior to finalizing the blasting plan, the Applicant ~~County~~ or designated operator shall consult with jurisdictional authorities tasked with protecting waters of the state and implement avoidance and minimization measures, as required by CDFW, USACE, and regional water quality (Section 401) regulatory permits prepared for the Project. A record of consultation and ~~Such~~ protective measures shall be included in the blasting plan and/or incorporated by reference.

3.2.4.13 Section 3.13, Noise and Vibration

No text changes have been made to Section 3.13, *Noise and Vibration*.

3.2.4.14 Section 3.14, Transportation

Page 3.14-1 The description of the study area in Section 3.14.1.1 has been revised as follows:

These include roadways located directly adjacent to the Project Site (e.g., i.e., SR 299, ~~Moose Camp Road~~, and the three existing, gated logging roads that would be used for Project access) as well as regional facilities that provide access to SR 299, which include Interstate 5 (I-5) approximately 35 miles west of the Project Site, and SR 139 approximately 60 miles east of the Project Site.

3.2.4.15 Section 3.15, Utilities and Service Systems

No text changes have been made to Section 3.15, *Utilities and Service Systems*.

3.2.4.16 Section 3.16, Wildfire

Page 3.16-7 Population data has been updated as follows:

Land use in the Project Site is exclusively managed forest lands. Surrounding the Project Site, land use includes mostly managed forest lands and scattered rural communities, including Moose Camp (75 people, adjacent to the Project Site), Montgomery Creek (143 people, 2 miles west of the Project Site), and Round Mountain (89 people, 5 miles southwest of the Project Site). Additionally, the communities of Oak Run (8 miles southwest of the Project Site), Whitmore (8 miles southwest of the Project Site), Millville (678 people, 17.4 miles southwest of the Project Site), Palo Cedro (1,143 people, 23 miles southwest of the Project Site), and Bella Vista (2,427 people, 23 miles southwest of the Project Site) (U.S. Census Bureau, 2020) are located farther from the Project Site but potentially within the area that could be affected by wildfire affecting the Project Site. Each of these communities is located within a Wildland-Urban Interface (WUI) Intermix area, defined as an area with greater than 6.18 houses per square kilometer and greater than or equal to 50 percent cover of wildland vegetation (USFS, 2015). Therefore, the Project Site is located adjacent to an area designated as a WUI Intermix. Burney, while not considered a WUI Intermix area, is the largest town in the Project vicinity with a population of just over 3,000. It is located approximately 5.5 miles east of the Project Site.

Page 3.16-16 The text has been revised as follows:

The height of the turbines, construction and operation of the Project would affect aerial firefighting operations in so much as, if aerial operations were to occur in the vicinity of the turbines, operators would have to account for the presence of the turbines in planning and executing the operations. Due to the spacing between rows of turbines, aerial firefighting operations, including helicopter operations and to a lesser degree fixed wing operations, are likely to have enough space even within the proposed Project Site to continue provide for aerial firefighting operations within the Project Site. It is anticipated both helicopter and fixed wind operations around the perimeter of the Project Site and within the leasehold area would be adversely affected to a lesser degree, within the Project Site. While the likelihood of impacts to aerial firefighting is low, the consequence of potential impacts to aerial firefighting is high and could result in a potentially significant impact. However, due to the height of the turbines, construction and operation of the Project could interfere with aerial firefighting operations, a potentially significant impact.”

Page 3.16-16 The text of Mitigation Measure 3.16-1b has been revised as follows:

Prior to construction, the Applicant shall provide GIS files or other maps of the Project layout to CAL FIRE to facilitate aerial fire-fighting planning. The Applicant shall notify CAL FIRE of any changes to the Project layout or any maintenance that would require the use of helicopters or the use of

equipment not previously identified on maps provided to CAL FIRE that could present a new, previously unidentified vertical obstacle to aerial firefighting. The Applicant will identify a Project operations point of contact for CAL FIRE to coordinate with in the event aerial fire-fighting operations occur in the vicinity of the Project.

Page 3.16-21 Item number four under Mitigation Measure 3.16-2b has been revised as follows:

1. Additionally, turbines shall include lightning protection equipment such as grounding equipment, and a lightning measurement system. Lightning grounding systems shall consider site-specific conditions such as soil type and conductivity.

3.2.5 Chapter 5, Report Preparation

No text changes have been made to Chapter 5, *Report Preparation*.