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HUNTINGTON BEACH ENERGY PROJECT

Preliminary Staff Assessment - Part A
Supplemental Focused Analysis

CALIFORNIA
ENERGY COMMISSION
Edmund G. Brown Jr, Governor

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ENERGY COMMISSION
1516 Ninth Street
Sacramento, CA 95814

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FELICIA MILLER
Project Manager

DIANE L. SCOTT
Project Assistant

CHRIS DAVIS
Siting Office Manager

ERIC KNIGHT
Environmental Office Manager

MATT LAYTON
Engineering Office Manager

ROGER JOHNSON
Deputy Director
Siting, Transmission and
Environmental Protection Division

ROBERT P. OGLESBY
Executive Director

PRELIMINARY STAFF ASSESSMENT – PART A SUPPLEMENTAL FOCUSED ANALYSIS INTRODUCTION

Felicia Miller

PURPOSE OF THIS REPORT

This Supplement to the Preliminary Staff Assessment (PSA) is intended to frame certain issues and present the comments received, and the discussions that occurred, during the November 20, 2013 PSA workshop held in Huntington Beach, California. In this document, staff includes a discussion and analysis of the issues, and where appropriate, revisions to the analyses and Conditions of Certification.

ISSUES AND RESOLUTION

As the applicant indicated in their Data Responses to staff (HBEP 2013ii) the availability of both secondary and tertiary treated recycled water through the Orange County Sanitation District's Plant 1 and 2, as well as details pertaining to potential water pipeline routes, staff is recommending the use of recycled water for the HBEP. Due to time constraints publishing this Supplemental Focused Analysis, staff will include an environmental analysis of the use of recycled water for industrial use for HBEP, as well as recycled water pipe routes in staff's Final Staff Analysis. Staff will need to work with the applicant to obtain the environmental assessment for the recycled water supply infrastructure that will be needed to serve the project. Due to time constraints publishing this Supplemental Focused Analysis, Staffs' assessment of the information to be provided will be included in the Final Staff Assessment.

PRELIMINARY STAFF ASSESSMENT – PART A
SUPPLEMENTAL FOCUSED ANALYSIS
BIOLOGICAL RESOURCES

Heather Blair and Jennifer Lancaster

INTRODUCTION

Staff received written comments from the applicant on the Biological Resources section of the HBEP Preliminary Staff Assessment (PSA), Part A published on October 10, 2013. This supplemental focused analysis presents staff's resolution to outstanding items identified in the PSA Part A and revisions to staff's proposed conditions of certification in consideration of comments received from the applicant and the issues discussed at the November 20, 2013 PSA workshop.

The analysis below is intended to replace the corresponding noise and nitrogen deposition impact analyses in the PSA Part A.

Compliance with Laws, Ordinances, Regulations, and Standards

The applicant must comply with the LORS listed in **Biological Resources Table 1** during project construction, demolition and operation. This is in addition to those presented in PSA Part A.

Biological Resources Table 1
Laws, Ordinances, Regulations, and Standards

Applicable Law	Description
Local	
Natural Community Conservation Plan (NCCP) & Habitat Conservation Plan (HCP), County of Orange, Central and Coastal Subregion (1996)	The NCCP/HCP creates a multiple-species, multiple-habitat subregional Reserve System and implements a long-term adaptive management program that will protect coastal sage scrub and other habitats and species located within the habitat mosaic, while providing for economic uses that will meet the social and economic needs of the people of the subregion. Portions of the Reserve System in the HBEP area include Talbert Nature Preserve, Upper Newport Bay Ecological Reserve, and Upper Newport Bay Regional Park.

IMPACT ASSESSMENT

CONSTRUCTION AND DEMOLITION IMPACTS AND MITIGATION

General Construction and Demolition Impacts

Noise

Noise from construction and demolition activities could discourage sensitive wildlife from foraging and nesting near the proposed project area. Many bird species rely on vocalizations during the breeding season to attract a mate within their territory, and noise from construction could adversely affect nesting behavior and other activities.

Special-status species that may be impacted by construction and demolition noise are those that are present in the adjacent Huntington Beach Wetlands Conservancy's Coastal Marsh Restoration Complex (Magnolia Marsh, Brookhurst Marsh, Talbert Marsh, and Newland Marsh). These marshes support a variety of special-status birds including the Belding's savannah sparrow (state-listed endangered), light-footed clapper rail (federally and state-listed endangered, fully protected), western snowy plover (federally listed threatened), California least tern (federally and state-listed endangered), and California brown pelican (state fully protected). Another location with noise-sensitive biological resources is the Wildlife Care Center, which houses rehabilitating birds and wildlife in open air enclosures adjacent to the proposed HBEP site.

Each of the aforementioned locations with noise-sensitive biological resources is listed in **Biological Resources Table 2**, below, along with ambient noise levels and estimated construction noise levels at each location.

Biological Resources Table 2
Summary of Noise Levels at Locations with Noise-sensitive Biological Resources

Location	Ambient Noise Level (average Leq)	Approximate distance from Power Block 1 (feet)	Construction Noise Level[1]
Wetland pier within Magnolia Marsh (M5)	61[2]	300	Average: greater than 70 dBA (Leq)[5], Lmax is unknown Pile driving: mid-60 dBA (Leq), upper 60-dBA (Lmax)[6]
In Magnolia Marsh adjacent to HBEP (M6)	54[2]	300	Average: greater than 70 dBA (Leq)[5], Lmax is unknown Pile driving: mid-60 dBA (Leq), upper 60-dBA (Lmax)[6]
Southeastern corner of Magnolia Marsh	45[3]	1200	Average: less than 60 dBA (Leq)[7], Lmax is unknown Pile driving: less than 60 dBA (Leq), likely less than 60 dBA (Lmax)[6]
Wildlife Care Center	72[4]	300 (from Power Block 2)	Average: greater than 70 dBA (Leq)[5], Lmax is unknown Pile driving: mid-60 dBA (Leq), upper 60-dBA (Lmax)[6]
Newland Marsh	unknown	1355	Average: less than 60 dBA (Leq)[7], Lmax is unknown Pile driving: less than 60 dBA (Leq and Lmax)[6]
Brookhurst Marsh	unknown	1355	Average: less than 60 dBA[7], Lmax is unknown Pile driving: less than 60 dBA (Leq and Lmax)[6]

Leq is the noise level averaged over a 24-hour period. Lmax is the maximum anticipated noise level.
[1]It is anticipated that with noise reduction measures, average construction noise levels could be reduced. Staff requested revised construction noise levels that assume implementation of noise reduction measures in the PSA and at the PSA workshop, but the applicant declined to provide them. In the

absence of this data, staff averaged the average construction noise levels from all construction phases as provided in HBEP 2012a, Table 5.7-7.
[2]Calculated by noise staff using HBEP 2012u
[3]Extrapolated by staff from HHM 09 in HBEP 2012u
[4]Calculated by noise staff using HHM 10 and HHM2 in HBEP 2012u
[5]70 dBA (Leq) at 375 feet from noise source
[6]Assumes use of vibratory pile driving; 68 dBA (Leq) and 71 (Lmax) at 262 feet (80 meters) from noise source (HBEP 2013m Table 1); noise staff extrapolated noise levels to approximate location
[7]57 dBA (Leq) at 1500 feet from noise source; noise staff extrapolated estimated noise levels to approximate location

Studies have shown that noise levels over 60 dBA can affect the behavior of certain bird species and could interfere with acoustic communication (e.g., Dooling and Popper 2007). Noise may affect birds in several ways, including reducing reproductive success; raising the level of stress hormones; interfering with sleep; cause permanent injury to the auditory system; and interfering with acoustic communication by masking important sounds, such as an approaching predator (Halfwerk et al 2011; Dooling 2006; Kight and Swaddle 2011). Many bird species rely on vocalizations during the breeding season to attract a mate within their territory. Francis et al. (2009) showed that noise alone reduced nesting species richness and led to a different composition of avian communities. Although some birds are able to shift their vocalizations to reduce the masking effects of noise, when shifts did not occur or were insignificant, masking could impair signaling and listening capabilities necessary for successful communication and survival (Barber et al. 2010).

Construction and demolition noise would occur over nine years in close proximity to the Magnolia Marsh, Upper Magnolia Marsh and Wildlife Care Center. As shown in **Biological Resources Table 2**, above, average levels of construction and demolition noise would continuously be well above 60 dBA throughout Upper Magnolia Marsh and most of Magnolia Marsh. Although maximum construction noise levels are unknown, it is assumed that they are above average (Leq) levels. Pile driving is an intermittent noise that would be particularly startling and disruptive to birds. Some areas of the marshes currently experience ambient noise levels above 60 dBA; it is expected that birds present in these areas have acclimated to elevated noise. However, construction and demolition would further increase noise levels in these areas and would potentially result in the effects described above. Resultant noise impacts to birds in Upper Magnolia Marsh and Magnolia Marsh would be significant without mitigation. Construction noise impacts would not extend to the Talbert, Newland, and Brookhurst marshes.

To mitigate noise impacts to birds, construction and demolition noise must be reduced to ambient levels, or no more than 60 dBA Lmax in areas where the ambient noise levels are below 60 dBA, within Upper Magnolia and Magnolia marshes. To achieve this, staff recommends implementation of Conditions of Certification **BIO-9**, which requires the project owner to submit monthly reports throughout construction and demolition to document that this noise threshold was not exceeded. Condition of Certification **BIO-8** applies specifically to breeding birds and requires pre-construction surveys. Where pre-construction surveys identify breeding birds, this Condition of Certification prohibits pile driving during the breeding season, and requires establishment of a buffer around the nest site(s) in which sound levels shall not exceed

ambient levels, or more than 60 dBA in areas where the ambient noise levels are below 60 dBA. Implementation of these conditions of certification would reduce noise impacts to birds, including special-status species, in Upper Magnolia and Magnolia marshes to less than significant.

Elevated construction and demolition noise would be a source of stress to rehabilitating wildlife at the Wildlife Care Center. Based on the applicant's data, it is unclear whether average construction noise would exceed ambient levels. As shown in **Biological Resources Table 2**, the ambient noise level at the Wildlife Care Center (300 feet from the noise source) is 72 dBA and average construction noise is expected to be 70 dBA Leq at 375 feet. It is anticipated that construction noise levels would not likely exceed ambient levels at this location. Further, the applicant has committed to installing temporary noise shielding at the Wildlife Care Center to reduce construction noise impacts (HBEP 2013n). Impacts to rehabilitating wildlife at the Wildlife Care Center would be adverse, but less than significant.

OPERATION IMPACTS AND MITIGATION

Noise

The proposed HBEP is on an industrial site that is currently occupied by the Huntington Beach Generating Station and is near other industrial land uses and Highway 1. However, it is also located adjacent to sensitive biological resources including marshes with the potential to support threatened and endangered birds and the Wetlands and Wildlife Care Center, which houses rehabilitating wildlife in open air enclosures. The existing Huntington Beach Generating Station, urban development, and roadways in the area are existing sources of noise.

Excessive noise masks auditory cues from other birds, including potential mates, and approaching predators. Chronic exposure to excessive noise has been demonstrated to negatively affect foraging behavior, reproductive success, population density, and community structure (Habib et al. 2007; Bayne et al. 2008; Barber et al. 2010).

Based on the applicant's Figure DR PYLE 6-1 (Estimated HBEP Operational Sound Level Contours), which were independently verified by Energy Commission noise staff, estimated operational noise from the HBEP would be between 65and 47 dBA at Upper Magnolia and Magnolia marshes (HBEP 2012u). At the wetland pier within Magnolia Marsh (receptor M5) operational noise is estimated to be 59 dBA. At the HBEP boundary adjacent to the marsh (receptor M6) operational noise is estimated to be 57 dBA. This represents a one dBA decrease at M5 and a six dBA increase at M6 above ambient conditions, although neither would be above 60 dBA. In the marsh area immediately adjacent to the HBEP boundary, operational noise would be above 60 dBA but below current ambient levels. Operational noise impacts to wildlife within Upper Magnolia and Magnolia marshes are less than significant.

The operational noise level at the Wildlife Care Center is estimated to be between 67 and 69 dBA. As presented in **Biological Resources Table 2**, the ambient noise level is estimated to be 72 dBA. Because the operational noise level is less than the ambient noise level, operational noise impacts to rehabilitating wildlife at the Wildlife Care Center would not occur.

Air Emissions – Nitrogen Deposition

Nitrogen deposition is the input of nitrogen oxide (NO_x) and ammonia (NH_3) derived pollutants, primarily nitric acid (HNO_3), from the atmosphere to the biosphere. Nitrogen deposition sources are primarily vehicle and industrial emissions, including power plants. Mechanisms by which nitrogen deposition can lead to impacts on sensitive species include direct toxicity, changes in species composition among native plants, and enhancement of invasive species (Fenn et al. 2003; Weiss 2006). The increased dominance and growth of invasive annual grasses is especially prevalent in low-biomass vegetation communities that are naturally nitrogen-limited; such vegetation communities that occur in the project vicinity include intertidal salt marshes, intertidal wetlands, freshwater marsh/wetlands, coastal dunes, chaparral, coastal sage scrub, oak woodlands, vernal pools, and serpentine grassland (Weiss 2006).

Critical habitat for the coastal California gnatcatcher, San Diego fairy shrimp, and western snowy plover occur in the vicinity of the HBEP (see **Biological Resources Figure 1** for the location of designated critical habitat in relation to the proposed project). Protected areas and wetlands also occur in the region, including the Huntington Beach Wetlands Conservancy, Talbert Nature Preserve, Laguna Coast Wilderness Park, San Joaquin Freshwater Marsh Reserve, Seal Beach National Wildlife Refuge, and Bommer Canyon Open Space Preserve. These protected areas support state and federally listed species, including San Diego fairy shrimp (federally listed endangered), western snowy plover (federally listed threatened), light-footed clapper rail (federally and state-listed endangered), Belding's savannah sparrow (state-listed endangered), and California least tern (federally and state-listed endangered). **Biological Resources Figure 3** shows protected areas in the project vicinity.

Nitrogen deposition, primarily from industrial and vehicle emissions, artificially fertilizes the soil and creates better conditions for non-native species to persist and to ultimately displace the native species, resulting in type conversion (conversion of one habitat type to another). Proliferation of weedy species and type conversion of coastal sage scrub to nonnative grasslands are factors that have contributed to the coastal California gnatcatcher's decline, and prevention of type conversion and habitat degradation are priorities for the recovery of the species (USFWS 2007a). San Diego fairy shrimp are vulnerable to grass invasions that shorten the inundation periods of vernal pools (Weiss 2006).

Excessive nitrogen deposition is strongly correlated with the growth of non-native vegetation (Huenneke et al. 1990; Inouye and Tilman 1995; Weiss 1999; Bowman and Steltzer 1998; Brooks 2003) and field studies have found that nitrogen fertilization in sites with elevated nitrogen deposition will enhance grass invasion (Rillig et al 1998; Brooks 2003). Several recent studies have attempted to quantify the critical load or rate at which nitrogen deposition begins to result in adverse effects to nitrogen-sensitive ecosystems. Studies in the United Kingdom suggest that the critical load ranges from 10 to 20 kilograms of nitrogen per hectare per year (kg/ha/yr) for mobile and fixed sand dune ecosystems (Jones et al. 2004; Plassmann et al. 2009). Fenn et. al. (2003) counter that estimated nitrogen deposition thresholds for ecological effects for other geographic regions are frequently not applicable to the western United States. Research conducted in the South San Francisco Bay area on grasslands in nutrient-poor serpentinic soils indicates that intensified annual grass invasions can occur in

areas with nitrogen deposition levels of 11 to 20 kg/ha/yr, with relatively limited invasions at levels of 4 to 5 kg/ha/yr (Weiss 2006). Critical loads in habitats affected by HBEP emissions may range from 7.8 to more than 100 kg/ha/yr (Pardo et al. 2011).

An Energy Commission Public Interest Energy Research study modeled total nitrogen deposition throughout California (Tonneson et. al. 2007); results showed that most of California experiences elevated rates of annual nitrogen deposition, especially near urban areas. Baseline nitrogen deposition rates in protected areas in the region range from 1.65 to over 15 kilograms of nitrogen per hectare per year (kg/ha/yr). Baseline nitrogen deposition rates in critical habitat in the region are estimated to be as follows (GIS data from Tonneson et. al. 2007).

- California gnatcatcher critical habitat: 2.07 to 15.01 kg/ha/yr
- San Diego fairy shrimp critical habitat: 2.07 to 13.45 kg/ha/yr
- Western snowy plover critical habitat: 1.66 to 11.09 kg/ha/yr

In data response #23 (HBEP 2013b), the applicant estimated the baseline nitrogen deposition rate to be 2 kg/ha/yr across the analysis area. Based on nitrogen deposition rates presented in the California Energy Commission's *Impacts of Nitrogen Deposition on California Ecosystem and Biodiversity* (Weiss, 2006), the background nitrogen deposition rates in the South Coast Air Basin ranges from 1 or 2 kg/ha/yr along the coastline to 21 kg/ha/yr in the Central Los Angeles Basin. The applicant estimates that the existing baseline nitrogen deposition rates near the project site are less than or equal to 2 kg/ha/yr because the HBEP project and neighboring biological resource areas are within 5 kilometers of the coastline. However, staff examined GIS-data of baseline nitrogen deposition from the Energy Commission's 2007 study; rates in the project vicinity varied from 2 to over 15 kg/ha/yr (Tonneson et. al. 2007); see **Biological Resources Figures 1 and 3**. This analysis of the HBEP's nitrogen deposition impacts uses the actual previously modeled baseline values rather than the applicant's estimate of 2 kg/ha/yr for the entire area. Although the modeled baseline values were produced using 2002 data, it is believed to be the most comprehensive and accurate data set available.

In its revised response to Data Requests 23-26, the applicant modeled project-specific and cumulative nitrogen deposition rates (HBEP 2013o). Staff performed an independent assessment of the data's accuracy, including modeling, to verify the applicant's results.

Staff uses a 6-mile radius to evaluate the direct nitrogen plume impacts of power plants. It is staff's experience that by the time the plume has traveled this distance, in-plume concentrations become indistinguishable from background concentrations. Staff considers protected areas and designated critical habitat within the 6-mile radius to be potentially sensitive to nitrogen deposition from the HBEP.

Modeled nitrogen deposition rates from HBEP in protected areas and critical habitat within six miles would range from 0.07 to 1.8 kg/ha/yr. **Biological Resources Tables 3** and **4** identify baseline, HBEP point source, and total nitrogen deposition levels relative to the critical loads (CL) for each vegetation type. In protected areas that support a variety of vegetation types, staff conservatively applied the CL of the most sensitive

vegetation type (lowest applicable CL) as the threshold for determining significance of impacts. This approach may be revised to account for the relative proportions of the different vegetation types (and associated critical loads) in each protected area if the applicant can provide this information for the FSA. See **Biological Resources Figures 1** and **3** for details regarding the background nitrogen deposition levels in relation to HBEP emissions.

Biological Resources Table 3
HBEP Nitrogen Deposition on Critical Habitats within Six Miles

Critical Habitat	Vegetation Type	CL for N Deposition (kg N ha-1 yr-1)	Baseline N Dep (kg N ha-1 yr-1)	HBEP Point Source N-Dep (kg N ha-1 yr-1)	Total predicted N-Dep (kg N ha-1 yr-1)	Acres Exceeding CL – All Sources
Coastal California gnatcatcher	Coastal Sage Scrub	7.8[a]	2.07-2.18	0.15-0.40	2.22 – 2.58	0
San Diego fairy shrimp	Vernal pool	6[a,b]	2.07-13.45	0.19-0.9	2.27 – 14.36	42.84
Western snowy plover	Coastal dunes	10[a]	1.66-11.09	0.08-0.18	1.74 – 11.28	518.71

a – Pardo et al., 2011. Where a range for CL was reported, the low end of the range was used as a conservative approach.
b – CL value for serpentine grassland in California (Pardo et al., 2011) was used as a proxy for vernal pool CL because serpentine grasslands often support vernal pools, and response to N deposition (annual grassland invasion, replacing native herbs) is the same as vernal pools.

Biological Resources Table 4
HBEP Nitrogen Deposition on Protected Areas within Six Miles

Protected Area	Vegetation Types	CL for N Deposition[a] (kg N ha-1 yr-1)	Baseline N Dep (kg N ha-1 yr-1)	HBEP Point Source N-Dep (kg N ha-1 yr-1)	Total predicted N-Dep (kg N ha-1 yr-1)	Acres Exceeding CL – All Sources
Bolsa Chica Ecological Reserve (includes western snowy plover critical habitat)	Coastal dunes, intertidal wetlands	10	2.19-11.10	0.13-0.18	2.37-11.28	1,247.56
Huntington Beach Wetlands Conservancy	Coastal dunes, intertidal wetlands	10	2.18-15.17	0.25-1.82	2.53-16.67	50.90
Talbert Nature Preserve (includes	Coastal sage scrub, coastal dunes,	7.8	2.18-15.17	0.35-1.5	2.53-16.67	103.98

Protected Area	Vegetation Types	CL for N Deposition[a] (kg N ha-1 yr-1)	Baseline N Dep (kg N ha-1 yr-1)	HBEP Point Source N-Dep (kg N ha-1 yr-1)	Total predicted N-Dep (kg N ha-1 yr-1)	Acres Exceeding CL – All Sources
California gnatcatcher and San Diego fairy shrimp critical habitat)	intertidal wetlands					
Upper Newport Bay Ecological Reserve	Intertidal wetlands	50	10.57	0.11-0.21	10.68-10.88	0
USACE Salt Marsh Restoration	Coastal sage scrub, intertidal wetlands	7.8	2.18	0.2-0.4	2.38-2.58	0

a – Empirical values reported in the literature, as presented in HBEP 2013b. Where a range for CL was reported, the low end of the range was used as a conservative approach. Where multiple vegetation types occur, the lowest CL is was used to be conservative.

Total predicted nitrogen deposition was calculated by adding the baseline data (from Tonneson et. al. 2007) to the predicted HBEP nitrogen deposition. Although the Huntington Beach Generating Station is currently operating, it is expected to produce only a fraction of the maximum nitrogenous emissions that the proposed project would be permitted to produce. For example, the existing facility's maximum actual NO_x emissions during the years 2007 to 2011 were 51.7 tons per year, roughly 20 percent of the proposed project's estimated NO_x emissions of 245.6 tons per year. The HBEP would result in a net increase of 193.9 tons of NO_x per year (HBEP 2013a). Therefore, nitrogen deposition from the current plant is small compared with levels expected from the HBEP.

Vegetation-specific critical loads for nitrogen deposition would be exceeded in four locations: San Diego fairy shrimp essential habitat in Fairview Park (Subunit 1b of proposed critical habitat, excluded from final designation) and portions of Bolsa Chica Ecological Reserve (including western snowy plover critical habitat), Huntington Beach Wetlands Conservancy, and Talbert Nature Preserve Given that threats to listed species from invasive weeds are exacerbated by nitrogen fertilization, the proposed project's deposition of additional nitrogen would be a significant indirect impact.

Mitigation Approach

Staff's proposed approach for mitigating indirect and cumulative impacts to listed species from HBEP nitrogen deposition is to fund new or established weed abatement programs in the affected area. It is understood that emissions from the proposed HBEP project would not be the only source of nitrogen deposition in protected areas and critical habitat in the region. There are existing industrial stationary sources as well as mobile sources (i.e., transportation) in the area that collectively contribute to elevated local and regional nitrogen deposition. Accordingly, staff proposes that the applicant's

mitigation be proportional to the proposed project's contribution toward total nitrogen deposition within protected areas and critical habitat in the region. The following equation was developed by staff to calculate this proportion. This calculation has been used in previous siting cases to calculate habitat compensation, including the Pio Pico Energy Center, Oakley Generating Station, Metcalf Energy Center, Los Esteros, and Donald Von Raesfeld Power Project (formerly Pico Power Project).

> *[Project N-dep within sensitive habitat / baseline N-dep within sensitive habitat] X acreage of affected habitat =* ***acres of mitigation land***

The project's relative contribution to nitrogen deposition on listed species' habitat and the associated mitigation acreage was calculated to determine weed abatement funding requirements. Since the nitrogen deposition plume extends 6 miles east of the project, it encompasses several different baseline levels of nitrogen deposition as illustrated in **Biological Resources Figures 1** and **3**. The HBEP's nitrogen deposition levels also vary across listed species habitat areas. Each area with different nitrogen deposition baseline and HBEP deposition value was identified as a "map zone". The mitigation values for each map zone that exceeds critical load for nitrogen deposition were calculated individually using the equation above and then totaled to determine the final area of impact requiring mitigation for each protected area and critical habitat. Each map zone calculation accounted for the acres of affected habitat, the HBEP's nitrogen deposition within affected habitat, and the baseline nitrogen deposition. Only map zones where the total nitrogen deposition exceeds the critical load (as identified in **Biological Resources Tables 3 and 4**) are included in the calculation of mitigation acres; map zones below critical load are not significantly impacted by the HBEP and do not require mitigation. Note that some critical habitats overlap with protected areas; these areas are only counted once in the calculation of mitigation requirements.

Staff does not have information on the nitrogen deposition levels of the existing Huntington Beach Generating Station. If the applicant can provide staff with modeled nitrogen deposition from the existing plant in the same manner that was done for the HBEP, staff can subtract the existing plant's nitrogen deposition from the HBEP nitrogen deposition and adjust the mitigation calculations accordingly. This analysis has considered all best available information at the time of the publication of this Supplemental Focused Analysis to the PSA.

Following is an example of this methodology applied for affected San Diego fairy shrimp habitat:

Three map zones (25, 26, and 27) exceed the critical load of 6 kg/ha/yr for San Diego fairy shrimp vernal pool habitat in Fairview Park:

Map Zone 25 [0.9 kg N ha^{-1} yr^{-1}/13.46 kg N ha^{-1} yr^{-1}] X 6.67 acres = 0.45 acres
Map Zone 26 [0.8 kg N ha^{-1} yr^{-1}/13.46 kg N ha^{-1} yr^{-1}] X 36.04 acres = 2.14 acres
Map Zone 27 [0.7 kg N ha^{-1} yr^{-1}/13.46 kg N ha^{-1} yr^{-1}] X 0.12 acres = 0.01 acres

The acreages for all three map zones were added together for a total of 2.60 acres of San Diego fairy shrimp habitat. This method of calculation was repeated for all map zones in protected areas and critical habitat that exceed critical load. Based on this calculation the applicant would be required to fund ongoing weed abatement for the life

of the project on a total of 27.81 acres; see **Biological Resources Table 5** and Condition of Certification **BIO-10** (Weed Abatement Program Funding). Refer to **BIOLOGICAL RESOURCES Appendix A** at the end of this PSA – Part A, Supplemental Focused Analysis section for tables showing the calculated values for each map zone per listed species.

Biological Resources Table 5
Impacts to Listed Species and Protected Areas within Six Miles of HBEP

Protected Area/Critical Habitat	Species	Total Acres of Critical or Essential Habitat Impacted (N-dep exceeds CL)	Calculated Mitigation Acreage for Weed Abatement Funding
Essential habitat at Fairview Park	San Diego fairy shrimp	42.84	2.60
Critical habitat	Western snowy plover	518.71	7.41
Bolsa Chica Ecological Reserve (excluding western snowy plover critical habitat)	Western snowy plover, California least tern	728.85	9.92
Huntington Beach Wetlands Conservancy	Western snowy plover, Belding's savannah sparrow, light-footed clapper rail, California least tern	50.90	1.63
Talbert Nature Preserve (excluding California gnatcatcher and San Diego fairy shrimp critical habitat)	Western snowy plover, coastal California gnatcatcher, San Diego fairy shrimp	103.98	6.25

The approach to mitigation for nitrogen-deposition impacts to listed species is to fund a new or established weed abatement program on critical habitat or habitat that contains the primary constituent elements[1] for western snowy plover and San Diego fairy shrimp, and suitable (preferably occupied) habitat for the other affected listed species. Staff's preferred strategy is to fund weed management within the actual affected protected areas and critical habitat, but other suitable locations would be acceptable if they meet these requirements. Mitigation can be implemented for these species either separately or together if suitable habitat for a combination of species can be found in the same location. If the project owner elects to establish a new weed abatement program, the project owner shall conduct a Property Analysis Record (PAR) or PAR-like analysis to establish the appropriate long-term fee to fund the weed abatement program for the identified lands for the life of the project. A PAR or PAR-like analysis uses a

[1] Primary constituent elements are those physical and biological features of a landscape that a species needs to survive and reproduce (USFWS 2012a).

computerized database methodology that calculates the costs of land management for a specific project. The PAR analyzes the characteristics and needs of the target property to determine management requirements. The PAR then identifies management tasks and estimated costs as well as the necessary administrative costs to provide the full cost of managing the property. If the project owner proposes to fund an established weed abatement program, the project owner shall identify the cost of funding the weed abatement program lands for the life of the project as determined by the entity implementing the program.

Staff's preferred approach is for funding to be provided to existing weed management programs currently being implemented in protected areas affected by HBEP nitrogen deposition.

This mitigation approach is fully described in staff's proposed Condition of Certification **BIO-10.** Weed abatement would enhance and preserve habitat for the listed species impacted by nitrogen deposition from the HBEP. Implementation of this condition would reduce impacts to federally and state-listed species from HBEP nitrogen deposition to less than significant.

CUMULATIVE EFFECTS

Cumulative impacts are those that result from the incremental impacts of a proposed action considered with other past, present, and reasonably foreseeable future actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over time.

A project may result in a significant adverse cumulative impact if its effects are cumulatively considerable. There are currently proposed projects near the HBEP that may impact local biological resources, especially those in and near the Huntington Beach Wetlands Complex and other regional wetlands. These projects include the Poseidon Desalination Plant, Ascon Landfill Site, Newland Street widening project, P2-92 Sludge Dewatering and Odor Control, and the Brightwater Project.

Due to ongoing operation of the Huntington Beach Generating Station, the proposed HBEP site is highly disturbed, is devoid of natural vegetation, and does not provide suitable habitat for special-status species. The Poseidon Desalination Plant is an unrelated project that is planned on a portion of the Huntington Beach Generating Station property. As with the HBEP, the Poseidon Desalination Plant would not be likely to have direct impacts to special-status species or other biological resources, as special-status species are unlikely to occur on this industrial brownfield site. However, construction of the proposed project and the Poseidon project may overlap, and cumulative indirect impacts to sensitive biological resources and special-status species could occur. These cumulative impacts could include disruption from lighting, spread of invasive weeds, and stormwater runoff. Implementation of Conditions of Certification **BIO-1** through **BIO-7** would minimize or avoid construction-related impacts from lighting, spread of invasive weeds, and stormwater runoff from the HBEP, and the Poseidon project would be required to implement similar measures (City of Huntington Beach 2005). Once operational, the HBEP would not result in a substantial change from baseline conditions for most biological resources. Therefore, the proposed HBEP would not contribute considerably to most cumulative impacts to biological resources.

Noise from the aforementioned projects may combine with HBEP construction noise to result in cumulative impacts to birds within the Upper Magnolia and Magnolia marshes. Condition of Certification **BIO-9** requires the project owner to take noise measurements and monitor nests to avoid disturbance to birds. Pursuant to this condition, noise reduction measures must be implemented by the HBEP to reduce construction and demolition noise to acceptable levels (i.e., ambient levels or 60 dBA in areas where pre-construction noise levels are below 60 dBA). With implementation of Condition of Certification **BIO-8**, the proposed HBEP would not contribute to cumulatively considerable impacts to any locations with noise-sensitive biological resources.

Nitrogen Deposition

The cumulative scenario for nitrogen deposition impacts to biological resources includes past, present, and reasonably foreseeable future projects with emissions that contribute to nitrogen deposition in a six-mile radius of the HBEP, and the protected areas and USFWS critical habitat contained therein. These projects include the Orange County Sanitation District (Facility ID 17301) and Orange County Sanitation District (Facility ID 29110).

Natural habitats in the project vicinity support populations of the federally listed San Diego fairy shrimp, California gnatcatcher, and western snowy plover, and the area contains USFWS-designated critical habitat for these species. Additional listed species in the region include light-footed clapper rail, California least tern, Belding's savannah sparrow, and least Bell's vireo. A substantial threat to these species is nonnative weed invasion and the resultant cascading effects (e.g., competition, vegetation type conversion). As described above, nonnative weed invasion is facilitated by nitrogen deposition, which is a result of the cumulative emissions of many sources within the region.

Cumulative nitrogen deposition exceeds the critical load in the following areas: San Diego fairy shrimp essential habitat in Fairview Park (Subunit 1b of proposed critical habitat, excluded from final designation) and portions of Bolsa Chica Ecological Reserve (including western snowy plover critical habitat), Huntington Beach Wetlands Conservancy, and Talbert Nature Preserve. The proposed HBEP would contribute to further nitrogen deposition in these areas.

The cumulative nitrogen deposition scenario includes baseline nitrogen deposition levels plus modeled levels from applicable regional sources; see **Biological Resources Figures 2** and **4**. The project's contribution to nitrogen deposition in areas exceeding the critical load levels ranges from relatively small (1 percent) to moderate (10 percent). It is the culmination of nitrogen emission sources from similar past, present, and reasonably foreseeable future projects that contribute to the current proliferation of invasive weeds and subsequent habitat loss for listed species (San Diego fairy shrimp, western snowy plover, California least tern, Belding's savannah sparrow, light-footed clapper rail, and coastal California gnatcatcher). Given the threat to these species from weed invasions and the existing high (over critical load) levels of nitrogen deposition, HBEP emissions and the resulting incremental effect to state and federally listed species are cumulatively considerable in the absence of mitigation. Staff recommends Condition of Certification **BIO-10** to reduce the project's contribution to cumulative impacts. Per Condition of Certification **BIO-10**, the applicant would provide funding to an

existing or new weed abatement program to benefit the listed species affected by the HBEP's nitrogen deposition. As described above, the acreage on which the weed abatement would occur would be proportional to the proposed project's contribution to nitrogen deposition occurring at USFWS-designated critical habitat and protected areas supporting listed species in the project vicinity. Implementation of Condition of Certification **BIO-10** would mitigate the project's incremental contribution to nitrogen deposition within critical habitat to less than cumulatively considerable.

In conclusion, the proposed HBEP would not contribute considerably to cumulative impacts to biological resources.

COMPLIANCE WITH LORS

The proposed project must comply with LORS that address state and federally listed species, as well as other sensitive biological resources. Applicable LORS are described in **Biological Resources Table 1** of the PSA - Part A and this Supplemental Focused Analysis.

With implementation of staff's proposed conditions of certification, the proposed HBEP would comply with LORS pertaining to biological resources. Implementation of conditions of certification **BIO-8** and **BIO-9** would avoid impacts to the federally endangered light-footed clapper rail such that take would not occur and compliance with the federal Endangered Species Act would be achieved.

Operation of the proposed project would result in indirect and cumulative impacts to federally and state-listed species from nitrogen deposition. **BIO-10** requires funding of weed abatement programs in affected areas, which would avoid type conversion of habitat and subsequent habitat loss through weed invasion or loss of native herbaceous vegetation. Staff has determined that this impact would not result in take of listed species with implementation of this mitigation, which will avoid project-related loss of habitat from weeds. Nitrogen deposition would also affect lands within the County of Orange Central & Coastal Subregion NCCP/HCP; however, implementation of **BIO-10** would ensure consistency with the NCCP/HCP.

CONCLUSIONS

The project site and offsite laydown area are industrial brownfield sites with operating power plants, and vegetation is limited to weedy species and landscaping. Rare plants and special-status wildlife are not expected to occur onsite; however, nearby marshes and other natural areas support special-status birds including the Belding's savannah sparrow (state-listed endangered), light-footed clapper rail (federally and state-listed endangered), western snowy plover (federally listed threatened), California least tern (federally and state-listed endangered), and California brown pelican (state fully protected). Another location with noise-sensitive biological resources is the Wildlife Care Center, which houses rehabilitating birds and wildlife in open air enclosures adjacent to the proposed HBEP site. Given the proximity of the proposed project to the aforementioned biological resources, construction and operation would result in the direct and indirect noise and nitrogen deposition effects presented in **Biological Resources Table 6**.

Staff has used best available information in this analysis. Mitigation calculations for impacts to nitrogen deposition can be adjusted if the applicant provides the following information:

- Acreages or relative proportions of vegetation types in each critical habitat and protected area, to refine CLs and calculation of acres exceeding vegetation-specific CLs.
- Modeled nitrogen deposition for the existing Huntington Beach Generating Station, comparable to data modeled for the HBEP. This would allow staff to subtract existing facility emissions from modeled HBEP emissions to refine the HBEP's proportional contribution to regional nitrogen deposition in the calculation of mitigation requirements.

Biological Resources Table 6
Summary of Impacts to Biological Resources from the HBEP

Impact	Condition of Certification	Significance Determination
CONSTRUCTION IMPACTS		
Special-status wildlife: disturbance from noise and lighting, habitat degradation from invasive weeds, stormwater runoff, or groundwater contamination	• **BIO-7** confines work to delineated areas and controls invasive weeds; • **BIO-8** requires pre-construction nest surveys and impact avoidance; • **SOIL&WATER-1** requires preparation of a SWPPP to control runoff and prevent contamination; • **VIS-2** minimizes offsite lighting • **BIO-9** prohibits excessive construction and demolition noise in Upper Magnolia and Magnolia marshes and requires reporting to document compliance with noise thresholds.	Less than significant with conditions of certification
Noise: disturbance resulting in mortality or decreased productivity of special-status birds and rehabilitating wildlife	• **BIO-8** requires pre-construction nest surveys and impact avoidance; • **BIO-9** prohibits excessive construction and demolition noise in Upper Magnolia and Magnolia marshes and requires reporting to document compliance with noise thresholds • **NOISE-2** establishes a noise	Less than significant with conditions of certification

Impact	Condition of Certification	Significance Determination
	complaint registration and resolution process that can be used by the Wildlife Care Center	
OPERATION IMPACTS		
Noise: disturbance resulting in mortality or decreased productivity of special-status birds and rehabilitating wildlife	**None**	**At marshes:** less than significant **At Wildlife Care Center:** no impact
Nitrogen deposition: degradation of habitat by enhancing invasive weeds	• **BIO-10** requires funding of a new or established weed abatement program on critical or suitable habitat for affected species	Less than significant with condition of certification

OVERALL CONCLUSION

With implementation of proposed conditions of certification, compliance with LORS would be achieved and direct, indirect, and cumulative impacts would be avoided, minimized, or mitigated to less than significant levels.

PROPOSED CONDITIONS OF CERTIFICATION

The following Biological Resources conditions of certification have been revised or added since publication of PSA Part A. Additions are underlined; deletions are ~~struck out~~.

DESIGNATED BIOLOGIST SELECTION

BIO-1 The project owner shall assign at least one Designated Biologist to the project. The project owner shall submit the resume of the proposed Designated Biologist, with at least three references and contact information, to the Energy Commission Compliance Project Manager (CPM) for approval in consultation with CDFW and USFWS.

The Designated Biologist must meet the following minimum qualifications:

1. Bachelor's degree in biological sciences, zoology, botany, ecology, or a closely related field;
2. Three years of experience in field biology or current certification of a nationally recognized biological society, such as The Ecological Society of America or The Wildlife Society; and
3. At least one year of field experience with biological resources found in or near the project area.

In lieu of the above requirements, the resume shall demonstrate to the satisfaction of the CPM, in consultation with CDFW and USFWS, that the

proposed Designated Biologist or alternate has the appropriate training and background to effectively implement the conditions of certification.

Verification: The project owner shall submit the specified information at least 75 days prior to the start of site mobilization or construction-related ground disturbance activities. No pre-construction site mobilization or construction related activities shall commence until a ~~an approved~~ Designated Biologist ~~is available to be on site~~ has been approved by the CPM, in consultation with CDFW and USFWS.

If a Designated Biologist is replaced, the specified information of the proposed replacement must be submitted to the CPM at least ten working days prior to the termination or release of the preceding Designated Biologist. In an emergency, the project owner shall immediately notify the CPM to discuss the qualifications and approval of a short-term replacement while a permanent Designated Biologist is proposed to the CPM for consideration.

DESIGNATED BIOLOGIST DUTIES

BIO-2 The project owner shall ensure that the Designated Biologist performs the following during any site (or related facilities) mobilization, ground disturbance, grading, construction, operation, closure, and restoration activities. The Designated Biologist may be assisted by the approved Biological Monitor(s) but remains the contact for the project owner and CPM. The Designated Biologist Duties shall include the following:

1. Advise the project owner's Construction and Operation Managers on the implementation of the biological resources conditions of certification;
2. Consult on the preparation of the Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP) to be submitted by the project owner;
3. Be available to supervise, conduct and coordinate mitigation, monitoring, and other biological resources compliance efforts, particularly in areas requiring avoidance or containing sensitive biological resources, such as special status species or their habitat;
4. Clearly mark sensitive biological resource areas and inspect these areas at appropriate intervals for compliance with regulatory terms and conditions;
5. Inspect active construction areas where animals may have become trapped prior to construction commencing each day. ~~At the end of the day, I~~ Inspect ~~for~~ or direct the site personnel how to inspect the installation of structures that prevent entrapment or allow escape during periods of construction inactivity. Periodically inspect areas with high vehicle activity (e.g., parking lots) for animals in harm's way;
6. Notify the project owner and the CPM of any non-compliance with any biological resources condition of certification;
7. Respond directly to inquiries of the CPM regarding biological resource issues;

8. Maintain written records of the tasks specified above and those included in the BRMIMP. Summaries of these records shall be submitted in the monthly compliance report and the annual compliance report;
9. Train the Biological Monitors as appropriate, and ensure their familiarity with the BRMIMP, Worker Environmental Awareness Program (WEAP) training, and all permits; and
10. Maintain the ability to be in regular, direct communication with representatives of CDFW, USFWS, and CPM, including notifying these agencies of dead or injured listed species and reporting special status species observations to the California Natural Diversity Database.

The Designated Biologist shall submit in the monthly compliance report to the CPM copies of all written reports and summaries that document construction activities that have the potential to affect biological resources. If actions may affect biological resources during operation the Biological Monitor(s), under the supervision of the Designated Biologist, shall be available for monitoring and reporting. During project operation, the Designated Biologist(s) shall submit record summaries in the annual compliance report unless their duties cease, as approved by the CPM.

GENERAL IMPACT AVOIDANCE AND MINIMIZATION MEASURES

BIO-7 The project owner shall implement the following measures during site mobilization, construction, operation, and closure to manage their project site and related facilities in a manner to avoid or minimize impacts to biological resources:

1. The boundaries of all areas to be temporarily or permanently disturbed (including staging areas, access roads, and sites for temporary placement of spoils) shall be delineated with stakes and flagging prior to construction activities in consultation with the Designated Biologist. Spoils shall be stockpiled in disturbed areas, which do not provide habitat for special-status species. Parking areas, staging and disposal site locations shall similarly be located in areas without native vegetation or special-status species habitat. All disturbances, vehicles, and equipment shall be confined to the flagged areas.
2. At the end of each work day, the Designated Biologist, Biological Monitor, and/or site personnel shall ensure that all potential wildlife pitfalls (trenches, bores, and other excavations) ~~outside the permanently fenced area~~ have been backfilled. If site personnel are inspecting trenches, bores, and other excavations and wildlife is trapped, they will immediately notify the Designated Biologist and/or Biological Monitor. If backfilling is not feasible, all trenches, bores, and other excavations shall be sloped at a 3:1 ratio at the ends to provide wildlife escape ramps, or covered completely to prevent wildlife access. Should wildlife become trapped, the Designated Biologist or Biological Monitor shall remove and relocate the individual to a safe location. Any wildlife encountered during the course of construction shall be allowed to leave the construction area unharmed.
3. Transmission lines and all electrical components shall be designed, installed, and maintained in accordance with the Avian Power Line

Interaction Committee's (APLIC's) Suggested P*ractices for Avian Protection on Power Lines* (APLIC 2006) and *Reducing Avian Collisions with Power Lines* (APLIC 2012) to reduce the likelihood of large bird electrocutions and collisions.

4. Spoils shall not be stockpiled adjacent to the southeastern fence line to minimize potential for spoils to enter into adjacent wetlands.
5. Soil bonding and weighting agents used on unpaved surfaces shall be non-toxic to wildlife and plants.
6. Facility lighting shall be designed, installed, and maintained to prevent side casting of light towards the project boundaries. Lighting shall be shielded, directional, and at the lowest intensity required for safety. Lighting shall be directed away from biologically sensitive areas (e.g., Magnolia Marsh). FAA visibility lighting shall employ only strobed, strobe-like or blinking incandescent lights, preferably with all lights illuminating simultaneously. Minimum intensity, maximum "off-phased" duel strobes are preferred, and no steady burning lights (e.g., L-810s) shall be used.
7. Water applied to dirt roads and construction areas (trenches or spoil piles) for dust abatement shall use the minimal amount needed to meet safety and air quality standards in an effort to prevent the formation of puddles, which could attract California least tern predators to construction sites. During construction, ~~a Biological Monitor~~ site personnel shall patrol these areas to ensure water does not puddle and attract crows and other wildlife to the site, and shall take appropriate action to reduce water application rates where necessary.
8. Report all inadvertent deaths of special-status species to the appropriate project representative, including road kill. Species name, physical characteristics of the animal (sex, age class, length, weight), and other pertinent information shall be noted and reported in the monthly compliance reports. For special-status species, the Designated Biologist or Biological Monitor shall contact CDFW and USFWS within 1 working day of receipt of the carcass for guidance on disposal or storage of the carcass. Injured animals shall be reported to CDFW and/or USFWS and the CPM, and the project owner shall follow instructions that are provided by CDFW or USFWS. During construction, injured or dead animals detected by personnel in the project area shall be reported immediately to a Biological Monitor or Designated Biologist, who shall remove the carcass or injured animal promptly. During operations, the Project Environmental Compliance Monitor shall be notified.
9. All vehicles and equipment shall be maintained in proper working condition to minimize the potential for fugitive emissions of motor oil, antifreeze, hydraulic fluid, grease, or other hazardous materials. The Designated Biologist shall be informed of any hazardous spills immediately as directed in the project Hazardous Materials Plan. Hazardous spills shall be immediately cleaned up and the contaminated soil would be properly disposed of at a licensed facility. Servicing of construction equipment shall take place only

at a designated area. Service/maintenance vehicles shall carry a bucket and pads to absorb leaks or spills.

10. During construction all trash and food-related waste shall be placed in self-closing containers and removed weekly or more frequently from the site. Workers shall not feed wildlife, or bring pets to the project site.
11. Except for law enforcement personnel, no workers or visitors to the site shall bring firearms or weapons.
12. Standard best management practices (BMPs) from the project Stormwater Pollution Prevention Plan shall be implemented during all phases of the project (construction, demolition, operation, and decommissioning) where stormwater run-off from the site could to enter adjacent marshes or channels. Sediment and other flow-restricting materials shall be moved to a location where they shall not be washed back into the jurisdictional waters. All disturbed soils within the project site shall be stabilized to reduce erosion potential, both during and following construction.
13. The project owner shall implement the following measures during construction and operation to prevent the spread and propagation of nonnative, invasive weeds:
    a. Limit the size of any vegetation and/or ground disturbance to the absolute minimum and limit ingress and egress to defined routes;
    b. Use only weed-free straw, hay bales, and seed for erosion control and sediment barrier installations. Invasive non-native species shall not be used in landscaping plans and erosion control. Monitor and rapidly implement control measures to ensure early detection and eradication of weed invasions.
14. During construction and operation, the project owner shall conduct pesticide management in accordance with standard BMPs. The BMPs shall include non-point source pollution control measures. The project owner shall use a licensed herbicide applicator and obtain recommendations for herbicide use from a licensed Pest Control Advisor. Herbicide applications must follow EPA label instructions. Minimize use of rodenticides and herbicides in the project area and prohibit the use of chemicals and pesticides known to cause harm to non-target plants and wildlife. The project owner shall only use pesticides for which a “no effect” determination has been issued by the EPA’s Endangered Species Protection Program for any species likely to occur within the project area or adjacent wetlands. If rodent control must be conducted, zinc phosphide or an equivalent product shall be used.

All mitigation measures and their implementation methods shall be included in the BRMIMP and implemented. Implementation of the measures would be reported in the monthly compliance reports by the Designated Biologist. Within 30 days after completion of project construction, the project owner shall provide to the CPM, for review and approval, a written construction termination report identifying how measures have been completed.

PRE-CONSTRUCTION NEST SURVEYS AND IMPACT AVOIDANCE AND MINIMIZATION MEASURES FOR BREEDING BIRDS

~~[Note: *this Condition is likely to be revised based on ongoing coordination with USFWS and CDFW if the applicant cannot reduce construction noise levels in Magnolia Marsh.*]~~

BIO-8 Pre-construction nest surveys shall be conducted if construction activities will occur from February 1 through August 31. The Designated Biologist or Biological Monitor shall perform surveys in accordance with the following guidelines:

1. Surveys shall cover all potential nesting habitat and substrate within the project site and areas surrounding the project site that are exposed to construction and demolition noise levels above ambient or 60 dBA in areas where ambient levels are below 60 dBA.
2. At least two pre-construction surveys shall be conducted, separated by a minimum 10-day interval. Pre-construction surveys shall be conducted no more than ~~30~~14 days prior to initiation of construction activity. One survey needs to be conducted within the ~~14~~3-day period preceding initiation of construction activity. Additional follow-up surveys may be required if periods of construction inactivity exceed three weeks in any given area, an interval during which birds may establish a nesting territory and initiate egg laying and incubation.
3. If active nests are detected during the survey, a no-disturbance buffer zone (protected area surrounding the nest) shall be established around each nest. The size of each buffer zone shall be determined by the Designated Biologist in consultation with the CPM (in coordination with CDFW and USFWS). Nest locations shall be mapped using GPS technology ~~and submitted, along with a weekly report stating the survey results, to the CPM in the monthly compliance reports~~.
4. If active nests are detected during the survey, the Designated Biologist or Biological Monitor shall monitor all nests with buffers at least once per week, to determine whether birds are being disturbed. If signs of disturbance or distress are observed, the Designated Biologist or Biological Monitor shall immediately implement adaptive measures to reduce disturbance. These measures could include, but are not limited to, increasing buffer size, halting disruptive construction activities in the vicinity of the nest until fledging is confirmed, or placement of visual screens or sound dampening structures between the nest and construction activity.
5. If active nests are detected during the survey, the Designated Biologist shall monitor the nest until he or she determines that nestlings have fledged and dispersed or the nest is no longer active. Activities that might, in the opinion of the Designated Biologist, disturb nesting activities (e.g., ~~excessive noise above ambient levels or 60 dBA in areas where pre-construction noise levels were below 60 dBA,~~ exposure to exhaust), shall be prohibited within the buffer zone until such a determination is made.

a. Sound levels above ambient levels or 60 dBA (Lmax) in areas where pre-construction noise levels are below 60 dBA are prohibited within the buffer zone, unless otherwise agreed to by the CPM in consultation with USFWS and CDFW.

b. Vibratory pile driving shall be used. If active nests are detected during the survey, pile driving shall be prohibited between February 1 and August 31, unless it can be demonstrated to the satisfaction of the CPM that pile driving will not exceed ambient levels or 60 dBA in areas where pre-construction noise levels are below 60 dBA.

Verification: Prior to the start of any pre-construction site mobilization,, the project owner shall provide the CPM a letter-report describing the findings of the preconstruction nest surveys, including the time, date, and duration of the survey; identity and qualifications of the surveyor(s); and a list of species observed. If active nests are detected during the survey, the report shall include a map or aerial photo identifying the location of the nest and shall depict the boundaries of the proposed no disturbance buffer zone around the nest. Additionally, ~~and~~ a monitoring plan shall be submitted that describes the project owner's proposal for documenting that the breeding bird(s) identified were not impacted, consistent with (4) and (5), above; this shall include reporting Leq and Lmax noise levels in the vicinity of the nest if it is in an area expected to exceed ambient levels or 60 dBA (Lmax) in areas where pre-construction noise levels are below 60 dBA. The survey report and monitoring plan shall be submitted to the CPM for review and approval. Additional copies shall be provided to the CDFW and USFWS for review and comment. Approval of the plan is required before construction may commence. All impact avoidance and minimization measures related to nesting birds shall be included in the BRMIMP and implemented. Implementation of the measures shall be reported in the monthly compliance reports by the Designated Biologist.

NOISE IMPACT MINIMIZATION, MONITORING, AND REPORTING

BIO-9 Throughout construction and demolition, sound levels in Upper Magnolia and Magnolia marshes shall not exceed ambient levels or 60 dBA (Lmax) in areas where pre-construction noise levels are below 60 dBA, unless otherwise agreed to by the CPM in consultation with USFWS and CDFW.

Verification: At least monthly for the duration of construction and demolition activities, the project owner shall document ambient noise levels (Leq) and construction noise levels (Leq and Lmax) in Upper Magnolia and Magnolia marshes at a minimum of two intervals along 300, 600, and 1200 feet contours from the loudest construction or demolition noise source. Methods and results shall be reported in the monthly compliance reports by the Designated Biologist and submitted to the CPM, CDFW and USFWS.

WEED ABATEMENT PROGRAM FUNDING

BIO-10 Prior to start of project operation the project owner shall provide funding to support an existing or establish a new invasive weed abatement program on affected protected areas or critical habitat, occupied habitat, or habitat that

contains the Primary Constituent Elements[2] in the amounts listed for the following protected areas and species:

- San Diego fairy shrimp essential habitat at Fairview Park: 2.60 acres
- Western snowy plover critical habitat at Bolsa Chica: 7.41 acres
- Bolsa Chica Ecological Reserve (excluding western snowy plover critical habitat; affected species are western snowy plover, California least tern): 9.92 acres
- Huntington Beach Wetlands Conservancy (affected species are Western snowy plover, Belding's savannah sparrow, light-footed clapper rail, California least tern): 1.63 acres
- Talbert Nature Preserve (affected species are Western snowy plover, coastal California gnatcatcher, San Diego fairy shrimp): 6.25 acres

Weed abatement can be implemented for habitat either separately or together if suitable habitat for a combination of affected species can be found at the same location.

If the project owner proposes to establish a weed abatement program, the project owner shall conduct a Property Analysis Record (PAR) or PAR-like analysis to establish the appropriate long-term fee to fund the weed abatement program for the identified lands for the life of the project. The project owner shall also demonstrate that the lands on which the new weed abatement program will be conducted are under conservation easement or otherwise protected in perpetuity. If the project owner proposes to fund an established weed abatement program, the project owner shall identify the cost of funding the weed abatement program lands for the life of the project as determined by the entity implementing the program.

The project owner will submit to the CPM the name of the entity(ies) that will be implementing the program(s) for the life of the HBEP and the endowment funds in the amount determined to be adequate to provide funding for weed abatement on the required acres for the life of the project. The entity(ies) to implement the program and the amount of the endowment shall be approved by the CPM in consultation with the USFWS and CDFW.

If the project owner chooses to establish a new weed abatement program, the project owner shall submit a weed abatement plan to the CPM for review and approval and to the USFWS and CDFW for review and comment. The weed abatement plan shall include the following for the mitigation lands: (1) existing conditions at the site(s) and goals for habitats and specific plant populations to be managed and monitored; (2) site preparation methods (weed control treatments, soil preparation methods, native species protection methods, timing); (3) weed abatement and site restoration specifications; (4) short-term (12 months or less) and long-term maintenance and monitoring schedule and methods. If funding is provided to an existing weed abatement program, the

[2] Primary constituent elements are those physical and biological features of a landscape that a species needs to survive and reproduce (USFWS 2012a).

project owner shall submit the management plan or other statement of work from the existing program.

Management activities funded may include but are not limited to: invasive weed eradication using appropriate methods at the optimal time of year to limit seed dispersion and avoid impacts to species, native seed application from local sources (preferably on-site), and planting of shrubs in appropriate habitat for California gnatcatcher.

The project owner shall obtain an annual report from the land manager(s) implementing the weed management program(s), as approved by the CPM. Annual report(s) will document how each annual payment provided from the endowment required hereunder was used and applied to assist in invasive weed abatement.

Verification: At least 30 days prior to the start of project operation the project owner shall submit a Weed Management Plan to the CPM for review and approval by the CPM, in consultation with the CDFW and USFWS. No less than 30 days prior to the start of project operation, the project owner shall provide written verification to the CPM that the endowment has been paid in full to the third party(ies) approved by the CPM in accordance with this condition of certification. The project owner shall provide evidence that it has specified that its annual payment from the endowment to the third party(ies) approved by the CPM can be used only to assist in invasive weed management and remediation of the project's effects (e.g., activities to support continued survival of San Diego fairy shrimp, western snowy plover, California least tern, Belding's savannah sparrow, light-footed clapper rail, and coastal California gnatcatcher at approved locations within affected protected areas, critical habitat, or habitat that contains the Primary Constituent Elements for these species that is protected in perpetuity. Thereafter, within 30 days after each anniversary date of the commencement of project operation, the project owner shall obtain an annual report from the third party(ies) administering the weed management program(s), as approved by the CPM. The annual reports will document how each annual payment from the endowment required hereunder was used and applied to assist in invasive weed management and/or habitat restoration/enhancement at approved locations for these species. The project owner shall provide copies of such reports to the CPM within 30 days of receipt. This verification shall be provided annually for the operating life of the project.

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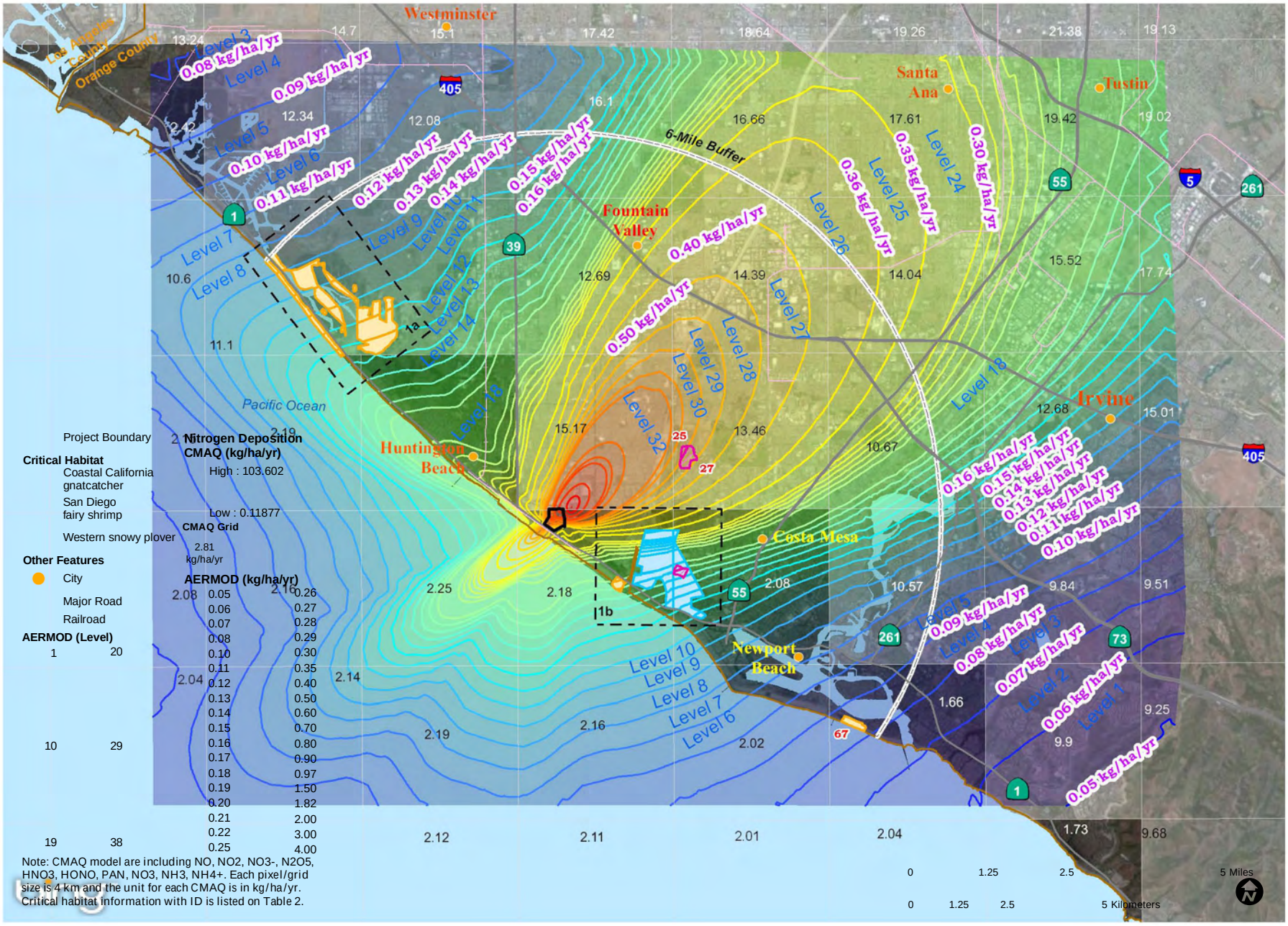
BIOLOGICIAL RESOURCES- FIGURE 1

Huntington Beach Energy Project - Annual Nitrogen Deposition (kg/ha/yr) with AERMOD on USFW Critical Habitat - Point Source

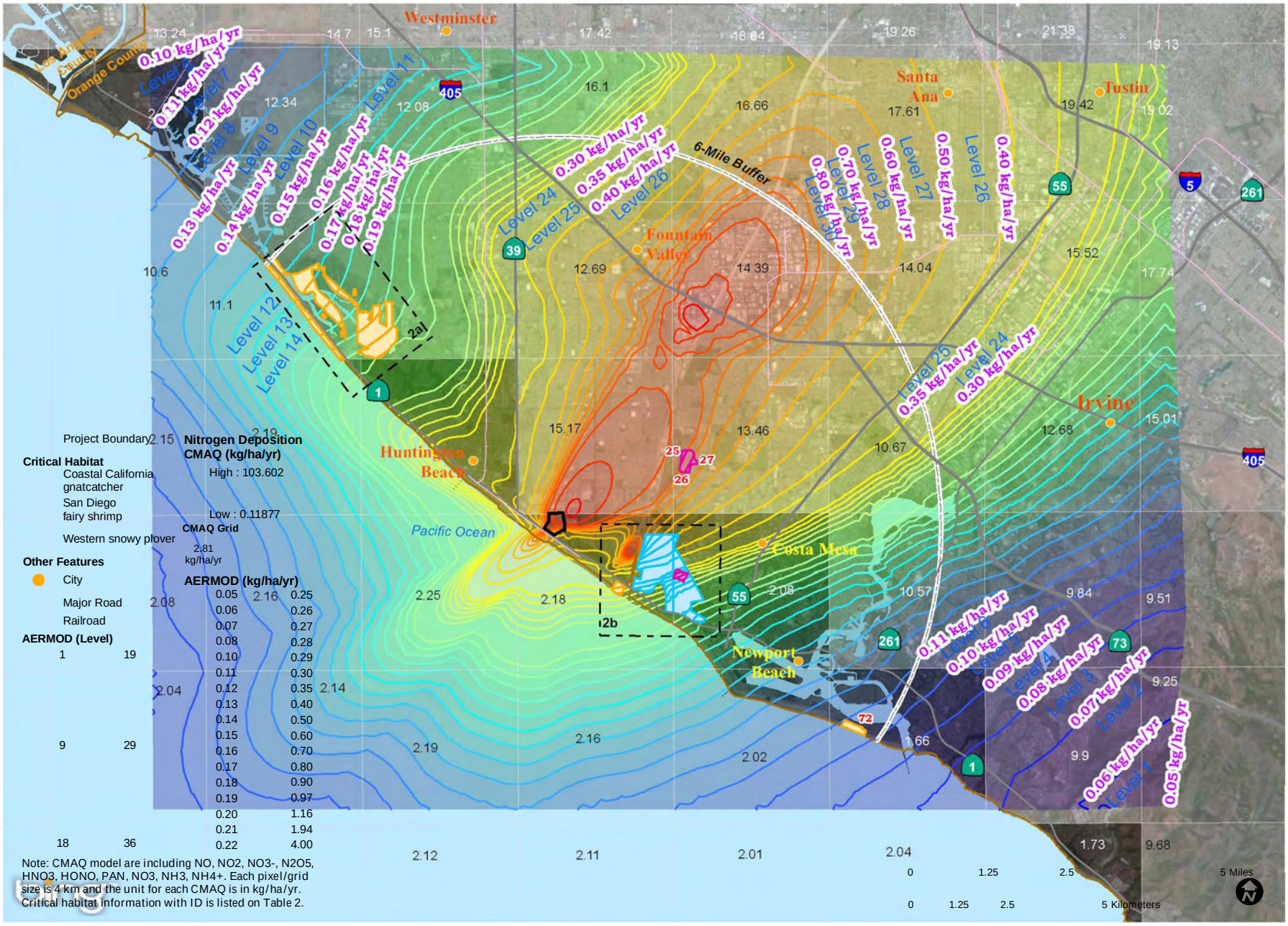


CALIFORNIA ENERGY COMMISSION, SITING, TRANSMISSION AND ENVIRONMENTAL PROTECTION DIVISION

SOURCE: CEC Air Quality, Public Health and TLS&N Unit Staffs, CH2MHILL 2012, U.S. Fish and Wildlife Service - November 2013, University of California Riverside - March 2007, Bing Aerial, OpenStreetMap June 2013.

BIOLOGICIAL RESOURCES- FIGURE 2

Huntington Beach Energy Project - Annual Nitrogen Deposition (kg/ha/yr) with AERMOD on USFW Critical Habitat - All Sources

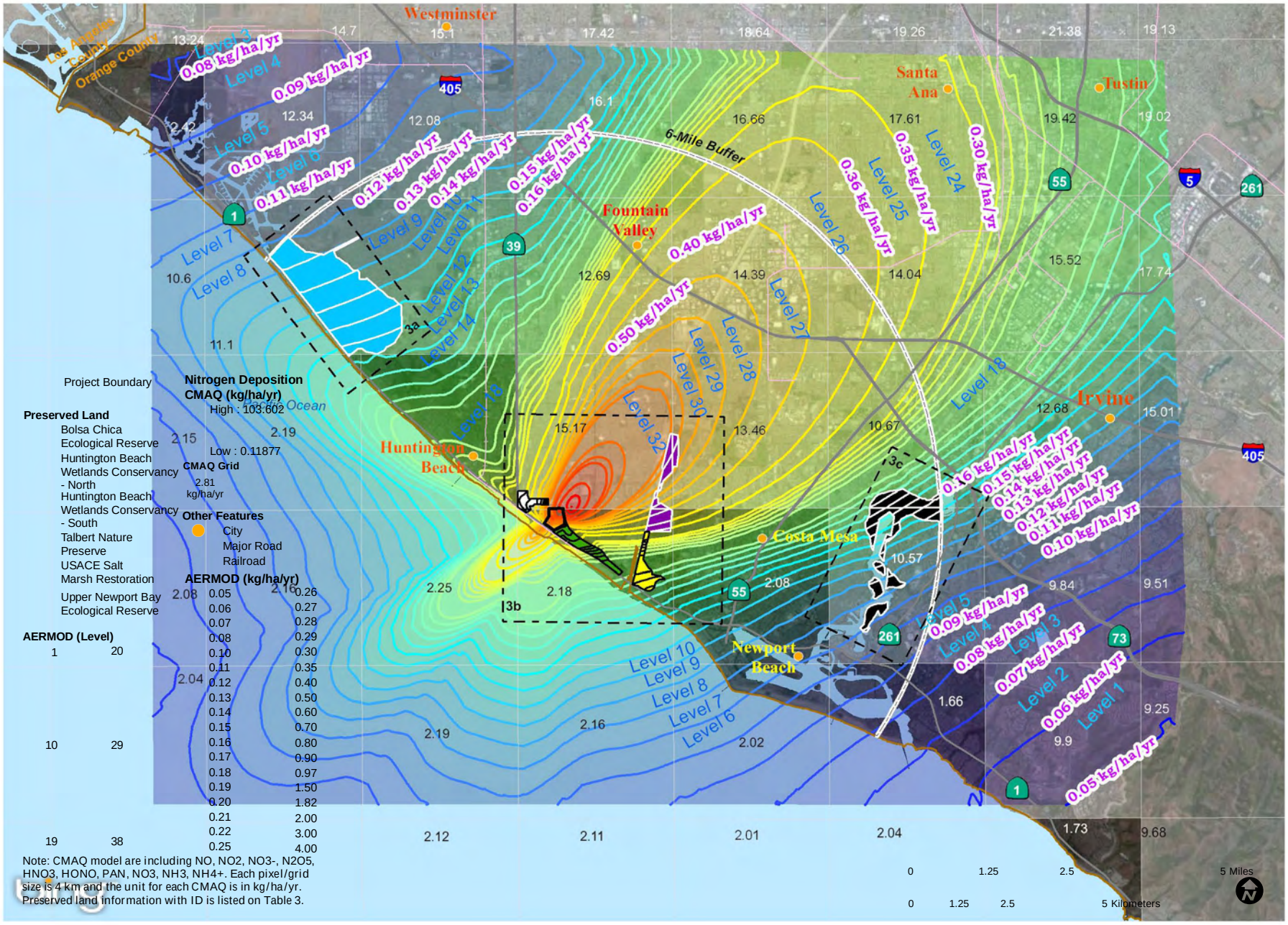


CALIFORNIA ENERGY COMMISSION, SITING, TRANSMISSION AND ENVIRONMENTAL PROTECTION DIVISION

SOURCE: CEC Air Quality, Public Health and TLS&N Unit Staffs, CH2MHILL 2012, U.S. Fish and Wildlife Service - November 2012, University of California Riverside - March 2007, Bing Aerial, OpenStreetMap June 2013.

BIOLOGICIAL RESOURCES- FIGURE 3

Huntington Beach Energy Project - Annual Nitrogen Deposition (kg/ha/yr) with AERMOD on Preserved Land - Point Source

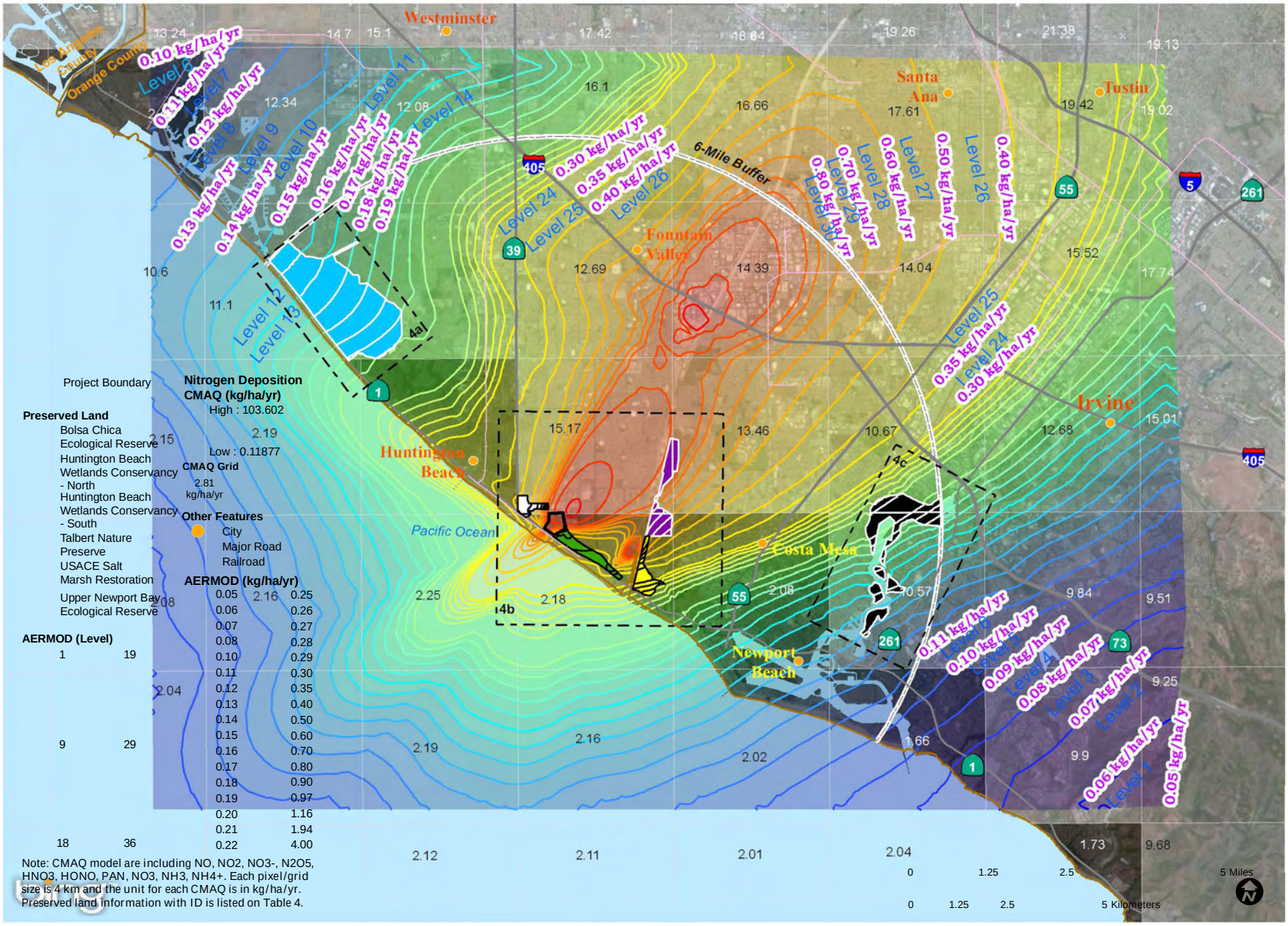


CALIFORNIA ENERGY COMMISSION, SITING, TRANSMISSION AND ENVIRONMENTAL PROTECTION DIVISION

SOURCE: CEC Air Quality, Public Health and TLS&N Unit Staffs, CH2MHILL 2012-2013, California Department of Fish and Wildlife (Ecological Reserve) - August 2010, University of California Riverside - March 2007, Bing Aerial, OpenStreetMap June 2013.

BIOLOGICIAL RESOURCES- FIGURE 4

Huntington Beach Energy Project - Annual Nitrogen Deposition (kg/ha/yr) with AERMOD on Preserved Land - All Sources



CALIFORNIA ENERGY COMMISSION, SITING, TRANSMISSION AND ENVIRONMENTAL PROTECTION DIVISION

SOURCE: CEC Air Quality, Public Health and TLS&N Unit Staffs, CH2MHILL 2012-2013, California Department of Fish and Wildlife (Ecological Reserve) - August 2010, University of California Riverside - March 2007, Bing Aerial, OpenStreetMap June 2013.

APPENDIX A
BIOLOGICAL RESOURCES - MITIGATION CALCULATIONS FOR NITROGEN DEPOSITION IMPACTS

Western Snowy Plover Critical Habitat Exceeding Critical Load for Coastal Dunes (10 kg N ha-1 yr-1)

Map Zone	Baseline N-Dep	Max HBEP N-dep	Acres Exceeding Critical Load	Mitigation Acres
1	11.10	0.13	15.65	0.18
2	11.10	0.13	9.31	0.11
3	11.10	0.14	0.45	0.01
4	11.10	0.14	87.51	1.10
5	11.10	0.14	16.57	0.21
6	11.10	0.15	2.47	0.03
7	11.10	0.15	19.42	0.26
8	11.10	0.15	41.39	0.56
11	11.10	0.15	15.77	0.21
12	11.10	0.15	0.70	0.01
9	11.10	0.16	2.86	0.04
10	11.10	0.16	12.53	0.18
13	11.10	0.16	42.47	0.61
14	11.10	0.16	1.50	0.02
15	11.10	0.16	21.50	0.31
16	11.10	0.16	16.71	0.24
18	11.10	0.16	0.07	0.00
17	11.10	0.17	121.11	1.86
19	11.10	0.17	1.82	0.03
20	11.10	0.17	0.92	0.01
21	11.10	0.17	12.89	0.20
22	11.10	0.18	70.89	1.15
23	11.10	0.18	4.21	0.07
Total			**518.71**	**7.41**

San Diego Fairy Shrimp Critical Habitat Exceeding Critical Load for Annual or Serpentine Grassland (6 kg N ha-1 yr-1)

Map Zone	Baseline N-Dep	Max HBEP N-dep	Acres Exceeding Critical Load	Mitigation Acres
27	13.46	0.7	0.12	0.01
26	13.46	0.8	36.04	2.14
25	13.46	0.9	6.67	0.45
Total			**42.84**	**2.60**

Bolsa Chica Ecological Reserve Exceeding Critical Load for Coastal Dunes (10 kg N ha-1 yr-1) – Includes Snowy Plover Critical Habitat

Map Zone	Baseline N-Dep	Max HBEP N-dep	Acres Exceeding Critical Load	Mitigation Acres
1	11.10	0.13	1.72	0.02
2	11.10	0.13	0.17	0.00
3	11.10	0.13	127.40	1.49
4	11.10	0.14	263.41	3.32
5	11.10	0.15	258.37	3.49
6	11.10	0.16	258.70	3.73
7	11.10	0.17	231.09	3.54
8	11.10	0.18	106.69	1.73
Total			**1247.56**	**17.33**

Huntington Beach Wetlands Conservancy Exceeding Critical Load for Coastal Dunes (10 kg N ha-1 yr-1)

Map Zone	Baseline N-Dep	Max HBEP N-dep	Acres Exceeding Critical Load	Mitigation Acres
21	15.17	0.35	11.46	0.26
24	15.17	0.4	17.12	0.45
32	15.17	0.5	11.85	0.39
27	15.17	0.6	3.61	0.14
28	15.17	0.7	2.26	0.10
26	15.17	0.8	1.79	0.09
25	15.17	0.9	1.71	0.10
30	15.17	0.97	0.84	0.05
34	15.17	1.5	0.26	0.03
Total			**50.90**	**1.63**

Talbert Nature Preserve Exceeding Critical Load Coastal Sage Scrub (7.8 kg N ha-1 yr-1)

Map Zone	Baseline N-Dep	Max HBEP N-dep	Acres Exceeding Critical Load	Mitigation Acres
14	13.46	0.8	0.00	0.00
13	13.46	0.9	18.02	1.20
11	13.46	0.97	10.73	0.77
36	15.17	0.5	0.00	0.00
33	15.17	0.6	9.20	0.36
23	15.17	0.7	7.97	0.37
16	15.17	0.8	4.91	0.26
15	15.17	0.9	27.61	1.64
12	15.17	0.97	25.38	1.62
10	15.17	1.5	0.16	0.02
Total			**103.98**	**6.25**

PRELIMINARY STAFF ASSESSMENT – PART A
SUPPLEMENTAL FOCUSED ANALYSIS
CULTURAL RESOURCES

Gabriel Roark, M.A., Melissa Mourkas, M.A., ASLA

INTRODUCTION

In response to the applicant's request for clarification of staff analysis in the Preliminary Staff Assessment (PSA) (CEC 2013), staff addresses below two cultural resource issues which may be resolved prior to publication of the Final Staff Assessment (FSA). With respect to Built Environment Resources and specifically the existing Huntington Beach Generating Station (HBGS), the applicant requested that staff clearly state that the existing historic-age structures are not eligible for listing on the local Huntington Beach landmarks list, the California Register of Historical Resources (CRHR), or on the National Register of Historic Places (NRHP). The HBGS has been listed as a landmark on the local register since the 1980s. Staff provides below additional analysis and concludes that the preponderance of evidence makes the existing HBGS ineligible for listing at the local, state or national level.

HUNTINGTON BEACH GENERATING STATION LOCAL LANDMARK DESIGNATION

BACKGROUND

On November 7, 2013, the applicant submitted the following comment on Cultural Resources Staff's conclusions as published in the PSA on October 10, 2013:

The PSA states that "it is unclear whether the proposed project would comply with all [LORS]…" as the Huntington Beach Generating Station (also known as the Edison Plant and designated as resource number P-30-176946) is currently listed on the City of Huntington Beach's Local Landmarks list as a result of a 1986 survey. (PSA at pp. 4.3-56 and 4.3-44, respectively.) However, a more recent survey has recommended that the Edison Plant is not eligible for HRHP, the CRHR or for local listing. (See City of Huntington Beach Historic Contact & Survey Report by Galvin Preservation Associates Inc., 2012 (the "2012 Galvin Report); PSA at 4.3-44.) The PSA states the 2012 Galvin Report has not been formally accepted by the City and, therefore, this section remains an outstanding issue for Staff. (PSA at 4.3- 44.) However, Staff indicated that if the Edison Plant is not determined to be a historical resource, then the Project would be in compliance with all applicable LORS as related to Cultural Resources. (PSA at 4.3-56.) The PSA clearly states that "Staff does not believe that the Edison Plant is eligible for the NRHP, CRHR, or the local register; therefore, it is not a historical resource pursuant to the California Environmental Quality Act and no mitigation measures are recommended at this time." Applicant encourages Staff to make its own determination that the Edison Plant is not eligible for the NRHP, CRHR, or the local register based on the preponderance of evidence.

The City of Huntington Beach is unlikely to adopt the Galvin Historical Resources Survey (Galvin 2012) before publication of the HBEP FSA. Therefore, staff's conclusions of eligibility will need to stand on their own. Staff will continue to work in conjunction with City of Huntington Beach planning staff to monitor the status of the local register listing until publication of the FSA. As stated in the Summary of

Conclusions and in the Compliance with LORS discussions in the PSA, staff has already indicated their belief that the Edison Plant is not a historical resource under the California Environmental Quality Act (CEQA) and is in agreement with the Galvin report (Galvin 2012).

A historical resource, as defined by CEQA, is a resource included in a local register of historical resources, as defined in section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements of section 5024.1(g) of the Public Resources Code. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant. (14 Cal. Code Regs., §15064.5[a][2].)

Public Resources Code, section 5024.1(g) states that:

(g) A resource identified as significant in an historical resource survey may be listed in the California Register if the survey meets all of the following criteria:
(1) The survey has been or will be included in the State Historic Resources Inventory.
(2) The survey and the survey documentation were prepared in accordance with office (OHP) procedures and requirements.
(3) The resource is evaluated and determined by the office (OHP) to have a significance rating of Category 1 to 5 on DPR Form 523.
(4) If the survey is five or more years old at the time of its nomination for inclusion in the California Register, the survey is updated to identify historical resources which have become eligible or ineligible due to changed circumstances or further documentation and those which have been demolished or altered in a manner that substantially diminishes the significance of the resource.

If a property was not determined historically significant following the Office of Historic Preservation procedures and requirements (preparation of a DPR 523 inventory form following "Instructions for Recording Historical Resources"), it is possible that the original determination of historical significance is not detailed enough for a lead agency to determine whether the subject resource is, in fact, a historical resource for the purposes of CEQA. This would most likely apply to the original 1980s survey.

Conclusion

The lead agency is to treat a resource as a historical resource unless it can provide a preponderance of evidence that the property is not historically significant. It is likely that the original determination of the property as a "landmark" in the 1980s did not meet the requirements as a historical resource as listed above. The updated survey (Galvin 2012) did not identify the property as significant at the reconnaissance level. That recommendation was based on broad patterns of development and may not have included all relevant contexts for the Edison Plant. However, in addition to the draft Galvin survey (Galvin 2012), which recommends the plant as "Not Historic" and codes it 6Z (found ineligible for NRHP, CRHR or local designation through survey evaluation), staff has the benefit of CH2M HILL's evaluation, which came to the same conclusion (6Z) after more in-depth context evaluation and recording of the entire property. Therefore, based on the preponderance of evidence that the Edison Plant is not a historical resource under CEQA, staff will recommend in the FSA that the Committee/Commission make a determination of ineligibility.

CONDITIONS OF CERTIFICATION

The applicant submits that staff-proposed Condition of Certification **CUL-6** is too stringent considering the degree of archaeological sensitivity within the project site (Foster 2013a:15). The staff-proposed **CUL-6** would require a full-time archaeological monitoring program during project-related ground-disturbance, unless conditions observed by a qualified archaeological monitor (as defined in the proposed condition) warrant reducing the intensity of monitoring (CEC 2013:4.3-69). The applicant proposes replacement of the staff-proposed condition with one that requires full-time archaeological monitoring only in the case that a CRHR-eligible cultural resource is discovered during construction (Foster 2013a:15–18).

The applicant finds that "much of the specific language in CUL-6 is unwarranted and unprecedented. In particular, the requirement for a fulltime archaeological monitor for a project without an identified potential to impact archaeological resources is not warranted given the 'low sensitivity for buried archaeological resources to be present[1]." The applicant proposes to replace the staff-proposed **CUL-6** with **CUL-6** from the Mariposa Energy Project (CEC 2011:20–21), which would tie archaeological monitoring to the event that a cultural resource eligible for listing in the CRHR is identified during construction. (Foster 2013a:15.) Staff respectfully disagrees with the applicant's assessment of both buried archaeological resource potential and its views on staff's proposed **CUL-6**, for two reasons:

1. The applicant's supposition that the project site has low sensitivity for buried archaeological or other cultural resources is based on limited evidence compared to staff's analysis of information derived from on-site, subsurface soils data.
2. The applicant describes the proposed HBEP as "a project without an identified potential to impact archaeological resources" (Foster 2013a:15). The PSA, however, clearly identifies a potential to damage archaeological resources (CEC 2013:4.3-46–48). Indeed, the HBEP application for certification (AFC) acknowledges this potential (AES 2012:5.3-25).

The applicant and staff differ regarding the project site's sensitivity for the presence of buried archaeological resources, with the applicant seeing such sensitivity as low, whereas staff regards it as moderate (AES 2012:5.3-24). Staff believes that this difference in assessment stems from the number and quality of sources considered in the respective analyses. The applicant's assessment of buried archaeological potential relies on generally predictive, modern-day landscape and development characteristics; the applicant considered three historic maps as well (AES 2012:5.3-6, 5.3-13, 5.3-16, 5.3-19, 5.3-23). The applicant indicates that an 8-foot-thick layer of clay was removed from a portion of the project site, but does not cite its source of information (AES 2012:5.3-19). The applicant does not, however, establish whether disturbances to the project site resulted in the removal of all soils and sediments that are of an age and

[1] Note that staff does not close the quotation that the applicant begins with, "low sensitivity". Staff's omission of the closing quotation marks is deliberate here, as they are omitted in the original (Foster 2013aS:15). The quote appears to be from the applicant's confidential cultural resources inventory report: "The APE [area of potential effects, or project area of analysis under Energy Commission proceedings] is considered to have a low sensitivity for buried resources" (Cardenas et al. 2012:5-4).

quality to have supported and preserved archaeological materials, nor at what depths such soils and sediments are expectable.

The PSA, on the other hand, takes soil, sedimentary, and historical factors into account in a very specific manner. Staff considered site-specific information from the AFC (beyond the cultural resources section), nineteen historic maps, archaeological monitoring reports from the Huntington Beach Generating Station Retool Project, two local geological studies, and one geotechnical study each from the project site and an adjacent property (CEC 2013:4.3-7–8, 4.3-36, 4.3-39–40, 4.3-45–48, Cultural Resources Tables 2–4 and 9). Using these sources of information, staff was able to estimate the depth of fill sediments across the project site and establish that some project-related excavation has a high probability of intersecting soils or sediments of an age to contain archaeological materials (CEC 2013:4.3-45–48). Staff concludes on the basis of the evidence considered in the PSA that there is an identifiable potential for the proposed project to affect buried archaeological resources. The PSA reads, for example:

> The proposed excavations described in the previous paragraph all could damage or destroy buried, as-yet-unidentified archaeological resources in the proposed project site. The potential to destroy archaeological resources is greatest with the proposed Block 2 foundation slab because it would require the greatest areal extent of digging. The ground anodes and power poles, on the other hand, have a relatively small footprint and would be more apt to damage buried archaeological resources rather than destroy them. Nevertheless, both the large- and small-footprint excavations could compromise the information potential of archaeological resources by altering the association of artifacts and features, as well as by damaging or destroying them. Such effects are considered significant impacts under CEQA. (CEC 2013:4.3-48.)

The cultural resources analysis in the AFC agrees with staff's analysis in identifying some potential for discoveries of buried archaeological sites and the need for archaeological monitoring before any such inadvertent discoveries occur (AES 2012:5.3-25).

At the November 20, 2013 PSA Part A Workshop held in Huntington Beach, the applicant's consulting archaeologist pointed out that construction digging is likely to intersect about 6 inches of native sediment out of an approximately 8.5–9.0-foot-thick section of overlying fill. Further, the consulting archaeologist opined that "automatic" [fulltime] monitoring for 6 inches of native sediment in the proposed Block 2 area is unwarranted. (Foster 2013b:12–13.)

Although staff finds that the applicant's archaeologist captures the situation with regard to the proposed Block 2 excavation, he does not account for the fact that staff lacks information on the depth of previous excavation for 10 proposed project components (see **Cultural Resources Table 1S**, highlighted entries). Until such a time as the applicant can provide as-built drawings or other data on the depth of fill and previous excavation in these 10 areas, staff cannot concur with the applicant's assessment of archaeological sensitivity for the proposed project.

Cultural Resources Table 1S
Depths of Major Excavations within the Proposed Project Site

Project Element	Area	Depth	Existing Grade (asl)	Foundation Top Elevation (asl)	Excavation Depth (asl)	Estimated Depth of Prior Earthwork (asl)	Natural Grade on Eastern Property Line(asl)
HBEP Block 1 Area							
CCGT/HRSG Foundation Slab	50 x 130	7	10	12.5	5.5	5.5 (existing conduit) 4 (East Fuel Oil Tank foundation) -10 (grounding anodes) 4 (Unit 5 Distillate Tank)	5
Two Generator Step Up Transformers adjacent to ACC	33 x 46	5	10	12	7	Same as area described above	5
ACC Pile Caps	N/A	3	9–15	12	9	Same as area described above	5
STG Foundation	60 x 55	7	6–15	11	4	Same as area described above	5
Two Generator Step Up Transformers west of Gas Compression Building	33 x 46	5	12	12	7	Unknown	5
Gas Compression Building Foundation	144 x 75	3	12	12.8	9.8	Unknown	5
HBEP Block 2 Area							
CCGT/HRSG Foundation Slab	50 x 130	7	14	16	9	9.5	8.5
Two westernmost Transformer Foundations	33 x 46	5	10	12	7	3.6	8.5

Project Element	Area	Depth	Existing Grade (asl)	Foundation Top Elevation (asl)	Excavation Depth (asl)	Estimated Depth of Prior Earthwork (asl)	Natural Grade on Eastern Property Line(asl)
Two easternmost Transformer Foundations	33 x 46	5	10	12	7	Unknown	8.5
STG Foundation	60 x 55	7	12.5	12.5	5.5	Unknown	8.5
ACC Pile Caps	N/A	3	12	14.5	11.5	Unknown	8.5
Miscellaneous Excavations							
Relocated Gas Metering Station	82 x 108	3	10	9.5	-3.5	Not reported	Not reported
Ammonia Tank Spill Containment Basin	18 x 38	5	12	12	-5.0	Not reported	Not reported
Ammonia Tank Refilling Station	12 x 56	6	12	12	-6.0	Not reported	Not reported
Perimeter Grounding Cable	Adjacent to struc-tures	2–3	Varies	Varies	Varies	Not reported	Not reported
Grounding Rods	0.75-inch Diameter	20	Varies	Varies	Varies	Not reported	Not reported

Notes: All dimensions are in feet. ACC = air-cooled condenser; asl = above sea level; CCGT = combined cycle gas turbine; HRSG = heat recovery steam generator; STG = steam turbine generator
Sources: CEC 2013:Cultural Resources Table 2

For the reasons described in the preceding paragraphs, staff does not believe that modifications to the staff-proposed **CUL-6** are warranted. **CUL-6** contains provisions that allow the Cultural Resources Specialist, in consultation with Energy Commission staff, to reduce or increase the scope of archaeological monitoring should observable conditions during construction warrant changes in scope. Should the applicant provide as-built drawings or other information that indicates little potential for excavation to disturb native sediments in the 10 project components highlighted in **Cultural Resources Table 1S**, staff would be in a position to reconsider the appropriateness of revising **CUL-6** for the proposed project. For the present time, staff proposes no changes to **CUL-6**.

REFERENCES

AES 2012—AES. *Application for Certification: Huntington Beach Energy Project*. June. Vol. 1. Submitted to California Energy Commission, Sacramento. Docket No. 12-AFC-02, TN 66003.

Cardenas et al. 2012—Gloriella Cardenas, Lori Durio Price, and Natalie Lawson. *Cultural Resources Inventory Report for the Huntington Beach Energy Project, Orange County, California*. March. CH2M Hill, Santa Ana, CA. Prepared for AES Southland, Huntington Beach, CA. Confidential Appendix 5.3B in *Application for Certification: Huntington Beach Energy Project*, by AES. Vol. 2. Submitted to California Energy Commission, Sacramento. Docket No. 12-AFC-02.

CEC 2011—California Energy Commission. *Mariposa Energy Project, Commission Decision*. May. Sacramento. CEC 800-2011-001-CMF. Docket No. 09-AFC-03. TN 60758.

CEC 2013—California Energy Commission. *Huntington Beach Energy Project Preliminary Staff Assessment - Part A*. October. Sacramento. CEC-700-2013-002-PSA. Docket Unit No. 12-AFC-02. TN 200828.

Foster 2013a—Melissa A. Foster. Letter Regarding Huntington Beach Energy Project (12-AFC-02), Applicant's Comments on the Preliminary Staff Assessment (Part A). November 7. Stoel Rives, Sacramento, CA. Submitted to Dockets Unit, California Energy Commission, Sacramento. Dockets Unit No. 12-AFC-02. TN 201142.

Foster 2013b—Melissa A. Foster. Letter Regarding Huntington Beach Energy Project (12-AFC-02): Applicant's Follow-Up to PSA Part A Workshop. December 13. Stoel Rives, Sacramento, CA. Submitted to California Energy Commission, Sacramento. Docket Unit No. 12-AFC-02. TN 201437.

Galvin 2012—Galvin Preservation Associates. *City of Huntington Beach Historic Context & Survey Report*. Draft. December.

PRELIMINARY STAFF ASSESSMENT – PART A
SUPPLEMENTAL FOCUSED ANALYSIS
LAND USE

Steven Kerr

INTRODUCTION

Staff received written comments from the applicant on the Land Use section of the HBEP Preliminary Staff Assessment (PSA), Part A published on October 10, 2013. This supplemental analysis presents the comments received from the applicant, the issues discussed at the November 20, 2013 PSA workshop, and the applicant's proposed revisions to staff's proposed conditions of certification.

ISSUES AND RESOLUTION

CONDITION OF CERTIFICATION LAND-1

The applicant has proposed a modification to the land use Condition of Certification **LAND-1** as shown below; staff agrees with this modification. New text is shown as **bold** and **underlined**. Deleted text is shown as ~~strikethrough~~.

LAND-1 The project owner shall comply with **Appendix B(g)(3)(c) of the Siting Regulations by ensuring the project, excluding linears and temporary laydown or staging area, will be located on a single legal parcel.** ~~the Subdivision Map Act (Pub. Resources Code §§ 66410-66499.58) by adhering to the provisions of Title 25, Subdivisions, city of Huntington Beach Zoning and Subdivision Ordinance to ensure legality of parcels.~~

Verification: At least 30 days prior to construction of the first power block, the project owner shall submit evidence to the compliance project manager (CPM), indicating approval of a Lot Line Adjustment by the city of Huntington Beach, establishing a single parcel for the 28.6 acre HBEP site. The submittal to the CPM shall include evidence of compliance with all conditions and requirements associated with the approval of the Lot Line Adjustment by the city.

COASTAL ACCESS AND COASTAL ACT CONSISTENCY

The applicant provided comments to clarify the potential role of the California Coastal Commission in this AFC proceeding. Staff will proceed with the preparation of the Final Staff Assessment (FSA) and evaluation of the project's consistency with the Coastal Act, taking into account the applicant's responses to the Coastal Commission letters and any further comments that may be provided by the Coastal Commission. Staff is aware that the Coastal Commission's participation in an AFC proceeding is at their discretion, and thus staff is prepared to make its final determination of consistency with the Coastal Act and the local coastal plan if no additional comments are received from the Coastal Commission.

VARIANCE FOR HEIGHT LIMITS

The applicant commented that staff's preliminary conclusion that the findings required for a variance from the height limits cannot be made is premature. As the applicant is engaged in ongoing discussions with city staff and management regarding land use compatibility, including visual issues and height limits, staff will continue its analysis based on the information included in the record and additional information that may be added to the record in relation to the findings required for a variance. Prior to making final conclusions in the FSA, staff will continue to consult with city staff in developing language to address the findings required for a height variance.

Additionally, once the preliminary staff assessments for Air Quality and Public Health are made available, Land Use staff will continue to coordinate with Air Quality and Public Health staff to ensure consistency in conclusions related to Land Use compatibility throughout the FSA.

LAND USE RELATED VISUAL ISSUES

The applicant commented that staff's land use determination and findings should take into account the findings of the Applicant's Visual Resources response to the PSA. The applicant and the city have engaged in ongoing discussions regarding appropriate visual screening and enhancements. Upon receipt of the city's recommendations regarding visual enhancements, Land Use staff will continue to coordinate with Visual Resources staff to develop conclusions regarding land use related visual issues for the FSA.

REFERENCES

HBEP 2013mm – Stoel Rives LLP / Melissa A. Foster (tn 201142). *Applicant's Comments on PSA, Part A, dated 11/04/13.* Submitted to CEC/Dockets on 11/04/2013.

PRELIMINARY STAFF ASSESSMENT – PART A
SUPPLEMENTAL FOCUSED ANALYSIS
NOISE AND VIBRATION

Edward Brady and Shahab Khoshmashrab

INTRODUCTION

Staff received written comments from the applicant on the Noise and Vibration section of the HBEP Preliminary Staff Assessment (PSA) Part A published on October 10, 2013 (HBEP 2013m). This supplemental focused analysis presents staff's resolution to outstanding items identified in the PSA Part A and revisions to staff's proposed conditions of certification in consideration of comments received from the applicant and the issues discussed at the November 20, 2013 PSA workshop.

If built and operated in conformance with the proposed conditions of certification, HBEP would comply with all applicable noise and vibration LORS and would not create significant adverse impacts related to noise and vibration.

ANALYSIS

To establish the baseline for the existing ambient noise levels at the project's noise-sensitive receptors identified in the PSA at monitoring locations M2, M3, and M4, staff used the average noise levels from the two noise surveys provided to staff: the 2011 survey in the AFC (HBEP 2012a, § 5.7) and the 2012 survey in the applicant's responses to Jason Pyle's data requests (HBEP 2012u). The resulting levels were 55 dBA L_{eq} at M2, 40 dBA L_{90} at M3, and 41 dBA L_{90} at M4. The 2011 survey did not include the operation of the existing Huntington Beach Generating Station (HBGS), while the 2012 survey did. At the workshop, the applicant stated that the 2012 survey should have been the only survey used because it includes operation of HBGS. The definition of existing baseline used by the Energy Commission staff on past projects has been one that includes existing facilities. For example, staff's nitrogen deposition analysis assumes that emissions of existing facilities are captured by the background values given that the model assumes these facilities were in operation when the background values were computed. Therefore, because the 2012 survey includes the HBGS's operational noise levels and the 2011 survey does not, and in order to be consistent with staff's approach on past projects, staff concludes that the 2012 survey is the appropriate survey to be used for evaluating the HBEP's operational noise impacts at M2, M3, and M4.

When using the 2012 survey, the ambient noise levels are 62 dBA L_{eq} at M2, 41 dBA L_{90} at M3, and 46 dBA L_{90} at M4 (HBEP 2012u). The proposed project's expected operational noise level of 61 dBA at M2 is below the existing baseline at this location. The lowest threshold required by the City of Huntington Beach Noise Ordinance (the applicable LORS[1] limit) is 50 dBA or the existing ambient if the existing ambient is above 50 dBA (CEC 2013a, PSA p. 4.6-14). The project's expected operational noise level of 61 dBA at M2 is below the existing ambient level of 62 dBA and thus it complies

[1] Laws, Ordinances, Regulations, and Standards

with the LORS. The project's expected level of 45 dBA at M3 is only 4 dBA above the existing ambient of 41 dBA L_{90} at this location and it is within the Energy Commission's 5 dBA threshold of significance for nighttime at residential receptors. Similarly, the project's expected level of 49 dBA at M4 is only 3 dBA above the existing ambient of 46 dBA L_{90} at this location and it is within the Energy Commission's 5 dBA threshold of significance for nighttime at residential receptors. These levels are also below the LORS threshold of 50 dBA. Therefore, the project would comply with the applicable LORS and would create a less-than-significant impact at its noise-sensitive receptors. Staff has revised Condition of Certification **NOISE-4** to reflect the changes in the project's allowable limits at M2, M3, and M4.

As required by Condition of Certification **NOISE-4**, when the project becomes operational, a noise survey would be conducted to ensure that the project would not exceed the above noise limits. The applicant requests that this survey be performed at less than 90 percent of its rated capacity in order to provide scheduling flexibility (HBEP 2013m, pp. 22-35). Staff believes that maximum project noise levels can still be captured at slightly lower capacity ratings than 90 percent. Staff believes a level of 85 percent for the nighttime measurements of 10 p.m. to 7 a.m. and a level of 80 percent for the daytime measurements of 7 a.m. and 10 p.m. would capture the necessary noise levels needed to meet the noise level limits in **NOISE-4**. A capacity rating of 85 percent at night would ensure that the project meets the worst case scenario, when the quietest hours of the nighttime are compared to the project's maximum noise levels. Any differences between the noise levels captured with the 80 percent rating vs. the 90 percent or 100 percent ratings would not be meaningful in terms of the sound levels ultimately heard by a listener at distances similar to those between M2, M3, and M4 and the project's power block. Staff has revised **NOISE-4** to reflect these above changes.

The applicant requests that **NOISE-6** be revised to allow construction to occur outside of the hours specified in **NOISE-6** with the compliance project manager's approval (HBEP 2013m, pp. 22-35). Staff agrees with this only for limited activities that would not cause excessive noise (as defined in **NOISE-6**); staff has revised this condition of certification accordingly.

The PSA includes Condition of Certification **NOISE-8**, which requires a "practice in care" policy in the HBEP employee safety training program (CEC 2013a, PSA p. 4.6-11). The "practice in care" policy would require construction workers to avoid unnecessary blowing of car horns, revving engines, loud radios, tailgate meetings or any loud noise that would affect residents in the project area. In its PSA comments, the applicant requests to delete **NOISE-8** because it is not proposed to reduce construction impacts to below a significance level (HBEP 2013m, pp. 22-35). In fact, staff did not propose **NOISE-8** as the result of concluding that workers' activities would result in a significant impact; we proposed it merely as a precautionary step. Thus, staff has deleted **NOISE-8**. However, staff encourages the applicant to consider the "practice in care" policy and to alert the workers to be mindful of their activities when arriving and leaving the workers' parking areas.

The applicant presents a list of methods for reducing noise generated by pile driving. These methods are: (1) the use of pads or impact cushions of plywood; (2) dampened

driving, which involves some form of blanket or enclosure around the hammer; and (3) the use of vibratory drivers (HBEP 2013m, pp. 22-35). These methods are similar to those described in the PSA (CEC 2013a, PSA p. 4.6-10). The applicant requests staff to revise Condition of Certification **NOISE-9** related to pile driving management to provide flexibility on the specific methods to be used. Staff believes the revised version of **NOISE-9** as provided below would address the applicant's concern while still ensuring effective management of pile driving noise.

In its PSA comments, the applicant also requests other revisions to the Noise and Vibration conditions of certification that are of minor nature (HBEP 2013m, pp. 22-35). Staff agrees with these revisions and has incorporated them in the conditions of certification below. Staff, however, disagrees with two of the applicant's requested revisions; they are discussed below.

The applicant requests that the City of Huntington Beach's requirement to prohibit construction on Sundays and Federal holidays be deleted from Condition of Certification **NOISE-6** (HBEP 2013m, pp. 22-35). Staff disagrees with this as it would violate the city's noise ordinance.

In its PSA comments also, the applicant requests to lengthen the period of time during which steam blow would be allowed to between 7 a.m. and 8 p.m. (similar to construction noise requirements) instead of 8 a.m. to 5 p.m. as required by Condition of Certification **NOISE-7**. Staff does not agree with this request because the high pitch nature of steam blow noise has a higher potential to cause community reaction than general construction activities. Thus, **NOISE-7** remains unchanged.

CONCLUSIONS

If built and operated in conformance with the proposed conditions of certification HBEP would comply with all applicable noise and vibration LORS and would not create significant adverse impacts related to noise and vibration.

Following are the revised conditions of certification since the publication of PSA Part A and do not include those conditions of certification that have remained unchanged. The added text is identified as **bold** and underlined, and the deleted text is identified as ~~strikethrough~~.

REVISED PROPOSED CONDITIONS OF CERTIFICATION

PUBLIC NOTIFICATION PROCESS

NOISE-1 ~~At least 15 days~~ ~~prior~~ **Prior** to the start of ground disturbance, the project owner shall notify all residents within one mile of the project site and one-half mile of the linear facilities, by mail or by other effective means, of the commencement of project construction. At the same time, the project owner shall establish a telephone number for use by the public to report any undesirable noise conditions associated with the construction and operation of the project. If the telephone is not staffed 24 hours a day, the project owner shall include an automatic answering feature, with date and time stamp

recording, to answer calls when the phone is unattended. This **or a similarly effective** telephone number shall be posted at the project site during construction where it is visible to passersby. This telephone number shall be maintained until the project has been operational for at least one year.

Verification: **At least 15 days prior** ~~Prior~~ to ground disturbance, the project owner shall transmit to the compliance project manager (CPM) a statement, signed by the project owner's project manager, stating that the above notification has been performed, and describing the method of that notification. This communication shall also verify that the telephone number has been established and posted at the site, and shall provide that telephone number.

NOISE COMPLAINT PROCESS

NOISE-2 Throughout the construction and operation of the project, the project owner shall document, investigate, evaluate, and attempt to resolve all **legitimate** project-related noise complaints[2]. The project owner or authorized agent shall:

- use the Noise Complaint Resolution Form (below), or a functionally equivalent procedure acceptable to the CPM, to document and respond to each **project-related** noise complaint;
- attempt to contact the person(s) making the noise complaint within 24 hours;
- conduct an investigation to determine the source of noise in the complaint;
- if the noise is project related, take all feasible measures to reduce the source of the noise; and
- submit a report documenting the complaint and actions taken. The report shall include: a complaint summary, including the final results of noise reduction efforts and, if obtainable, a signed statement by the complainant that states that the noise problem has been resolved to the complainant's satisfaction.

Verification: Within five days of receiving a noise complaint, the project owner shall file a Noise Complaint Resolution Form, shown below, with ~~both the local jurisdiction and~~ the CPM, that documents the resolution of the complaint. If mitigation is required to resolve the complaint, and the complaint is not resolved within a three **business**-day period, the project owner shall submit an updated Noise Complaint Resolution Form when the mitigation is ~~performed and complete~~ **implemented**.

NOISE RESTRICTIONS

NOISE-4 The project design and implementation shall include appropriate noise mitigation measures adequate to ensure that the operation of the project will not cause the noise levels due to **normal steady-state** plant operation alone, ~~during the hours of 10:00 p.m. to 7:00 a.m., to exceed an average of 55 dBA~~

[2] **A legitimate project-related noise complaint, or a legitimate complaint, refers to a complaint about noise that is caused by the HBEP project as opposed to another source (as verified by the CPM). A legitimate complaint constitutes a violation by the project of any noise condition of certification (as confirmed by the CPM), which is documented by an individual or entity affected by such noise.**

~~L_{eq}, and during the hours of 7:00 a.m. and 10:00 p.m.,~~ to exceed an **hourly average of 61 dBA** ~~average 57 dBA L_{eq}~~ measured at or near monitoring location M2.

Also, the project design and implementation shall include appropriate noise mitigation measures adequate to ensure that the operation of the project will not cause the noise levels due to plant operation alone, during the four quietest consecutive hours of the nighttime, to exceed an average of ~~44~~**45** dBA L_{90} measured at or near monitoring location M3 and an average of ~~45~~**49** dBA L_{90} measured at or near monitoring location M4.

No new pure-tone components **(as defined in Noise Table A1)** shall be caused by the project. No single piece of equipment shall be allowed to stand out as a source of noise that draws legitimate complaints.

When the project first achieves a sustained output of ~~90~~**85** percent or greater of its rated capacity, the project owner shall conduct a 25-hour community noise survey at monitoring locations M2, M3 and M4, or at a closer location acceptable to the CPM. This survey shall also include measurement of one-third octave band sound pressure levels to ensure that no new pure-tone noise components have been caused by the project.

The measurement of power plant noise for the purposes of demonstrating compliance with this condition of certification may alternatively be made at a location, acceptable to the CPM, closer to the plant (e.g., 400 feet from the plant boundary) and this measured level then mathematically extrapolated to determine the plant noise contribution at the affected residence. The character of the plant noise shall be evaluated at the affected receptor locations to determine the presence of pure tones or other dominant sources of plant noise.

If the results from the noise survey indicate that the power plant noise at the affected receptor sites exceed the above values, mitigation measures shall be implemented to reduce noise to a level of compliance with these limits.
If the results from the noise survey indicate that pure tones are present, mitigation measures shall be implemented to ~~eliminate~~ **reduce** the pure tones **to a level that complies with Noise Table A1, below**.

Verification: The above noise survey shall be conducted in two parts. Part one shall take place within 90 days of Power Block 1 (PB-1) first achieving a sustained output of ~~90~~**85** percent or greater of its rated capacity. Part 2 of this survey shall be performed within 90 days of Power Block 2 (PB-2) first achieving ~~90~~**85** percent or greater of its rated capacity and shall include the combined operation of PB-1 and PB-2 at ~~90~~**85** percent or greater of the overall plant rated capacity **with all turbine generators operating**. **The exception to the above is that for the daytime portions of the survey only (between 7:00 a.m. and 10:00 p.m.) the above rated capacity can be 80 percent or higher rather than 85 percent or higher.**

Within 15 days after completing each part, the project owner shall submit a summary report to the CPM. Included in the survey report shall be a description of any additional mitigation measures necessary to achieve compliance with the above listed noise limits, and a schedule, subject to CPM approval, for implementing these measures. When

these measures are implemented and in place, the project owner shall repeat the noise survey.

Within 15 days of completion of the new survey, the project owner shall submit to the CPM a summary report of the new noise survey, performed as described above and showing compliance with this condition.

NOISE-6 Heavy equipment operation and noisy[3] construction work relating to any project features, including pile driving, shall be restricted to the times delineated below:

Mondays through Saturdays:	7:00 a.m. to 8:00 p.m.
Sundays and Federal Holidays:	Construction not allowed

Limited construction activities may be performed outside of the above hours, with CPM approval.

Haul trucks and other engine-powered equipment shall be equipped with adequate mufflers and other state-required noise attenuation devices. Haul trucks shall be operated in accordance with posted speed limits. Truck engine exhaust brake use (jake braking) shall be limited to emergencies.

~~Construction equipment generating excessive noise shall be updated or replaced. Temporary acoustic barriers shall be installed around stationary construction noise sources, if required to minimize construction noise. Reorient construction equipment, and relocate construction staging areas, when possible, to minimize the noise impact at nearest noise-sensitive receptors.~~

Verification: Prior to ground disturbance, the project owner shall transmit to the CPM a statement acknowledging that the above restrictions will be observed throughout the construction of the project.

In consultation with the CPM, construction equipment generating excessive noise[4] shall be updated or replaced if beneficial in reducing the noise and if feasible. In addition, temporary acoustic barriers shall be installed around stationary construction noise sources if beneficial in reducing the noise and if feasible. Reorient construction equipment, and relocate construction staging areas, when possible, to minimize the noise impact at nearest noise-sensitive receptors.

At least 15 days prior to working outside of the above hours, the project owner shall submit a statement to the CPM, specifying the time of night and the number of nights for which activities will occur, the approximate distance of activities to residential receptors, and the expected sound levels at these receptors, stating

[3] Noise that draws a legitimate complaint (for the definition of "legitimate complaint", see the footnote in Condition of Certification **NOISE-2**)

[4] Noise that draws a legitimate complaint (for the definition of "legitimate complaint", see the footnote in Condition of Certification **NOISE-2**)

that the activities will be performed in a manner to ensure excessive noise is prohibited as much as practicable.

~~**NOISE-8** The project owner shall reduce the noise impacts created by vehicular noise during the construction of HBEP by implementation of a "practice in care" policy as a part of the HBEP employee safety training program. This "practice in care" policy shall require avoiding unnecessary blowing of car horns, revving engines, loud radios, tailgate meetings or any loud noise caused by project workers that would affect residents in the adjacent mobile home park and the residential communities near the intersection of Newland and Hamilton north of the project site.~~

~~**Verification:** Prior to ground disturbance at the project site, the project owner shall transmit to the CPM a statement acknowledging that the above "practice in care" policy will be followed throughout the construction of the project.~~

PILE DRIVING MANAGEMENT

NOISE-9 The project owner shall perform pile driving **in a manner to reduce the potential for any legitimate noise complaints. The project owner shall notify the residents in the vicinity of pile driving prior to start of pile driving activities.** ~~using a quieter process than the traditional pile driving techniques to ensure that noise from this operation does not cause annoyance at monitoring locations M2, M3, and M4.~~

Verification: At least 15 days prior to first pile driving, the project owner shall submit to the CPM a description of the pile driving technique to be employed, including calculations showing its projected noise impacts at monitoring locations M2-M4.

At least 10 days prior to first production pile driving, the project owner shall notify the residents within 0.5 miles of the pile driving. In this notification, the project owner shall state that it will perform this activity in a manner to reduce the potential for any legitimate noise complaints, as much as practicable. The project owner shall submit a copy of this notification to the CPM prior to the start of pile driving.

REFERENCES

CEC 2013a – Huntington Beach Energy Project Preliminary Staff Assessment - Part A. Submitted to CEC/Dockets on October 10, 2013 (tn 200828).

HBEP 2012a – (tn 66003) Huntington Beach Energy Project, submitted by AES. Application for Certification, Volumes 1 & 2, dated June, 2012.

HBEP 2012u – Stoel Rives LLP / Melissa A. Foster (tn 68876). *Applicant's Responses to Intervenor Jason Pyle's Data Requests, Set 1 (#1-16), dated December 13, 2012.* Submitted to CEC/Dockets on December 13, 2012.

HBEP 2013m (tn 201142). Applicant's Comments on PSA Part A. Submitted to CEC/Dockets on November 7, 2013.

NOISE Table A1 (Excerpt from PSA NOISE APPENDIX A)
Definition of Some Technical Terms Related to Noise

Terms	Definitions
Decibel, dB	A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micropascals (20 micronewtons per square meter).
Frequency, Hz	The number of complete pressure fluctuations per second above and below atmospheric pressure.
A-Weighted Sound Level, dBA	The sound pressure level in decibels as measured on a Sound Level Meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise. All sound levels in this testimony are A-weighted.
L_{10}, L_{50}, & L_{90}	The A-weighted noise levels that are exceeded 10 percent, 50 percent, and 90 percent of the time, respectively, during the measurement period. L_{90} is generally taken as the background noise level.
Equivalent Noise Level, L_{eq}	The energy average A-weighted noise level during the Noise Level measurement period.
Community Noise Equivalent Level, CNEL	The average A-weighted noise level during a 24-hour day, obtained after addition of 4.8 decibels to levels in the evening from 7 p.m. to 10 p.m., and after addition of 10 decibels to sound levels in the night between 10 p.m. and 7 a.m.
Day-Night Level, L_{dn} or DNL	The Average A-weighted noise level during a 24-hour day, obtained after addition of 10 decibels to levels measured in the night between 10 p.m. and 7 a.m.
Ambient Noise Level	The composite of noise from all sources, near and far. The normal or existing level of environmental noise at a given location (often used for an existing or pre-project noise condition for comparison study).
Intrusive Noise	That noise that intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.
Pure Tone	A pure tone is defined by the Model Community Noise Control Ordinance as existing if the one-third octave band sound pressure level in the band with the tone exceeds the arithmetic average of the two contiguous bands by 5 decibels (dB) for center frequencies of 500 Hz and above, or by 8 dB for center frequencies between 160 Hz and 400 Hz, or by 15 dB for center frequencies less than or equal to 125 Hz.

Source: Guidelines for the Preparation and Content of Noise Elements of the General Plan, Model Community Noise Control Ordinance, California Department of Health Services 1976, 1977.

PRELIMINARY STAFF ASSESSMENT – PART A
SUPPLEMENTAL FOCUSED ANALYSIS
SOCIOECONOMICS

Lisa Worrall

INTRODUCTION

Staff received comments from the applicant on the Socioeconomics section of the HBEP Preliminary Staff Assessment (PSA) - Part A published on October 10, 2013. This supplemental analysis presents the comments received from the applicant, the issues discussed at the November 20, 2013 PSA workshop, and resolution to the issues.

ISSUES AND RESOLUTION

ISSUE

The applicant disagrees with the intent of Condition of Certification **SOCIO-2** and staff's calculations for police and park facilities fees pursuant to Chapters 17.75 and 17.76 of the Huntington Beach Municipal Code, which provide the basis for Condition of Certification **SOCIO-2** (HBEP 2013mm). The applicant contends that the assessable area for development impact fees estimated by staff in the PSA is incorrect and the fees would be assessed on the two proposed new buildings (New Building No. 33 and New Building No. 34). Upon guidance from the city, the fees estimated in the PSA were based on the footprint of the power blocks, HRSGs, cooling towers, and administration buildings (CEC 2013c). The applicant proposed two alternatives for the rate that are based on land use (e.g. commercial/office, industrial/manufacturing, etc.). Based on the applicant's comments, the applicant proposes the following revisions to the Verification of **SOCIO-2**.

Verification: **At least 90 days prior to the start of commercial operation, the project owner shall confer with the CEC's assigned Chief Building Official (CBO) for HBEP to calculate the applicable one-time development impact fee(s) as set forth in Chapter 17 of the City of Huntington Beach Municipal Code**. At least 30 days prior to commercial operation, the project owner shall provide to the Compliance Project Manager (CPM) proof of payment to the city of Huntington Beach of the required Development Impact Fee**(**s**)**.

RESOLUTION

Staff discussed the applicant's proposed revisions to **SOCIO-2** at the PSA workshop with the applicant and Ms. Jane James, Planning Manager with the city of Huntington Beach. Ms. James notified staff and the applicant that the city now considers the development impact fees would be assessed based on the gross square footage of buildings. Staff agreed to the applicant's revisions to **SOCIO-2** based on Ms. James' concurrence with the proposed revisions. The revisions to the verification of **SOCIO-2** would allow flexibility to resolve any differences or questions on fees.

REVISIONS TO PROPOSED CONDITIONS OF CERTIFICATION

SOCIO-2 The project owner shall pay the following one-time Development Impact Fees to the city of Huntington Beach as required by Chapter 17 of the Huntington Beach municipal code:

- Police Facilities Development Impact Fees
- Parkland Acquisition and Park Facilities Development Impact Fees

Verification: At least 90 days prior to the start of commercial operation, the project owner shall confer with the CEC's assigned Chief Building Official (CBO) for HBEP to calculate the applicable one-time Development Impact Fee(s) as set forth in Chapter 17 of the Huntington Beach Municipal Code. At least 30 days prior to commercial operation, the project owner shall provide to the compliance project manager (CPM) proof of payment to the city of Huntington Beach of the required Development Impact Fee**(**s**)**.

REFERENCES

CEC 2013c – California Energy Commission/ Lisa Worrall (tn 69423). Record of *Conversation with Aaron Klemm and Jane James with City of Huntington Beach Regarding Method and Rate of Calculating Applicable Development Impact Fees to the HBEP, dated, 02/01/2012.* Submitted to CEC/ Dockets Unit on 2/07/2013.

HBEP 2013mm – Stoel Rives LLP / Melissa A. Foster (tn 201142). *Applicant's Comments on PSA, Part A, dated 11/04/13.* Submitted to CEC/Dockets on 11/04/2013.

PRELIMINARY STAFF ASSESSMENT - PART A
SUPPLEMENTAL FOCUSED ANALYSIS
SOIL & WATER RESOURCES

Mike Conway, P.G.

ISSUES

I. SOIL & WATER RESOURCES: RECYCLED WATER

This supplemental focused analysis presents staff's resolution to outstanding items identified in the PSA Part A and revisions to staff's proposed conditions of certification in consideration of comments received from the applicant and the issues discussed at the November 20, 2013 PSA workshop. Due to time constraints for publishing this Supplemental Focused Analysis, staff's analysis of the use of recycled water by HBEP is not addressed in detail. Staff expects information to be provided by the applicant on HBEP's use of recycled water and will be part of the FSA. The information provided will not only be analyzed in the water resources section, but will be considered in all sections of the FSA.

Staff believes the applicant should be required to use recycled water for industrial purposes. California Water Code Section 13550 requires use of recycled water for industrial purposes when available and when the quality and quantity of the recycled water are suitable for the use, the cost is reasonable, the use is not detrimental to public health, and the use will not impact downstream users or biological resources.

The applicant provided detailed information in the *Applicant's Responses to Staff's Informal Data Requests* (HBEP 2013ii) about the availability of both secondary and tertiary treated recycled water through the Orange County Sanitation District's (OCSD) Plant 1 and 2. This response explains that Plants 1 and 2 are within one and two miles of the Huntington Beach Energy Project (HBEP), respectively. The response also explains that the OCSD Plants currently have recycled water available that could be delivered to the project. The response also describes the potential water pipeline routes from the OCSD plants and where and how treatment facilities could be constructed on the HBEP site.

Staff contacted the OCSD in October and December 2013 and spoke with Jim Colston, district's environmental compliance manager (TN: 201394). He reiterated what was described by the applicant. The district has sufficient quantities of unspoken-for recycled water available to meet the needs of the HBEP. Plant 2 has about 100 million gallons per day (MGD) of secondary treated, disinfected recycled water available, with total dissolved solids in the 1,500 to 2,000 mg/L range. Plant 1 may have tertiary treated water available in the future, but it will depend on whether current users exercise their future water use options. Recycled water from either Plant 1 or 2 would would be free to the project. Both of these recycled water streams are currently being discharged to the Pacific Ocean.

Staff believes California Water Code 13550, Energy Commission policy, and Water Board policy require the use of this water when feasible. The recycled water supply seems feasible based on the applicant's responses and information provided by the OCSD.

STAFF RECOMMENDATION

Based on availability of recycled water described by the applicant, staff suggests adding the following two conditions to the Soil and Water Resources section and revising the originally proposed **SOIL&WATER-7**.

SOIL&WATER-6: The project owner shall provide the CPM a copy of the executed and final recycled water purchase agreement (agreement) with the Orange County Sanitation District (OCSD) for the long-term supply (30-35 years) of recycled water to HBEP. The agreement shall specify a minimum delivery rate. The agreement shall specify all terms and costs for the delivery and use of recycled water by HBEP. The HBEP shall not connect to the recycled water pipeline without the final agreement in place and submitted to the CPM. The project owner shall comply with the requirements of Title 22 and Title 17 of the California Code of Regulations.

Verification: No later than 60 days prior to the delivery of recycled water, the project owner shall submit two copies of the final and executed recycled water purchase agreement for the supply and on-site use of recycled water at the HBEP. The project owner shall submit to the CPM a copy of the cross connection inspection and approval report from the local health department prior to the delivery of recycled water.

SOIL&WATER-7: The project owner shall use potable water supplied by the city of Huntington Beach (City) for potable and sanitary purposes only during construction and operation of the HBEP. Potable water shall not be used for any construction activity that is suitable for non-potable water use. All contracts for recycled water and the construction of the recycled water pipeline shall complete prior to construction. In the event of a recycled water delivery interruption, potable water may be used as an emergency back-up supply for plant operation.

The project owner shall provide the CPM with a copy of an executed and final Potable Water Supply Agreement (agreement) for the long-term supply (30–35 years) of potable water. The agreement shall specify a minimum delivery rate in order to meet the HBEP's operation requirements in the event of a recycled water interruption. The project owner shall not use more than 4-AFY of potable water as an emergency backup source for HBEP operation.

Verification: No later than 30 days prior to use of potable water, the project owner shall submit to the CPM two copies of the executed and final Potable Water Supply Agreement (agreement). The project owner shall submit to the CPM any water quality monitoring reports required by the City in the annual compliance report. The project owner shall notify the CPM of any violations of the agreement terms and conditions, the actions taken or planned to bring the project back into compliance with the agreement, and the date compliance was reestablished.

SOIL&WATER-~~7~~ 8 : Prior to the use of ~~a water source~~ recycled or potable water during commercial operation, the project owner shall install and maintain metering devices as part of the water supply and distribution system to monitor and record in gallons per day the total volume(s) of water supplied to the HBEP from the water source. Those metering devices shall be operational for the life of the project and must be able to record the volume from each source separately.

Verification: At least thirty (30) days prior to use of any water source for HBEP operation, the project owner shall submit to the CPM evidence that metering devices have been installed and are operational. The project owner shall provide a report on the servicing, testing, and calibration of the metering devices in the annual compliance report.

II. SOIL & WATER RESOURCES: WATER USE LIMIT

The Applicant objects to Energy Commission staff's Condition of Certification language for the original **SOIL&WATER-6**, which sets a limit on annual water use. The applicant provided the following comments:

- "Regarding Soil & Water Resources, Applicant is concerned with Staff placing a limit on potable water use at 115 acre-feet a year ("AFY") (PSA at p. 4.9-2.). The AFC indicated that 115 AFY would be the average annual use at the average maximum temperatures and assumes 6,665 hours of operations a year. Although the Applicant agrees that this is the typical water use, there will be variation on a year-to-year basis and it is not appropriate to consider this amount to be a "cap" on water use in every year given year-to-year variations (e.g. in average temperature conditions)."
- "Applicant also wants to clarify that for a portion of operation of HBEP, HBGS Units 1&2 will remain operational and could run concurrently with HBEP Block 1. Thus, SOIL&WATER-6 should indicate that the 115 AFY average annual water use applies only to the HBEP equipment and does not include the existing HBGS units."

Based on the comments above, the applicant recommended the following revisions to the original condition:

SOIL&WATER-6: Water supply for project operation and construction shall be potable water supplied by the Orange County Sanitation District. Water use for operation of new equipment constructed for the Huntington Beach Energy Project shall not exceed an average of 115 AFY, based on an assumed 30-year project life; water use for construction shall not exceed 22 AFY. A monthly summary of water use shall be submitted to the CPM.

STAFF RECOMMENDATION

Staff is suggesting that the applicant use recycled water for industrial purposes, so most of the applicant's comments would not apply to the newly suggested conditions of certification. The applicant previously proposed that 115 AFY of potable water would satisfy the average annual project needs. The applicant responded to the restriction of

115 AFY proposed in the original **SOIL&WATER-6**, saying this number represents average conditions and not the potential annual maximum.

Staff recalculated a maximum annual water use for the facility, assuming conservative worst case parameters. Staff assumed that the month of January through May, and November and December would use 94.2 gallons per minute (gpm), at 50-percent capacity (4,380 hours, the applicant's proposed upper end capacity factor), and assumed site monthly maximum average ambient temperature, was 85F (dry bulb), 69.7F (wet bulb) with 46-percent relative humidity. Staff assumed that for the months June through October the facility would operate under site peak summer ambient conditions, 110F (dry bulb) and 7-percent relative humidity and use 488.4 gpm, and operate at 50-percent capacity (4,380 hours). The total annual water use under this scenario equals 208 AFY. Staff is aware that the use of recycled water requires filtration and some losses, but staff believes the extra buffer built into the above calculations would provide sufficient margin.

Recycled water needs are not expected to exceed 208 AFY on an annual basis. The use of recycled water is encouraged, but there is significant local demand for recycled water that will increase in the future. Therefore staff believes the HBEP facility should only be allowed to use recycled water reasonably. Staff would be amenable to revising the not to exceed volume if the applicant can better demonstrate what operating scenario would represent a maximum use condition.

Staff also agrees with the applicant's suggestion to have the condition apply to only the new portions of the Huntington Beach facility.

Staff's recommends the following revisions to the original condition **SOIL&WATER-6**:

~~**SOIL&WATER-6**~~ **SOIL&WATER-9**: Water supply for project operation and construction shall be recycled water supplied by the Orange County Sanitation District. Water use for operation of new equipment constructed for the Huntington Beach Energy Project shall not exceed 208 AFY; water use for construction shall not exceed 22 AFY. A monthly summary of water use shall be submitted to the CPM.

III. SOIL & WATER RESOURCES: DEWATERING PERMIT REQUIREMENTS

The applicant commented that the language contained in **SOIL&WATER-3** is confusing and suggests that the condition be revised to accommodate any permit that could be required by the Santa Ana Regional Water Quality Control Water Board (RWQCB). For instance, dewatering from groundwater seepage may or may not be required during construction. Also, the quality of the water that would be pumped is somewhat unknown. The RWQCB has a number of permits that could apply depending on the quality of the discharge water and where it would be discharged.

STAFF RECOMMENDATION

Staff recommends accepting the applicant's suggestion to modify the condition language to make it clearer. Below is staff's revised condition.

~~**SOIL&WATER-3**: Prior to initiation of groundwater dewatering discharge, the project owner shall apply for coverage under Order No. R8-2007-0008, NPDES No. CAG918001 for the discharge of general groundwater cleanup wastes. Coverage under Order No. R8-20070008, NPDES No. CAG918001 may not be necessary if water quality tests reveal that local groundwater contamination does not exist. The project owner shall provide a copy of all permit documentation sent to the Santa Ana Regional Water Quality Control Board or State Water Quality Control Board to the CPM and notify the CPM in writing of any reported non-compliance.~~

~~**Verification**: Prior to construction mobilization, the project owner shall submit to the CPM documentation that all necessary NPDES permits were obtained from the Santa Ana Regional Water Quality Control Board or State Water Quality Control Board. Sixty Thirty (630) days prior to construction mobilization HBEP operation, the project owner shall submit to the CPM a copy of the relevant plans and permits received. The project owner shall submit to the CPM all copies of any relevant correspondence between the project owner and the Board regarding NPDES permits in the annual compliance report.~~

SOIL&WATER-5: Discharge of dewatering water shall comply with the Santa Ana Regional Water Quality Control Board (RWQCB) and State Water Resources Control Board regulatory requirements. The project owner shall submit a Report of Waste Discharge (RWD) to the compliance project manager (CPM) and RWQCB for determination of which regulatory waiver or permit applies to the proposed discharges. The project owner shall pay all necessary fees for filing and review of the RWD and all other related fees. Checks for such fees shall be submitted to the RWQCB and shall be payable to the State Water Resources Control Board. The project owner shall ensure compliance with the provisions of the waiver or permit applicable to the discharge. Where the regulatory requirements are not applied pursuant to a National Pollutant Discharge Elimination System permit, it is the Commission's intent that the requirements of the applicable waiver or permit be enforceable by both the Commission and the RWQCB. In furtherance of that objective, the Commission hereby delegates the enforcement of the waiver or permit requirements, and associated monitoring, inspection, and annual fee collection authority, to the RWQCB. Accordingly, the Commission and the RWQCB shall confer with each other and coordinate, as needed, in the enforcement of the requirements.

Verification: Prior to any dewatering water discharge, the project owner shall submit a RWD to the RWQCB to obtain the appropriate waiver or permit. The appropriate waiver or permit must be obtained at least 30 days prior to the discharge.
The project owner shall submit a copy of any correspondence between the project owner and the RWQCB regarding the waiver or permit and all related reports to the CPM within 10 days of correspondence receipt or submittal.

REFERENCES

HBEP 2013ii – Stoel Rives LLP / Kim Hellwig (tn 200675). *Applicant's Responses to Staff's Informal Data Requests (Water Resources/Alternatives), dated 09/30/13.* Submitted to CEC/Dockets on 09/30/2013.

TN: 201394 - Record of Conversation on 12-9-2013, Re: Orange County Sanitation District's Recycled Water Availability for HBEP.

PRELIMINARY STAFF ASSESSMENT – PART A
SUPPLEMENTAL FOCUSED ANALYSIS
TRAFFIC AND TRANSPORTATION

Jonathan Fong

INTRODUCTION

Staff received written comments from the applicant on the Traffic and Transportation section of the HBEP Preliminary Staff Assessment (PSA), Part A published on October 15, 2013. This supplemental analysis presents the comments received from the applicant, the issues discussed at the November 20, 2013 PSA workshop, and the applicant's requested revisions to staff's proposed Conditions of Certification.

ISSUES AND RESOLUTION

ISSUE

The applicant has requested language be added to the verification of proposed Condition of Certification **TRANS-4** (HBEP2013mm). The condition requires the applicant to obtain permits from affected jurisdictions for any encroachment into public rights of way. The requested modification clarifies that the condition is triggered by ground disturbance within a public roadway, easement or right-of-way and not on-site project construction ground disturbance.

The applicant has provided two comments on the Preliminary Staff Assessment (PSA). These comments are minor in nature and do not affect the proposed conditions of certification or staff's analysis.

RESOLUTION

Staff agrees with the proposed clarification to the verification of **TRANS-4**. The applicant's minor comments on the PSA will be addressed in the Traffic and Transportation Final Staff Assessment (FSA).

REVISIONS TO PROPOSED CONDITIONS OF CERTIFICATION

TRANS-4 Encroachment into Public Rights-of-Way

Prior to any ground disturbance, improvements, or obstruction of traffic within any public road, easement, or right-of-way, the project owner or its contractor(s) shall coordinate with all relevant jurisdictions, including the city of Huntington Beach, Orange County and Caltrans, to obtain all required encroachment permits and comply with all applicable regulations.

Verification: At least 10 days prior to ground disturbance **in or along any public road, easement, or right-of-way** or interruption of traffic in or along any public road, easement, or right-of-way, the project owner shall provide copies of all permit(s), relevant to the affected location(s), received from Caltrans or any other affected jurisdiction/s to the CPM. In addition, the project owner shall retain copies of the

issued/approved permit(s) and supporting documentation in its compliance file for a minimum of 6 months after the start of commercial operation.

REFERENCES

HBEP 2013mm – Stoel Rives LLP / Melissa A. Foster (tn 201142). *Applicant's Comments on PSA, Part A, dated 11/04/13.* Submitted to CEC/Dockets on 11/04/2013.

PRELIMINARY STAFF ASSESSMENT – PART A
SUPPLEMENTAL FOCUSED ANALYSIS
VISUAL RESOURCES

Jeanine Hinde

ISSUES IDENTIFIED IN THE PRELIMINARY STAFF ASSESSMENT

The analysis of visual resources for the proposed Huntington Beach Energy Project (HBEP) was published with Part A of the preliminary staff assessment (PSA) in early October, 2013. Energy Commission staff (staff) evaluated seven critical off-site viewpoints, or key observation points (KOPs), which were selected to represent primary viewer groups and sensitive viewing locations in a defined area surrounding the project site where visual impacts could occur. Of the seven KOPs, staff identified significant visual resources impacts at KOP 4 and KOP 5. These two KOPs represent views of the project site from Magnolia Street near the Pacific Coast Highway (PCH) and Newland Street at the entrance to the Huntington By-The-Sea Mobile Estates and RV Park, respectively. Visual impacts for the remaining five KOPs are considered less than significant.

The project site is in the state's Coastal Zone, and Section 30251 of the California Coastal Act of 1976 (Coastal Act) requires that the scenic and visual qualities of coastal areas be considered and protected as resources of public importance. Permitted development must be sited and designed to restore and enhance visual quality in visually degraded areas where feasible. Although staff was advised that the applicant and the City of Huntington Beach (City) were investigating visual screening concepts for the HBEP, as of publication of the PSA, the applicant had not proposed any specific measures to restore and enhance visual quality at the project site. Without a visual screening and enhancement plan to include in the PSA, staff had insufficient information to assess consistency of the proposed project with many laws, ordinances, regulations, and standards (LORS) requiring visual enhancement and screening of development in the Coastal Zone. Additionally, given the significant visual resources impacts at KOP 4 and KOP 5 as identified by staff, a conceptual visual screening plan would also have been necessary to determine the extent to which such a plan may mitigate those impacts.

Staff concluded that the potential effects of the long-term schedule for the demolition of existing power plant structures and construction of the proposed HBEP would substantially degrade the existing visual character and quality of the site and its surroundings. Staff proposed Condition of Certification **VIS-1** requiring preparation and implementation of a Construction Screening and Site Restoration Plan to reduce this impact to less than significant.

Staff concluded that project lighting could adversely affect daytime and nighttime views in the project area and that potential glint and glare impacts would be significant. Conditions of Certification **VIS-2**, **VIS-3**, and **VIS-4** were proposed to reduce the effects of lighting on visual resources to less than significant.

APPLICANT'S CONCEPTUAL VISUAL ENHANCEMENT PROPOSALS

On October 21, 2013 (more than 1 week after publication of Part A of the PSA), the Huntington Beach City Council held a study session that included presentation of an AES visual enhancement plan that included color and conceptual design treatment options (TN #201046). The applicant's presentation included a summary of comments from the City's Design Review Board that stated a preference for the design that combined an architectural mesh screen with three oversized, brightly-colored surfboards angled in front of the proposed HBEP Power Block 2. The Design Review Board's comments included a request to enhance the architectural mesh screen design to incorporate curve or wave shapes into the screen structures.

ISSUES RAISED BY THE APPLICANT AND STAFF'S RESPONSES

APPLICANT COMMENT

The applicant submitted extensive comments on the **Visual Resources** section of the PSA Part A on November 7 (TN #201142). In those comments, the applicant states:

> *Of particular concern is Staff's analysis in the PSA does not sufficiently acknowledge the physical reality of the existing two large, 1950s-era electrical generation power blocks, with their massive, 214-foot-tall stacks and their 140-foot-high, 300-foot-wide boiler structures that have a highly industrialized appearance because of the dense webs of support scaffolding, stairways, pipes, tanks, and equipment that cover their exteriors. The PSA fails to give sufficient weight to the fact that because the Project will replace the massive and industrial appearing structures on the site with modern power generation facilities that are substantially shorter and less massive than those that are now on the site…the overall visual effect of the Project will be to create a substantial visual improvement and enhancement.*

The applicant further states that "the positive visual change of the Project meets and achieves the 'visual enhancement' requirements of the City."

STAFF RESPONSE

Staff fully addressed and considered existing visual resource conditions at the project site and the surrounding area. The impact discussions under CEQA for critical KOPs 1, 4, and 5 include staff's analyses comparing existing and proposed conditions with details justifying the conclusions. These pages of the PSA characterize existing visual resources conditions and describe impacts for KOPs 1, 4, and 5 (TN #200828):

- 4.12-4 and 5
- 4.12-8 and 9
- 4.12-12 to 15
- 4.12-19 and 20
- 4.12-21 to 23

Of the seven KOPs evaluated by staff, significant impacts on visual resources are identified only at KOPs 4 and 5.

The applicant's statement that "the positive visual change of the Project meets and achieves the 'visual enhancement' requirements of the City" is made irrespective of any plan to visually screen the power plant site or facilities. While staff is aware that the City is interested in conceptual visual enhancement treatments that have been proposed by the applicant, the necessity of those enhancements is founded in Section 30251 of the Coastal Act and the City's local coastal program. A visual treatment plan is being discussed between the City and the applicant, and if the City adopts a resolution approving the plan, it will be reviewed and considered by staff in the context of conformance with Section 30251.

APPLICANT COMMENT

In comments on the PSA Part A, the applicant states that it is premature for staff to reach conclusions for visual resources impacts at KOPs 4 and 5 without considering visual screening.

STAFF RESPONSE

Staff does not agree that the conclusions in the **Visual Resources** section of the PSA are premature. As of publication of Part A of the PSA, no measures had been proposed by the applicant to screen and enhance the project site. Staff submitted data requests to the applicant in December 2012 and January 2013 with discussions on the requirement for the proposed HBEP to include a proposal to restore and enhance visual quality at the power plant site. In its responses to both data requests, the applicant did not acknowledge the applicability of any of the LORS addressing visual screening and enhancement of the power plant site and denied staff's request for a conceptual plan (TNs #69704 and #69208). No visual screening plan was made available to staff prior to publication of the PSA Part A.

APPLICANT COMMENT

In comments on staff's analysis of KOP 4, the applicant states that staff's analysis is flawed for concluding that the new power plant structures would cause a moderate to high degree of view dominance from KOP 4. The applicant states that staff did not consider existing conditions at the site in analyzing the visual impact.

STAFF RESPONSE

Existing conditions for KOP 4 are fully discussed on pages 4.12-12 and 4.12-13 of Part A of the PSA. As described on pages 4.12-21 and 4.12-22 of staff's analysis, Power Block 1 would be constructed at the furthest northeast corner of the project site adjacent to Magnolia Marsh, effectively changing the location and massing of very large power plant structures at the site. The three new visually prominent heat recovery steam generators, stacks, and the air cooled condenser (ACC) unit (92- to 120-feet-tall) would replace one of the relatively low profile decommissioned fuel oil tanks (40 feet tall) on

this portion of the site. Staff concludes that construction and operation of the HBEP has, at least, the potential to cause a significant impact for views at or near KOP 4.

APPLICANT COMMENT

In comments on staff's analysis of KOP 5, the applicant states that "although the new Power Block 2 and its ACC unit will be prominently visible in this view, the change to the view will not represent a 'substantial degradation' of the view's existing character and quality and thus will not result in a significant visual impact." The applicant states that construction of new, sleekly designed power plant structures with an "attractive appearance" would improve visual quality and that "there is no basis for concluding that the visual quality of this view be no lower than it is at present." The applicant comments that staff's analysis did not clearly reflect the applicant's landscape plans.

STAFF RESPONSE

The applicant's comments do not fully consider staff's analysis for KOP 5. Staff concludes that overall visual sensitivity for KOP 5 is *moderate to high*. The overall visual change is also *moderate to high*. As described on page 4.12-8 of staff's PSA, these ratings are combined to determine the visual impact for this KOP, which is considered significant. Staff's analysis of the visual impact at KOP 5 is on pages 4.12-22 and 4.12-23 of the PSA. Because the applicant's proposed landscape plan was submitted 4 weeks after publication of Part A of the PSA, no analysis of the plan by staff was possible.

As shown in Figure 12b of the **Visual Resources** section of the PSA, the proposed HBEP would increase the mass and visual prominence of power plant structures at KOP 5 and other nearby viewpoints. The power plant structures have a definite industrial appearance, and staff does not consider these structures to be attractive.

APPLICANT COMMENT

In comments on the PSA Part A, the applicant states that references to residential views should be removed from the discussion of project impacts on views from KOP 4.

STAFF RESPONSE

Staff agrees that references to views from residences should be omitted from the impact discussion for KOP 4 and proposes changing the first sentence in the paragraph in the middle of page 4.12-22 to remove the phrase referring to the residential area east of Magnolia Street and north of the Huntington Beach Channel, as follows:

> Compared to existing conditions, the new power plant structures would cause a moderate to high degree of view dominance from KOP 4 and other nearby viewpoints, including the ~~residential area east of Magnolia Street and north of the Huntington Beach Channel, the~~ PCH near Magnolia Street~~,~~ and the observation deck and interpretive trail in Magnolia Marsh.

APPLICANT COMMENT

The applicant disagrees with staff's conclusion that the proposed HBEP's operational lighting would create a significant visual impact.

STAFF RESPONSE

In the applicant's discussion of lighting on page 5.13-15 of the application for certification (AFC) (TN #66003), it states: "To reduce off-site lighting impacts, lighting for [the] HBEP [would] be restricted to areas required for safety and operation." The text that follows on page 5.13-15 of the AFC describes measures that would be taken to reduce the project's lighting impacts. Similarly, staff identifies potentially significant impacts for long-term construction lighting and project operations lighting. Staff proposes Conditions of Certification **VIS-2**, **VIS-3**, and **VIS-4** to reduce potential lighting impacts to less than significant. These conditions are not opposed by the applicant.

APPLICANT COMMENT

The applicant identifies Goal LU 14 and Objective LU 14.1 from **VR Table 2** of Part A of the PSA as being irrelevant to the proposed HBEP (page 4.12-36 of Part A of the PSA). The applicant requests a critical review of the table and removal of items that are not directly relevant to the HBEP.

STAFF RESPONSE

Staff agrees that Goal LU 14 and the related objective do not apply to the proposed HBEP. Staff proposes deleting them from **VR Table 2** addressing project consistency with applicable visual resources LORS, as follows:

~~Goal LU 14 – Preserve the City's open spaces~~

- ~~Objective LU 14.1 Preserve and acquire open spaces for the City's existing and future residents that provide, maintain, and protect significant environmental resources, recreational opportunities, and visual relief from development.~~

The same text deletion will be made to **VR Appendix-3**, which includes the full text of applicable visual resources LORS.

Staff re-reviewed the LORS table and did not identify other items that did not bear some applicability to the proposed HBEP.

PSA PUBLIC WORKSHOP

Staff attended the public workshop on the PSA on November 20, 2013, to exchange comments and respond to questions on the visual resources analysis. Comments and questions on visual resources were presented by the project applicant and the City of Huntington Beach.

The applicant's comments at the workshop were generally consistent with the written comments submitted on the PSA Part A. Staff stated that an in-depth discussion of the visual analysis in the PSA would not be especially productive given that the applicant

and the City of Huntington Beach had begun work on a visual screening plan intended to achieve compliance with applicable visual resources LORS. The applicant's visual treatment concepts are shown in figures attached to the November 7 written comments on the PSA. At the workshop, staff explained that the visual analysis for the proposed project would be updated in the final staff assessment (FSA) to include an evaluation of the visual screening and enhancement plan that may be further refined prior to its presentation for a vote before the City Council in early 2014.

At the workshop, staff referred to the figure showing the simulated view with visual treatment for KOP 5 (Figure PSA Response VR-4, TN #201142) and commented on the need for visual screening of the ACC unit next to the HBEP Power Block 2. Staff asked the applicant these questions about visual screening for KOP 5:

- Would it be feasible to change the site arrangement to rotate the ACC units at both power blocks 180º so that the large, exterior vertical pipes on the units would face into the project site rather than outside toward public use areas?
- Would it be possible to incorporate the mesh architectural screen on the exterior areas of the ACC units between the vertical pipes?
- Would it be possible to substitute shorter ACC units (approximately 25 feet tall) similar to the units that had been installed at the El Segundo Power Plant?

Stephen O'Kane of AES Southland replied that reconfiguring the proposed site plan to rotate the ACC units would also require moving the steam turbine generators, and that such a change in the site plan would not be possible. Mr. O'Kane stated that adding structures to the ACC units would affect their performance, although following further questioning on the subject, he commented that something could possibly be done to decorate the outsides of the ACC units.

Mr. O'Kane also responded that site space constraints would make installation of ACC units that are shorter vertically but much longer horizontally infeasible at the project site.

Staff remains concerned about the need to include the ACC units in the visual screening plan for the HBEP, and in particular, the ACC unit for Power Block 2. The summary of comments on the applicant's screening plan from the City's Design Review Board (TN #201046) included a comment that paint treatment only was acceptable for the ACC units. However, the applicant's presentation on October 21 at the City Council Study Session did not include any image or simulation from KOP 5; therefore, the City's representatives would not have seen the full impact of the proposed project from that viewpoint.

At the PSA workshop, Ms. Jane James, Planning Manager of the City of Huntington Beach Planning and Building Department, commented on the importance of visually screening the project site, and in particular, the need to screen power plant structures taller than 50 feet. Ms. James commented on the need for screening the views from Newland Street, the PCH, and Huntington State Beach. Ms. James specifically referred to screening the six proposed 120-foot-tall stacks.

PROPOSED REVISED CONDITIONS OF CERTIFICATION

On December 13, 2013, the applicant submitted follow-up comments to the PSA Part A public workshop, including proposed revised changes to Condition of Certification **VIS-1** (TN #201437). The applicant's earlier proposed revision to Condition of Certification **VIS-5** is included below.

Staff modified the proposed language for **VIS-1** for clarification. Also, the change to the height of the screening fencing requested by the City pertains only to the parking lot screen fencing and not to the screen fencing for the power plant site. As stated below, the temporary screen fencing for the power plant site shall be no less than 12 feet tall. Please refer to the City's comments on the PSA Part A (TN #201173).

Staff will recommend additional conditions of certification in the FSA addressing implementation of visual screening and landscape plans.

VIS-1 **Long-term Visual Screening and Site Restoration – Project Demolition, Construction, and Commissioning.** Prior to the start of site mobilization, the project owner shall prepare and implement a Construction Screening and Site Restoration Plan describing methods and materials that will be used **during each project phase** to screen project ~~construction and~~ parking areas **and views of the project site from areas where construction activities have the potential to be visible during a phase. The plan will include provisions to** restore areas where ground disturbance occurred during construction.

To minimize the visual impacts of project construction **during each project phase**, the project owner shall install and maintain construction screening fencing along the perimeter**s** of the project site ~~for all~~ areas ~~that could be visible~~ **where there could be views** from public use areas **of construction activities during a phase.**~~, including~~ **The Compliance Project Manager (CPM), in consultation with the visual resources staff and the City of Huntington Beach, shall decide where screening fencing is required during a project phase or phases. Depending on the location of on-site construction work, the areas requiring screening include** the **perimeter of the** wetland along the southeast site boundary, the west side **perimeter** of the project site on Newland Street, and the southwest ~~side~~ **perimeter** of the site along the Huntington Beach Wetlands Conservancy property adjacent to the Pacific Coast Highway (PCH). The screening fencing for the power plant site shall be no less than 12 feet tall. **Upon completing installation of the 8-foot-tall masonry wall along the southeast boundary by the wetland, the CPM shall allow the project owner to remove all construction screening fencing from that portion of the site.**

Screening fencing shall be installed to visually screen the open lots that will be used for parking on Newland Street across from the project site and along the PCH at Beach Boulevard. The screening fencing for the parking lots shall be no less than ~~8~~**6** feet tall **and shall meet the City of Huntington Beach corner lot visibility requirements specified in Title 23, Chapter 230, "Site**

Standards," of the Huntington Beach Municipal Code (i.e., 25-foot by 25-foot corner visibility triangle).

The Construction Screening and Site Restoration Plan shall provide images showing options for screening materials; examples shall include fencing materials in unobtrusive shades of green or brown as well as printed decorative designs. Possible options include knitted polyethylene material, bottom-locking fence slats with chain link fencing, pre-printed mesh fabric, or printable mesh vinyl. All screening fencing shall be well maintained and repaired or replaced as necessary for the duration of project demolition, construction, and commissioning.

When construction is finished, all evidence of construction activities shall be removed, including ground disturbance at staging and storage areas, and restored to its original or better condition. Any vegetation removed during construction shall be replaced in kind at a 1:1 ratio. The Construction Screening and Site Restoration Plan shall describe the methods and schedule for the restoration work to occur.

The Construction Screening and Site Restoration Plan shall be submitted to the ~~Compliance Project Manager (~~CPM~~)~~, the Energy Project Manager for the City of Huntington Beach, and the Executive Director of the Coastal Commission for simultaneous review and comment. Any comments on the plan from the City and the Coastal Commission shall be provided to the CPM. The project owner shall not purchase or order any materials for screening fencing until written approval of the final plan is received from the CPM. Modifications to the Construction Screening and Site Restoration Plan are prohibited without the CPM's approval.

Verification: At least 60 calendar days before the start of site mobilization, the project owner shall submit a Construction Screening and Site Restoration Plan to the CPM, the Energy Project Manager for the City of Huntington Beach, and the Executive Director of the Coastal Commission for simultaneous review and comment. The project owner shall provide the CPM with a copy of the transmittal letters submitted to the City and the Coastal Commission requesting those agencies' respective reviews of the Construction Screening and Site Restoration Plan.

If the CPM determines that the plan requires revision, the project owner shall provide a plan with the specified revision(s) for review and approval by the CPM. A copy of the revised plan shall be provided to the City's Energy Project Manager and the Executive Director of the Coastal Commission. No work to implement the Construction Screening and Site Restoration Plan shall begin until final plan approval is received from the CPM.

The project owner shall install all construction screening and parking area fencing before the start of ground disturbance at the project site. The project owner shall notify the CPM within 7 calendar days of installing the screening fencing that it is ready for inspection.

The project owner shall report any work required to repair or replace temporary screening fencing in the Monthly Compliance Report for the project.

Within 10 calendar days of receipt of confirmation from the project owner that the permanent 8-foot-tall masonry wall along the southeast project boundary has been completed, the CPM shall notify the project owner that construction screening fencing can be removed from the portion of the southeast site boundary where the masonry wall is erected.

The project owner shall complete site restoration within 60 calendar days of completing construction of the HBEP power blocks and buildings, including demolition of HBGS Units 1 and 2. The project owner shall notify the CPM within 7 calendar days of completing site restoration that restored areas are ready for inspection.

VIS-5 **Surface Treatment of Project Structures and Buildings.** Prior to commercial operation of the HBEP Power Block 1, the project owner shall prepare and implement a Surface Treatment Plan addressing treatment of the surfaces of all project structures and buildings visible to the public such that proposed colors and finishes (1) minimize visual intrusion and reduce contrast by blending with the existing visual environment, (2) avoid creating new sources of substantial glint and glare, and (3) are consistent with all applicable laws, ordinances, regulations, and standards.

The monopoles for the on-site 230-kV transmission line shall **have a surface treatment that enables them** ~~be constructed using self-weathering steel~~ to blend with the environment to the greatest extent feasible, and the finish shall appear as a matte patina. ~~No galvanizing process shall be used that produces a reflective or shiny metallic finish.~~ Unpainted exposed lagging and surfaces of steel structures that are visible to the public shall be embossed or otherwise treated to reduce glare.

The Surface Treatment Plan shall include, at a minimum, the following elements:

- Description of the overall rationale for the proposed surface treatments, including selection of the proposed colors and finishes.
- Discussion of proposed opportunities and options for using color to enhance design quality.
- Inventory of major project structures and buildings specifying the proposed color palette and finishes. The inventory shall specify height, length, and width or diameter for each major structure and building, and elevation views shall be included in the plan with project structures clearly identified.
- Color brochures, color chips, and or physical samples showing each proposed color and finish. Electronic text files showing proposed colors may not be submitted in place of original samples. Colors must be identified by vendor, name, and number, or according to a universal designation system.
- Electronic files and a set of print copies of 11-inch by 17-inch color visual simulations at life size-scale showing the surface treatment proposed for

project structures. The visual simulations for key observation point (KOP) 4 and KOP 5 shall be used to prepare images showing the completed surface treatment plan.

- Schedule for completing the surface treatments.
- Procedure to ensure proper surface treatment maintenance for the life of the project.

The Surface Treatment Plan shall be submitted to the Compliance Project Manager (CPM), the Energy Project Manager for the City of Huntington Beach, and the Executive Director of the Coastal Commission for simultaneous review and comment. Any comments on the plan from the City and the Coastal Commission shall be provided to the CPM. The project owner shall not submit instructions for colors and finishes to manufacturers or vendors of project structures, or perform final field treatment on any structures, until written approval of the final plan is received from the CPM. Modifications to the Surface Treatment Plan are prohibited without the CPM's approval.

Verification: At least 90 calendar days before submitting instructions for colors and other surface treatments to manufacturers or vendors of project structures, and/or ordering prefabricated project structures, the project owner shall submit the Surface Treatment Plan to the CPM, the Energy Project Manager for the City, and the Executive Director of the Coastal Commission for simultaneous review and comment. The project owner shall provide the CPM with a copy of the transmittal letters submitted to the City and the Coastal Commission requesting those agencies' respective reviews of the Surface Treatment Plan.

If the CPM determines that the plan requires revision, the project owner shall provide a plan with the specified revision(s) for review and approval by the CPM. A copy of the revised plan shall be provided to the City's Energy Project Manager and the Executive Director of the Coastal Commission. No work to implement the Surface Treatment Plan shall begin until final plan approval is received from the CPM.

Prior to the start of commercial operation of Power Block 1, the project owner shall notify the CPM that surface treatments of all publicly visible structures and buildings identified in the Surface Treatment Plan have been completed and that the facilities are ready for inspection. The project owner shall obtain written confirmation from the CPM that the project complies with the Surface Treatment Plan.

The project owner shall provide a status report regarding surface treatment maintenance in the Annual Compliance Report for the project. At a minimum, the report shall specify:

- condition of the surfaces of all structures at the power plant site,
- major maintenance activities that occurred during the reporting year, and
- a schedule for major maintenance activities for the next year.

PRELIMINARY STAFF ASSESSMENT – PART A
SUPPLEMENTAL FOCUSED ANALYSIS
WASTE MANAGEMENT

Ellie Townsend-Hough

ISSUE

The applicant has provided the following comment on staff's HBEP Waste Management Section in the PSA Part A:

"The Applicant objects to CEC staff's assertion in the PSA (p 4.13-9 - 4.13-10) that states:

> Prior to the Final Staff Assessment (FSA) HBEP owners should specify which areas identified in **Waste Management Table 2** require cleanup or remediation prior to construction. Once these areas have been identified, the applicant should be required to comply with a condition of certification similar to Condition of Certification **WASTE-1**, which would require completion of Phase II investigations to evaluate the extent of contamination and identify the necessary remedial actions. If a site is considered contaminated, a Phase II environmental site assessment may be conducted, ASTM test E1903, a more detailed investigation involving chemical analysis for hazardous substances and/or petroleum hydrocarbons is performed. It would also require the applicant to coordinate with the appropriate regulatory authority that would otherwise regulate the activity if not for the in-lieu authority of the Energy Commission. The condition would then require monitoring and reporting on the progress of remediation of the various areas of contamination located on the HBEP site. Staff will finalize this condition of certification once the additional data on sites needing additional characterization are provided by the applicant.

Thus, based on the foregoing language, it appears that Staff is seeking additional site investigation as part of the PSA/FSA process. It is inappropriate, however, for Staff to require Applicant to conduct an additional investigation (a Phase II environmental site assessment) or require the Applicant to comply with a proposed COC (**WASTE-1**) during the Staff analysis phase of the AFC licensing proceeding. The Applicant will not be conducting any additional site investigations or evaluations prior to the issuance of a license by CEC for HBEP; therefore, Staff's request for an update of Waste Management Table 2 will not occur prior to the issuance of the FSA or during the remainder of the CEC licensing proceedings for HBEP. **WASTE-1** will be completed post-licensing and will be submitted to the CPM as specified in the Verification to **WASTE-1**."

ANALYSIS

After the completion of the Preliminary Staff Assessment (PSA), staff received a copy of the Draft Closure Plan for the Huntington Beach Generating Station Retention Basin Site. The Draft Closure Plan incorporated soil borings analysis and sampling around the

retention basin and a few buildings on the project site. Many of the soil removal/cleanup procedures for the retention basin have already been approved by the Department of Toxic Substances Control for the retention basin. The Closure Plan confirmed that regulatory oversight has already begun to take placed on the project site. After completion of the PSA, staff also received a letter from the City of Huntington Beach referencing applicable ordinances and requirements they would require for remediation of site contamination. This letter indicated that they typically require characterization and remediation prior to site grading. Also, on October 17, 2013, staff had an opportunity to complete a site visit of the Huntington Beach Generating Station with Randall Weidner of Southern California Edison (SCE) after publication of the PSA and get a better understanding of site conditions. SCE discussed the process they propose for clean up, their close coordination with Department of Toxic Substances Control (DTSC) and the timing for characterization and remediation they envision immediately after demolition and prior to grading. Staff has also had discussions with the Department of Toxic Substances Control and the Huntington Beach Fire Department (HBFD) to discuss whether allowing site characterization and remediation after certification but prior to project construction was feasible.

The Huntington Beach Fire Department recommended that Soil Sampling and a Remediation Plan be submitted to staff and the Fire Department prior to project site grading. The Fire Department representative, Joe Morelli, thought that the requirement for the applicant to sample and begin remediation prior to the demolition at the site was much more stringent than the fire department would require. Also, the major portions of the site that are contaminated will be the responsibility of SCE. SCE has provided for soil sampling and groundwater analysis for the Huntington Beach retention basins. In addition, more complete sampling results will be obtained as existing structures are demolished. Staff concludes that if the applicant complies with the HBFD and DTSC requirements for site characterization and remediation as outlined in the ordinances referenced in the letter dated November12, 2013, then these activities can be conducted post certification.

Staff recommends that the Existing Site Contamination section of the Waste Management PSA and **WASTE-1** be replaced. The language for the PSA will be replaced in the FSA. The proposed replaced language for the FSA is included below.

CONCLUSION

Staff believes the timing of soil sampling and remedial action plans can be handled after certification as requested by the project owner. Staff has replaced **WASTE-1,** however, to ensure that there would be no environmental impacts and worker safety would be maintained.

PROPOSED REVISIONS TO CONDITION OF CERTIFICATION

Staff proposes the following changes to the **WASTE-1** to address the applicant comment and ensure adequate mitigation of site contamination:

WASTE-1 The project owner shall ensure that the HBEP project site is properly characterized and remediated as necessary pursuant to the corrective action plans reviewed by DTSC, the Huntington Beach Fire Department and/or the Orange County Health Care Agency, and approved by the Energy Commission CPM. In no event shall project construction commence in areas requiring characterization and remediation until the CPM determines, with confirmation from the appropriate regulatory agency, that all necessary remediation has been accomplished.

All soils at the site shall conform to City of Huntington Beach's Specification # 431-92 Soil Clean-Up Standards. Soil testing for the contaminants identified in City Specification 431-92 and for methane gas, in accordance with City Specification 429, shall be completed as follows:

a. Soil Sampling Work Plan: A qualified environmental consultant shall prepare and submit a soil sampling work plan (for contaminants identified in City Specification 431-92 and for methane gas) to the CEC CPM and the Huntington Beach Fire Department (HBFD) for review and concurrence. Once the CEC CPM and HBFD review and concur with the submitted work plan, the sampling may commence.

   Note: Soil shall not be exported to other City of Huntington Beach locations without first being demonstrated to comply with City Specification 431-92 Soil Clean Up Standards. Also, any soil proposed for import to the site shall first be demonstrated to comply with City Specification 431-92.

b. Soil Sampling Lab Results: Conduct the soil sampling in accordance with the HBFD approved work plan. After the sampling is conducted, the lab results (along with the Environmental Consultants summary report) for methane and 431-92 testing shall be submitted to the CEC CPM and HBFD for review.

c. Remediation Action Plan: If contamination is identified, provide a Fire Department approved Remediation Action Plan (RAP) based on requirements found in Huntington Beach *City Specification #431-92, Soil Cleanup Standard.* All soils shall conform to City Specification # 431-92 Soil Clean-Up Standards prior to the issuance of a grading or building permit.

d. Prior to and during grading and construction, discovery of additional soil contamination or underground pipelines, etc., must be reported to the CEC CPM and the HBFD immediately and the approved work plan modified accordingly in compliance with City Specification #431-92 Soil Clean-Up Standards.

e. Outside City Consultants: The HBFD review of this project and subsequent plans will require the use of consultants to the city. The Huntington Beach City Council-approved fee schedule allows the Fire

Department to recover consultant fees from the applicant, developer or other responsible party.

The project owner shall furnish a final copy of items a. through e. to the Energy Commission CPM, DTSC, the Huntington Beach Fire Department and/or the Orange County Health Care Agency. An initial draft of the remedial documents shall be provided to the Energy Commission CPM, DTSC and the Huntington Beach Fire Department for review and comment. The final document shall be approved by the CPM. The final copy of the remedial plan shall reflect recommendations of the CPM, DTSC, and the Huntington Beach Fire Department. The project owner shall provide to the CPM for review and approval written notice from the appropriate regulatory agency that the HBEP site has been investigated and remediated as necessary in accordance with the corrective action plan.

Verification: At least 30 days prior to implementation, the project owner shall submit the Soil Sampling Work Plan to the CPM for approval. Within 30 days of implementing the Soil Sampling Work Plan, the project owner shall submit copies of all soil sampling lab results with the summary report for review. At least 90 days prior to implementation, the project owner shall submit the Remediation Action Plan for review and approval. If additional soil contamination is encountered prior to or during grading the project owner will shall revise the approved work plan and submit it for approval within 30 days after contamination is identified.

PRELIMINARY STAFF ASSESSMENT – PART A
SUPPLEMENTAL FOCUSED ANALYSIS
WORKER SAFETY/FIRE PROTECTION ANALYSIS

Geoff Lesh, PE, CFPS, CSP

INTRODUCTION

Staff received comments from the City of Huntington Beach Fire Department (HBFP) on the Worker Safety/Fire Protection section of the HBEP Preliminary Staff Assessment (PSA), Part A published on October 10, 2013. This supplemental analysis presents the comments received from the HBFP, the issues discussed at the November 20, 2013 PSA workshop, and resolution to the issues.

ISSUES AND RESOLUTION

ISSUE

The HBFP commented that Figure 2-1.1 of the applicant's Application for Certification (AFC) shows a proposed fire access road, which does not comply with the access road requirements set forth in City Specification #401 and Section 503 of the California Fire Code and Section 503 of the Huntington Beach Fire Code.

RESOLUTION

Staff remarked at the PSA workshop that according to the AFC the applicant had stated that the HBEP would conform to all LORS, including those of the City of Huntington Beach, and that as stated in the PSA, it was staff's understanding that it would be so designed.

The applicant confirmed that the HBEP would be designed to conform to all LORS, and that the noted Figure 2-1.1 was conceptual only, and not a final proposed design layout of the fire access roads. Applicant confirmed that it would be communicating with the HBFD to ensure compliance with LORS.

REVISIONS TO PROPOSED CONDITIONS OF CERTIFICATION

Staff does not propose any changes to the conditions presented in the Worker Safety/Fire Protection section of the HBEP PSA.

REFERENCES

CHB 2013a – City of Huntington Beach / Dept of Planning & Building / Aaron Klemm / Jane James (tn 201173). *City of Huntington Beach Comments on the Huntington Beach Energy Project Preliminary Staff Assessment, Part A, dated 11/12/2013*. Submitted to CEC/Dockets on 11/13/2013.

PRELIMINARY STAFF ASSESSMENT – PART A
SUPPLEMENTAL FOCUSED ANALYSIS
COMPLIANCE CONDITIONS
AND
COMPLIANCE MONITORING PLAN

Eric Veerkamp

INTRODUCTION

As a result of discussion at the Preliminary Staff Assessment public workshop held in Huntington Beach on November 20, 2013, the following language changes were agreed to by Energy Commission Compliance staff. Language changes only occur in the Conditions of Certification; changes are represented by ~~strikeover~~ and underline.

COMPLIANCE CONDITIONS OF CERTIFICATION

For the Huntington Beach Energy Project, staff proposes the **Compliance** Conditions of Certification below.

COM-4: **Pre-Construction Matrix and Tasks Prior to Start of Construction.** Prior to start of construction, the project owner shall submit to the CPM a compliance matrix including only those conditions that must be fulfilled before the start of construction. The matrix shall be included with the project owner's first compliance submittal or prior to the first pre-construction meeting, whichever comes first, and shall be submitted in a format similar to the description below.

Site mobilization and construction activities shall not start until all of the following occur: the project owner has submitted the pre-construction matrix and all submittals required by compliance verifications pertaining to all pre-construction conditions of certification, and the CPM has issued an authorization-to-construct letter to the project owner. The deadlines for submitting various compliance verifications to the CPM allow sufficient staff time to review and comment on, and if necessary, allow the project owner to revise the submittal in a timely manner. These procedures help ensure that project construction proceeds according to schedule. Failure to submit required compliance documents by the specified deadlines may result in delayed authorizations to commence various stages of the project.

If the project owner anticipates site mobilization immediately following project certification, it may be necessary for the project owner to file compliance submittals prior to project certification. In these instances, compliance verifications can be submitted in advance of the required deadlines and the anticipated authorizations to start construction. The project owner must

understand that submitting compliance verification requirements prior to these authorizations is at the owner's own risk. Any approval by Energy Commission staff prior to project certification is subject to change based upon the Commission Decision, or amendment thereto, and early staff compliance approvals do not imply that the Energy Commission will certify the project for actual construction and operation.

COM-13: Incident-Reporting Requirements. Within one (1) hour, the project owner shall notify the CPM or Compliance Office Manager, by telephone and e-mail, of any incident at the power plant or appurtenant facilities that results or could result in any of the following:

~~1. reduction in the facility's ability to respond to dispatch (excluding forced outages caused by protective equipment or other typically encountered shutdown events);~~

2. health and safety impacts on the surrounding population;
3. property damage off-site;
4. response by off-site emergency response agencies;
5. serious on-site injury;
6. serious environmental damage; or
7. emergency reporting to any federal, state, or local agency.

The notice shall describe the circumstances, status, and expected duration of the incident. If warranted, as soon as it is safe and feasible, the project owner shall implement the safe shutdown of any non-critical equipment and removal of any hazardous materials and waste that pose a threat to public health and safety and to environmental quality (also, see specific conditions of certification for the technical areas of **Hazardous Materials Management** and **Waste Management**).

Within one (1) week of the incident, the project owner shall submit to the CPM a detailed incident report, which includes, as appropriate, the following information:

1. a brief description of the incident, including its date, time, and location;
2. a description of the cause of the incident, or likely causes if it is still under investigation;
3. the location of any off-site impacts;
4. description of any resultant impacts;
5. a description of emergency response actions associated with the incident;
6. identification of responding agencies;

7. identification of emergency notifications made to federal, state, and/or local agencies;
8. identification of any hazardous materials released and an estimate of the quantity released;
9. a description of any injuries, fatalities, or property damage that occurred as a result of the incident;
10. fines or violations assessed or being processed by other agencies;
11. name, phone number, and e-mail address of the appropriate facility contact person having knowledge of the event; and
12. corrective actions to prevent a recurrence of the incident.

The project owner shall maintain all incident report records for the life of the project, including closure. After the submittal of the initial report for any incident, the project owner shall submit to the CPM copies of incident reports within twenty-four (24) hours of a request.

COM-15: Facility Closure Planning. To ensure that a facility's eventual permanent closure and long-term maintenance do not pose a threat to public health and safety and/or to environmental quality, the project owner shall coordinate with the Energy Commission to plan and prepare for eventual permanent closure.

A. Provisional Closure Plan and Estimate of Permanent Closure Costs

To assure satisfactory long-term site maintenance and adequate closure for "the whole of a project," the project owner shall submit a Provisional Closure Plan and Cost Estimate for CPM review and approval within sixty (60) days after the start of commercial operation. The Provisional Closure Plan and Cost Estimate shall consider applicable final closure plan requirements, ~~including interim and long-term, post-closure site maintenance costs~~, and reflect the use of an independent third party to carry out the permanent closure.:

1. facility closure costs at a time in the facility's projected life span when the mode and scope of facility operation would make permanent closure the most expensive;
2. the use of an independent third party to carry out the permanent closure; and
3. no use of salvage value to offset closure costs.

The Provisional Closure Plan and Cost Estimate shall provide for a phased closure process and include but not be limited to:

1. comprehensive scope of work and itemized budget;
2. closure plan development costs;
3. dismantling and demolition;

4. recycling and site clean-up;
5. mitigation and monitoring direct, indirect, and cumulative impacts;
6. site remediation and/or restoration;
7. interim and long term operation ~~and post-closure~~ monitoring and maintenance, including long-term equipment replacement costs; and
8. contingencies.

The project owner shall include an updated Provisional Closure Plan and Cost Estimate in every fifth-year ACR for CPM review and approval. Each updated Provisional Closure Plan and Cost Estimate shall reflect the most current regulatory standards, best management practices, and applicable LORS.

B. Final Closure Plan and Cost Estimate

At least three (3) years prior to initiating a permanent facility closure, the project owner shall submit for Energy Commission review and approval, a Final Closure Plan and Cost Estimate, which includes any long-term, post-closure site maintenance and monitoring. Final Closure Plan and Cost Estimate contents include, but are not limited to:

1. a statement of specific Final Closure Plan objectives;
2. a statement of qualifications and resumes of the technical experts proposed to conduct the closure activities, with detailed descriptions of previous power plant closure experience;
3. identification of any facility-related installations not part of the Energy Commission certification, designation of who is responsible for these, and an explanation of what will be done with them after closure;
4. a comprehensive scope of work and itemized budget for permanent plant closure and ~~long-term~~ site maintenance activities, with a description and explanation of methods to be used, broken down by phases, including, but not limited to:
    a. dismantling and demolition;
    b. recycling and site clean-up;
    c. impact mitigation and monitoring;
    d. site remediation and/or restoration and;
    e. ~~post-closure maintenance~~ any contingencies

    ~~contingencies~~.
5. a revised/updated Final Cost Estimate for all closure activities, by phases, including ~~long-term, post-closure~~ site monitoring and maintenance costs, and long-term equipment replacement ~~of long-term post-closure equipment~~;

6. a schedule projecting all phases of closure activities for the power plant site and all appurtenances constructed as part of the Energy Commission-certified project;
7. an electronic submittal package of all relevant plans, drawings, risk assessments, and maintenance schedules and/or reports, including an above- and below-ground infrastructure inventory map and registered engineer's or delegate CBO's assessment of demolishing the facility; additionally, for any facility that permanently ceased operation prior to submitting a Final Closure Plan and Cost Estimate and for which only minimal or no maintenance has been done since, a comprehensive condition report focused on identifying potential hazards;
8. all information additionally required by the facility's conditions of certification applicable to plant closure;
9. an equipment disposition plan, including:
    a. recycling and disposal methods for equipment and materials; and
    b. identification and justification for any equipment and materials that will remain on-site after closure;
10. a site disposition plan, including but not limited to:
    a. proposed rehabilitation, restoration, and/or remediation procedures, as required by the conditions of certification and applicable LORS, and,
    b. ~~long-term~~ site maintenance activities~~, and~~
    c. anticipated future land-use options after closure;
11. identification and assessment of all potential direct, indirect, and cumulative impacts and proposal of mitigation measures to reduce significant adverse impacts to a less-than-significant level; potential impacts to be considered shall include, but not be limited to:
    a. traffic
    b. noise and vibration
    c. soil erosion
    d. air quality degradation
    e. solid waste
    f. hazardous materials
    g. waste water discharges
    h. contaminated soil
12. identification of all current conditions of certification, LORS, federal, state, regional, and local planning efforts applicable to the facility, and proposed strategies for achieving and maintaining compliance during closure;

13. updated mailing list or listserv of all responsible agencies, potentially interested parties, and property owners within one (1) mile of the facility;
14. identification of alternatives to plant closure and assessment of the feasibility and environmental impacts of these; and
15. description of and schedule for security measures and safe shutdown of all non-critical equipment and removal of hazardous materials and waste (see conditions of certification for **Public Health**, **Waste Management**, **Hazardous Materials Management**, and **Worker Safety**).

If implementation of an Energy Commission-approved Final Closure Plan and Cost Estimate is not initiated ~~implemented~~ within one (1) year of its approval date, it shall be updated and re-submitted to the Commission for supplementary review and approval. If a project owner initiates but then suspends closure activities, and the suspension continues for longer than one (1) year, or subsequently abandons the facility, the Energy Commission may access the required financial assurance funds to complete the closure. The project owner remains liable for all costs of contingency planning and closure.

HUNTINGTON BEACH ENERGY PROJECT (12-AFC-02)
PRELIMINARY STAFF ASSESSMENT – PART A
SUPPLEMENTAL FOCUSED ANALYSIS

PREPARATION TEAM

Introduction ..... Felicia Miller

Environmental Assessment

Biological Resources ..... Heather Blair / Jennifer Lancaster

Cultural Resources ..... Gabriel Roark, M.A. / Melissa Mourkas, M.A., ASLA

Land Use ..... Steven Kerr

Noise and Vibration ..... Edward Brady / Shahab Khoshmashrab

Socioeconomics ..... Lisa Worrall

Soil and Water Resources ..... Mike Conway, P.G.

Traffic and Transportation ..... Jonathan Fong

Visual Resources ..... Jeanine Hinde

Waste Management ..... Ellie Townsend-Hough

Worker Safety and Fire Protection ..... Geoff Lesh, PE, CSP, CFPS

Compliance Conditions ..... Eric Veerkamp

Project Assistant ..... Diane L. Scott

PRELIMINARY STAFF ASSESSMENT – PART A SUPPLEMENTAL FOCUSED ANALYSIS INTRODUCTION

Felicia Miller

PURPOSE OF THIS REPORT

This Supplement to the Preliminary Staff Assessment (PSA) is intended to frame certain issues and present the comments received, and the discussions that occurred, during the November 20, 2013 PSA workshop held in Huntington Beach, California. In this document, staff will include a discussion and analysis of the issues, and where appropriate, revisions to the Conditions of Certification.

ISSUES AND RESOLUTION

As the applicant indicated in their Data Responses to staff (HBEP 2013ii) the availability of both secondary and tertiary treated recycled water through the Orange County Sanitation District's Plant 1 and 2, as well as details pertaining to potential water pipeline routes, staff is recommending the use of recycled water for the HBEP. Due to time constraints publishing this Supplemental Focused Analysis, staff will include an environmental analysis of the use of recycled water for industrial use for HBEP, as well as recycled water pipe routes in staff's Final Staff Analysis. Staff will need to work with the applicant to obtain the environmental assessment for the recycled water supply infrastructure that will be needed to serve the project. Due to time constraints publishing this Supplemental Focused Analysis, Staffs' assessment of the information to be provided will be included in the Final Staff Assessment.