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Comments submitted by Sierra Club

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California Energy Commission

Dockets Office, MS-4

Docket No. 09-RENEW EO-01

1516 Ninth Street

Sacramento, CA 95814-5512

Re: Docket No. 09-RENEW EO-01; Desert Renewable Energy Conservation Plan – Key Conservation Designations and Recommendations

The Sierra Club is a national nonprofit organization of approximately 2.5 million members and supporters dedicated to exploring, enjoying, and protecting the wild places of the earth. The Sierra Club's interests encompass protecting our public lands, wildlife, air and water while at the same time rapidly increasing our use of renewable energy to reduce global warming. We submit these comments on behalf of our members, activists and staff who are interested in protecting native species and their habitats as well as the sustainable development of carbon-free resources to meet climate goals.

Sierra Club is committed to rapidly increasing renewable energy generation while also protecting the natural landscapes and wildlife that we enjoy and explore. We strongly support the Desert Renewable Energy Conservation Plan's (DRECP) designation of public lands as part of the National Landscape Conservation System (NLCS) and as Areas of Critical Environmental Concern (ACEC). These designations are necessary to enhance the resilience and integrity of wild lands and wildlife that face numerous threats, including the effects of climate change, habitat loss and fragmentation. Accordingly, the Sierra Club

offers the following comments regarding the importance of specific locations in the California desert, supporting conservation designations proposed in the draft DRECP and, in some cases, recommending enhancements. These recommendations reflect the knowledge and insight of Sierra Club's desert members, who have spent decades exploring, enjoying and protecting the California desert.

These comments augment comments submitted with Defenders and Wildlife et al, as well as Sierra Club's comments on the DRECP Planning Processes, Energy Calculator Air Quality and Transmission elements of the Plan.

Western and Central Mojave Desert:

The Jawbone-Butterbrecht ACEC: Jawbone would be an ideal addition to the NLCS. Jawbone encompasses an important ecotone between the creosote scrub and Joshua tree woodland of the Mojave Desert and the pinyon-juniper and grey pine woods of the Scodie Mountains in the Sequoia National Forest. Several springs, including Dove Spring (a world class birding site), and ephemeral streams support over 160 species of birds. Robber's Roost, a unique granite outcrop with many crags and cavities, is an important nesting site for birds of prey such as the prairie falcon. Jawbone also provides important habitat for the desert tortoise and Mohave ground squirrel. Archaeologically sensitive sites are located throughout Jawbone. One of these sites, located near Boulder Spring in Sage Canyon, contains pictographs, petroglyphs, and dense concentrations of bedrock mortar holes. Jawbone contains a portion of the Pacific Crest Trail and an even larger portion of the trail's view shed, so hikers from all over the world actually visit this important desert land and gaze out onto its foothills and bajadas. Tens of thousands of volunteer hours have been spent in Jawbone to help manage off-highway vehicle abuse and restore the land to its natural state. The BLM should honor their hard work by including Jawbone Canyon as part of the NLCS.

Former Cuddeback Air Force Range: The former Cuddeback Air Force Range (in the vicinity of 35.304539, -117.400836) is incorrectly designated as a "Conservation Planning Area" in the draft DRECP maps provided through the DRECP Gateway. The draft DRECP should be revised to designate these lands as ACEC and NLCS. According to Department of Interior testimony before Congress on April 29, 2014, the Department of Defense has relinquished control of the former Cuddeback Air Force Range to the Bureau of Land Management.ⁱ The Conservation Planning Area designation is reserved for non-Federal lands and private lands (see II.3-18 of the draft DRECP).

Located along the western boundary of the Grass Valley Wilderness area and southeast of the Golden Valley Wilderness area, the Cuddeback Dry Lake area should be designated as NLCS because it is part of a contiguous block of predominately BLM-administered lands that stretches from the western boundary of Fort Irwin to the El Paso Mountains, via the Summit Range and Lava Mountains. These lands provide habitat for DRECP covered species, including the desert tortoise and Mohave ground squirrel.

The former Cuddeback Air Force Range overlaps with the Pilot Knob identified core area for the Mohave ground squirrel, and provides habitat connectivity between other identified core areas, according to research by Philip Leitner on the status of the Mohave ground squirrel.ⁱⁱ The former Air Force Range and surrounding lands should be managed to maintain large blocks of intact habitat. According to the draft DRECP Biological Objective MGSQ1.1, the BLM should “[c]onserve and avoid disturbance of suitable habitat in specific geographic regions that are required for Mohave ground squirrel population viability, identified as key population centers. Key population centers are presented in Figure C-39, described by Leitner (2008, 2013).”

El Paso Wash/Ridgecrest: Additional BLM lands south of Ridgecrest, and north of Brown Road and the Spangler OHV area should be designated as an Area of Critical Environmental Concern and managed to protect Mohave ground squirrel habitat and connectivity. These lands are part of a habitat crossroads connecting several core populations of the Mohave ground squirrel, according to research cited in the DRECP’s biological goals and objectives. Although the draft DRECP designates some BLM lands in this vicinity as an ACEC to protect Mohave ground squirrel habitat, the ACEC is likely to be insufficient to protect habitat connectivity because of the impact of private land uses and management of the Spangler OHV area for intensive ground disturbing activity. BLM lands north of Brown Road and west of U.S. Highway 395 were studied for Mohave ground squirrel to evaluate the proposed Ridgecrest Solar Power Project that has since been withdrawn. The study found that these BLM lands provided high quality Mohave ground squirrel habitat because of the existence of a wide desert wash (El Paso Wash) adjacent to high diversity creosote bush scrub habitat. The BLM and California Energy Commission staff’s draft EIS (March 2010) for the Ridgecrest Solar power project found that loss of the lands north of Brown Road “would significantly reduce the connectivity for the MGS [Mohave ground squirrel] populations. There is no known way to fully mitigate for the loss of all or a portion of the proposed RSPP project site regarding connectivity.”ⁱⁱⁱ

Although the portion of El Paso Wash that exists north of Brown Road does not fall within the boundary of the Western Mojave Plan Mohave ground squirrel

conservation area, this is likely because Brown Road was chosen as an arbitrarily convenient boundary rather than reflecting the quality of habitat north of Brown Road. Furthermore, the ACEC designation south of Brown Road is vulnerable to development of private property parcels within the ACEC boundary. Miles of new dirt roads, presumably for OHV use, have already been carved into a one square mile private property parcel immediately south of Brown Road and west of U.S. Highway 395 (within the proposed ACEC boundary). Extending the ACEC further north of Brown Road will protect more of the high quality Mohave ground squirrel habitat for connectivity through El Paso Wash, in an effort to ensure connectivity despite disturbance to habitat on private land parcels and adjacent OHV areas. Extending the ACEC coverage should at a minimum include the area within the following corners: 35.549456, -117.712179; 35.593247, -117.750288; 35.593574, -117.810911; 35.593574, -117.810911.

Pisgah: Lands currently non-designated in the vicinity of Pisgah Crater and the creosote scrub and dune habitat south of the Cady Mountains (in the vicinity of 34.792095; -116.424038) should be designated as NLCS and ACEC. These lands meet several criteria for designation as NLCS identified in the DRECP (DRECP, page II.3-315 and 316), as the area includes high quality habitat for multiple native species, high ecological diversity, is the focus of scientific study, representative of a significant natural phenomenon, relatively undisturbed and intact habitat, and provides habitat linkage across NLCS lands.

The Department of Interior's Final Solar Programmatic EIS ultimately identified these lands – including lands listed as non-designated under the DRECP – as a solar exclusion area, in part because the area provided suitable habitat for as many as 54 special status species.^{iv} The lands north of Interstate 40 and south of the Cady Mountains were also previously reviewed for the proposed – and since-cancelled – Calico Solar power project. Surveys found that the lands north of Interstate 40 and south of the Cady Mountains provided habitat for several DRECP covered species, including the desert tortoise, desert bighorn sheep, Mojave fringe-toed lizard, and golden eagle (foraging). In addition, a species currently not covered under the DRECP but of conservation concern – the white-margined beardtongue – occurs in multiple locations on lands currently identified as non-designated north of Interstate 40.

South of Interstate 40, the Pisgah lava flow provides an area to continue nascent research into adaptive color polymorphism and unusually high genetic diversity in reptiles, according to a peer-reviewed study by Steven Micheletti, Eliseo Parra, and Eric Routman published in 2012.^v Furthermore, DRECP Biological Objective L1.4 states that the BLM should “[c]onserve unique landscape features, important landforms, and rare or unique vegetation types identified within the Plan Area, including... [a]reas with unique geological activity (e.g., Pisgah and

Amboy craters, Black Tank Wash volcanic area, Old Woman statue).” Much of the Pisgah lava flow is closed to the public because it is within the boundary of the Marine Corps Air-Ground Combat Center at Twentynine Palms, increasing the importance of managing remaining portions of the Pisgah area for its recreational and scientific importance.

The Eastern Desert:

The valleys described below provide vital connectivity between protected Wilderness Areas, and allowing wildlife access to water sources in the valleys between. Protection of these valleys and benches will ensure the conservation of these areas.

The Piute and Fenner Valleys serve as designated critical habitat for the desert tortoise. It is a common occurrence to encounter tortoises roaming the washes and crossing the roads of these valleys. These valleys also connect the large habitat blocks of the Mojave Preserve, Lake Mead National Recreation Area, and the Dead Mountains Wilderness Area.

Ward Valley serves as designated critical habitat for the desert tortoise as well. It joins the Old Woman Mountains Wilderness Area in the west with the Stepladder and Turtle Mountains Wilderness Areas in the east. Ward Valley will allow for the dispersal of bighorn sheep into surrounding mountain ranges from the Old Woman Mountains.

The Chemehuevi Valley connects the Stepladder and Turtle Mountains Wilderness Areas in the west to the Chemehuevi and Whipple Mountains Wilderness Areas in the east, as well as the wildlife refuge system along the Colorado River. This valley is critical desert tortoise habitat and also hosts mountain lions and mule deer, based on images taken with a wildlife camera placed in the area.

The Chuckwalla Desert Wildlife Management Area, which contains portions of the Chuckwalla and Smoke Tree Valleys, serves as critical tortoise habitat and has received considerable investment from the BLM and nonprofit organizations over the years for land acquisition to protect the species. The area harbors vast stands of microphyll woodland which bring surprising numbers of mule deer. It is also home to rare species such as Munz’s cholla, crucifixion thorn, pink fairyduster, and others. The many washes leading to the Colorado River, such as Milpitas and Vinagre Washes, function as highways for animal movement between the River and the mountains to the west. The Chuckwalla DWMA contains fantastic vistas of the Black Hills, Chocolate Mountains, Palo Verde

Mountains, and even Picacho Peak in the Picacho State Recreation Area, far to the south.

Amargosa Watershed:

The Amargosa Watershed is a series of interconnected basins which all drain into the Amargosa River. The Amargosa River is one of only two perennial rivers in the Mojave Desert, and one of the only free flowing desert rivers in the US southwest. 26 miles of the river are protected as a Congressionally designated Wild and Scenic River. The 150 mile bi-state river and its spring and stream tributaries support a truly unique and rich riparian and aquatic natural community. The Amargosa Basin contains one of the two largest assemblages of listed, endemic and rare species in North America – desert fish, rare plants, mammals, and birds – that are wholly dependent on perennial sources of water. Perennial surface water is located in isolated small oases, streams, springs, and in very limited stretches of the Amargosa River.

Except during occasional intense rainstorms, the perennial flow in the Wild and Scenic section of the Amargosa River is completely supplied by groundwater. Several significant springs emerge along the river corridor between Shoshone and the Amargosa River Canyon south of Tecopa that contribute to the flow of the Amargosa River. Many of these spring flows arise from a regional carbonate aquifer that conveys water from sources far beyond the Amargosa Basin. The flows from these springs, and other cool water springs, are supplemented by groundwater moving below ground through the sediments of the southern Amargosa Desert and Pahrump Valleys.

An example of the fragility of this delicate hydrological-ecological balance is the critically endangered Amargosa Vole. It could easily qualify as the most endangered mammal in North America, with between 50-200 individuals left in the wild. Its habitat lies entirely in the spring-fed Tecopa Marsh, and it has shrunk over the years due to reduced spring flows (secondary to groundwater pumping up-watershed) and human-altered hydrology patterns. This imperiled species will only survive if the groundwater flows that feed the springs it relies on are assured. Conserving the Valleys of the Amargosa is a key action which could help save the vole.

Thus protecting the Valleys of the Amargosa is critical for conservation in this area. These valleys provide connectivity between the mountain ranges, all of which are designated Wilderness, which surround them. They provide wildlife access to critical water resources, many of which emerge at the bottom of these valleys. They provide groundwater flow to the springs of the Amargosa. In sum, they are the fabric that binds together this ecologically sensitive region.

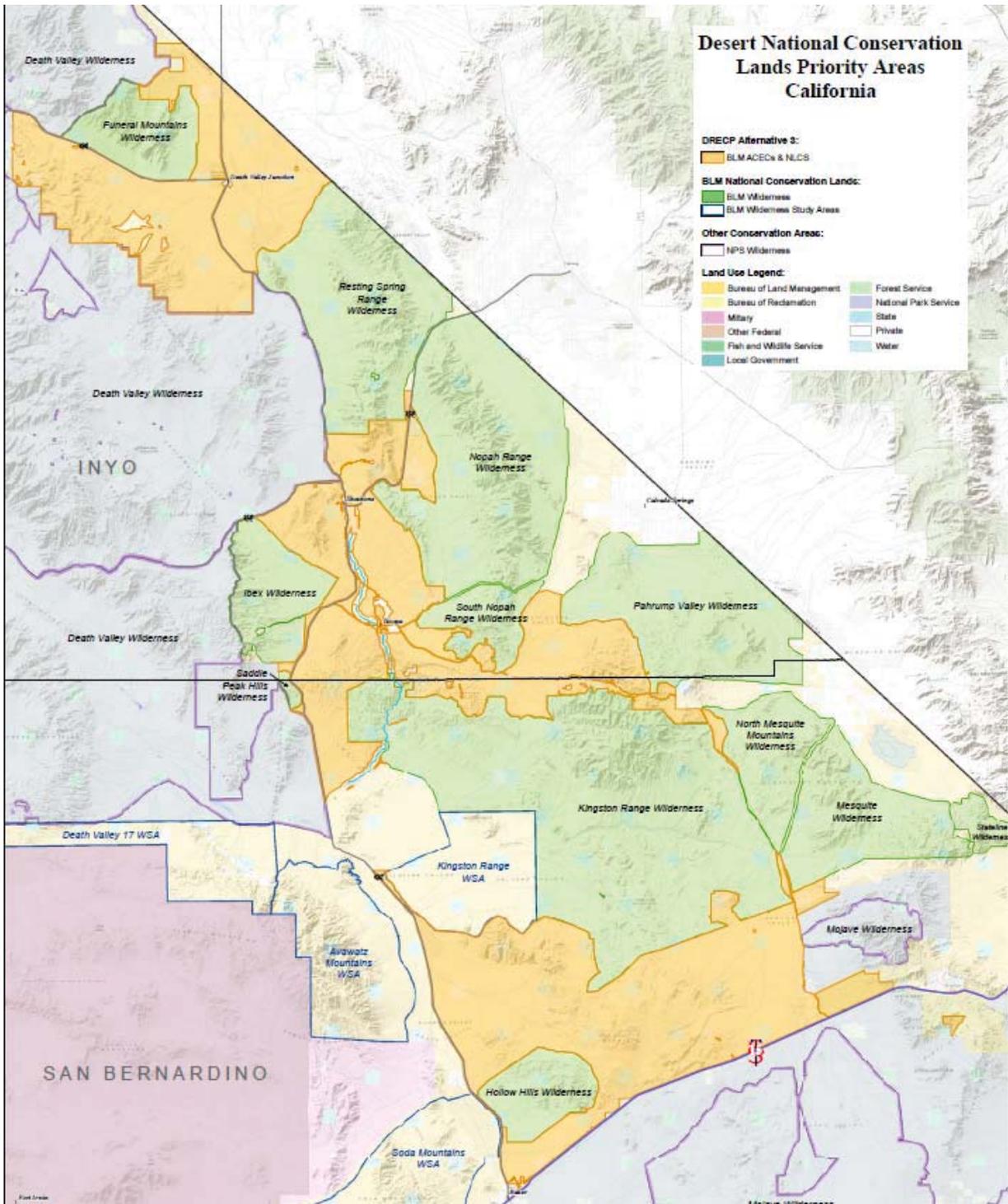


Figure 1: Valleys of the Amargosa. Lands highlighted in orange are proposed for National Conservation Land status in the DRECP Alternative 3. Due to critical and highly sensitive resources in these areas, they should all be designated as such. The only area deserving of National Conservation Land status in the

Amargosa Watershed which is not included on this map is the northern California Valley/Charleston View area.

Southern Amargosa Desert:

The lands surrounding Death Valley Junction form the southern portion of an area known as the Amargosa Desert. The Amargosa Desert is a vast plain which stretches along the course of the Amargosa River from near Beatty, Nevada all the way down to Eagle Mountain in California. The California portion of this area, the Southern Amargosa Desert, harbors a vast array of unique and endemic life.

The eastern portion of this area is known as Carson Slough. This seasonally inundated alkali flat is where the outflows of the springs at Ash Meadows meet the southward flow of the Amargosa River. While it may dry up at times of year, there are portions which regularly hold water and form an alkali marsh, a unique and rare habitat. And indeed, there are two special status plants which are only known to grow at Ash Meadows National Wildlife Refuge in Nevada and in Carson Slough in California: the federally endangered Amargosa niterwort, and the federally threatened Ash Meadows gumplant. These species have highly limited ranges, perhaps just a few dozen acres in Carson Slough, and conservation of these remaining habitat patches is critical to their survival and long-term viability. To the south of the Slough is Franklin Playa, an undisturbed dry lake bed. It is likely to harbor these or other halophytic plant species, and can hold water well into the spring during a wet year. +

The western portion of this area is the northern end of the Greenwater Range, a low desert mountain range which bounds the west side of the Amargosa River valley. These Public Lands, surrounded by National Park to the south, west, and northwest, and designated BLM Wilderness to the north, form a vital connectivity corridor between the Greenwater Range and the Funeral Range. Bighorn sheep are known to use these ranges as migration routes, following the springs up in elevation as the seasons advance. Unlike many of their cousins further south in the Mojave, desert tortoise in this area are known to inhabit the rocky hills and mountains, and it is likely that there are relatively healthy populations of tortoises on these lands.

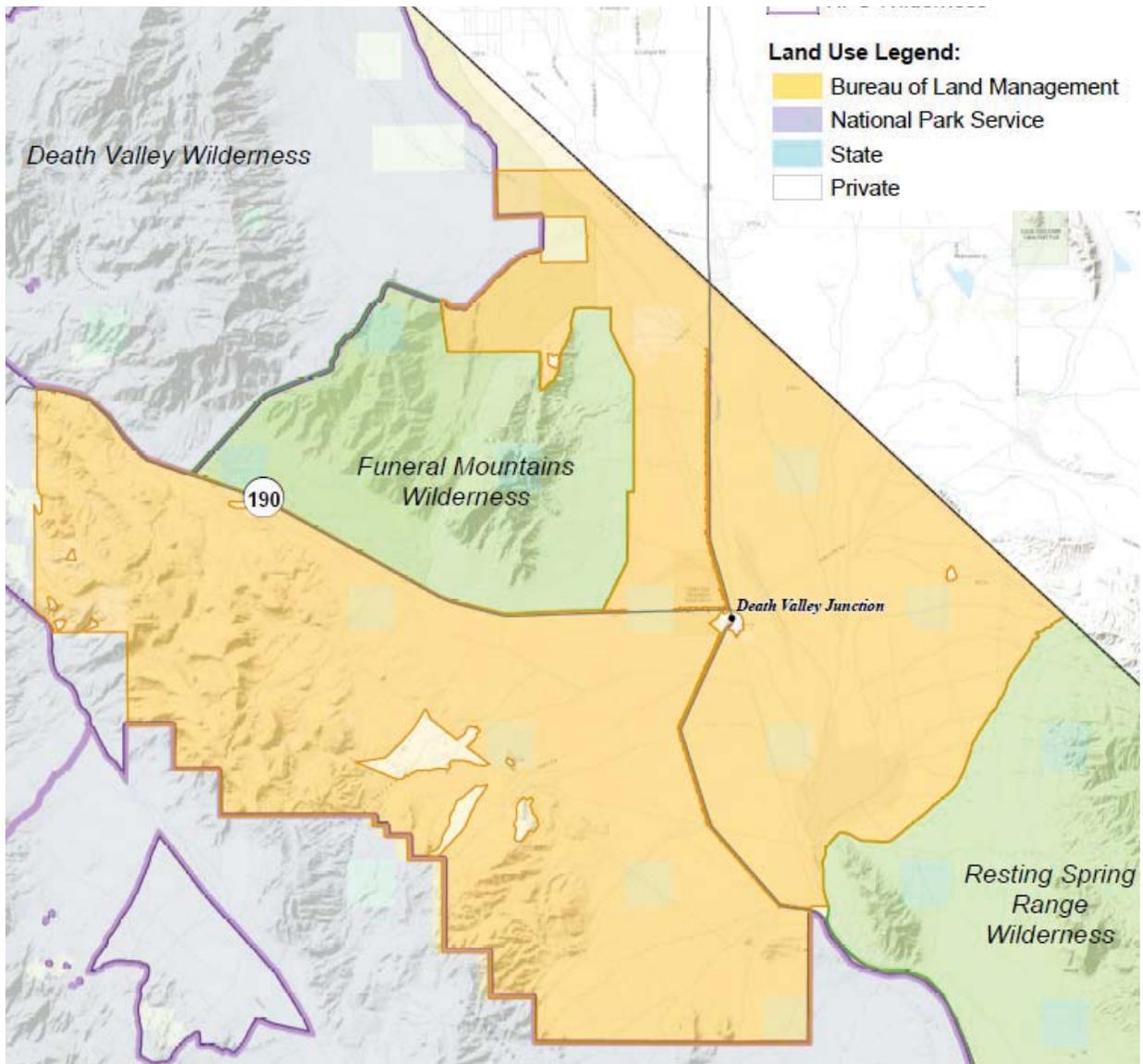


Figure 2: Southern Amargosa Desert. Proposed NLCS lands from Alternative 3 are highlighted in orange. Ryan is the mountainous area and benches on the western side of the map, and Carson Slough is the area east of Death Valley Junction. The small strip of land in the northern portion of this map along the state border should also be added to the NLCS, to ensure continuity of management in the area.

Middle Amargosa Basin:

The Middle Amargosa Basin is the beating heart of this region. The most important springs of the entire Amargosa River emerge here: Shoshone Spring, Tecopa Hot Springs, Resting Springs, Willow Spring, and the many springs of the Amargosa Canyon. And all of these springs are either on or directly adjacent to Public Lands. These springs harbor an abundance of rare and endemic life, including numerous threatened and endangered species. There are two species of pupfish here, the Shoshone pupfish (previously thought to be extinct) and the Amargosa pupfish. There is also the Amargosa speckled dace, another fish. There is a unique endemic scorpion, the Shoshone cave whip-tail. The area also contains one of the best remaining breeding habitats for the federally endangered least Bell's vireo. And of course, the last remaining habitat of the aforementioned Amargosa vole occurs here, in the Tecopa Marsh.

It is not simply the valley bottom that is important, however. The Dublin Hills are also potential NLCS lands in this area. The western Sperry Hills provide a vital connectivity corridor between the Kingston Range and the protected areas of Death Valley National Park.

Many millions of dollars have been spent acquiring key parcels of land in the Middle Amargosa Basin, and these lands have been donated for conservation purposes to BLM. Many more millions have been spent on resource conservation projects in this area. These investments were made with the intention of promoting and safeguarding lands for conservation.

This area is also where almost all of the residents of the California portion of the Amargosa Watershed live. There is widespread support amongst residents of Tecopa, Tecopa Hot Springs, and Shoshone for NLCS designation. This is partially because people are attracted to the undeveloped and remote character of the landscape in the Middle Amargosa Basin. But equally it is because the entire economy of Southern Inyo County is reliant on tourism. Of the sixteen businesses in the Middle Amargosa Basin, fourteen offer unqualified support for NLCS status.

Chicago Valley is a remote and little-known corner of the desert, almost entirely free from development except for a small trailer park, a two-lane state highway, and a handful of sparsely used dirt roads. It is surrounded by the Nopah Range and Resting Springs Range Wildernesses. However, at the bottom of the valley, the most critical part hydrologically, there is a substantial portion of Public Lands that remains unprotected. A nearby landowner has proposed to Inyo County to build utility-scale solar there.

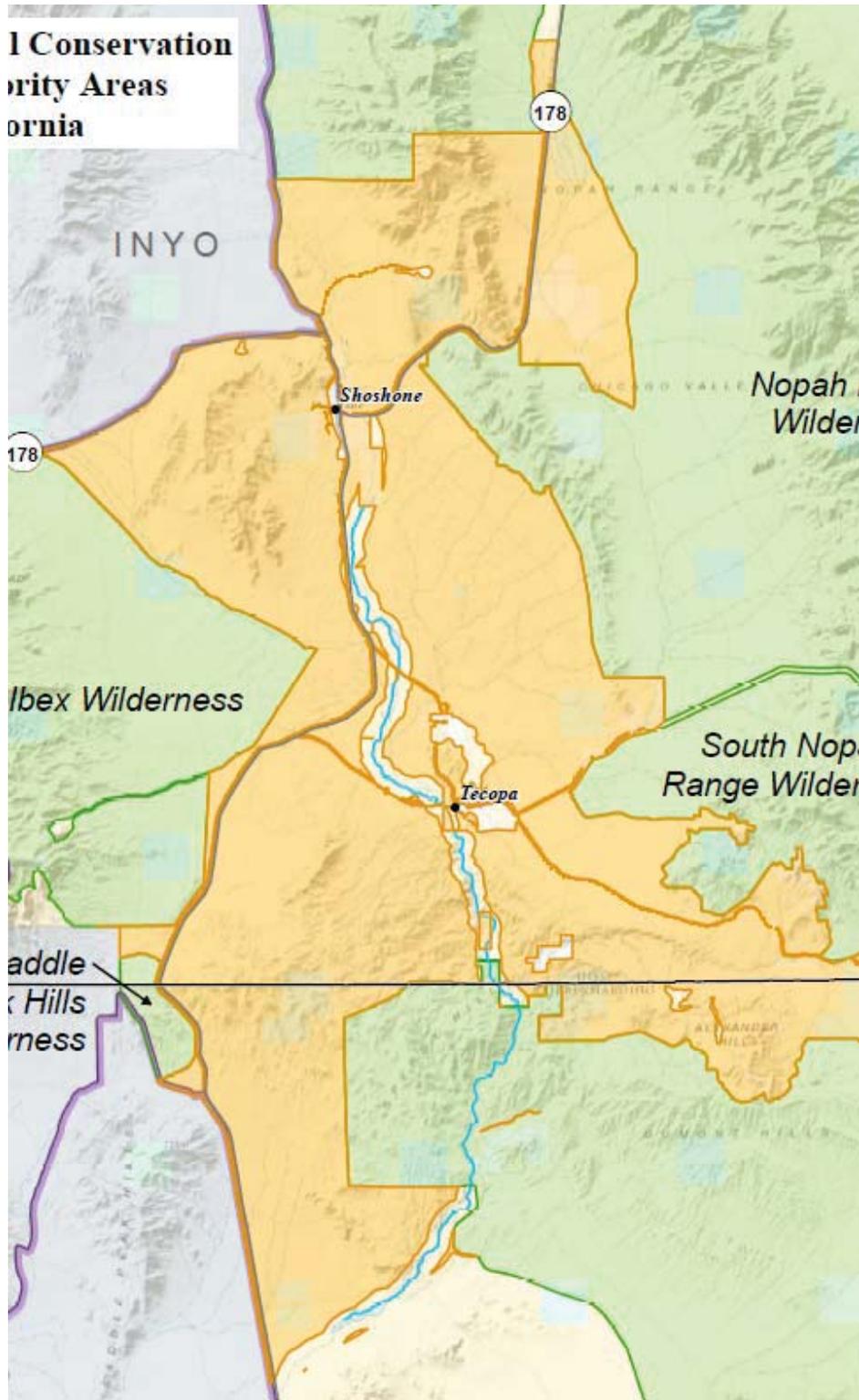
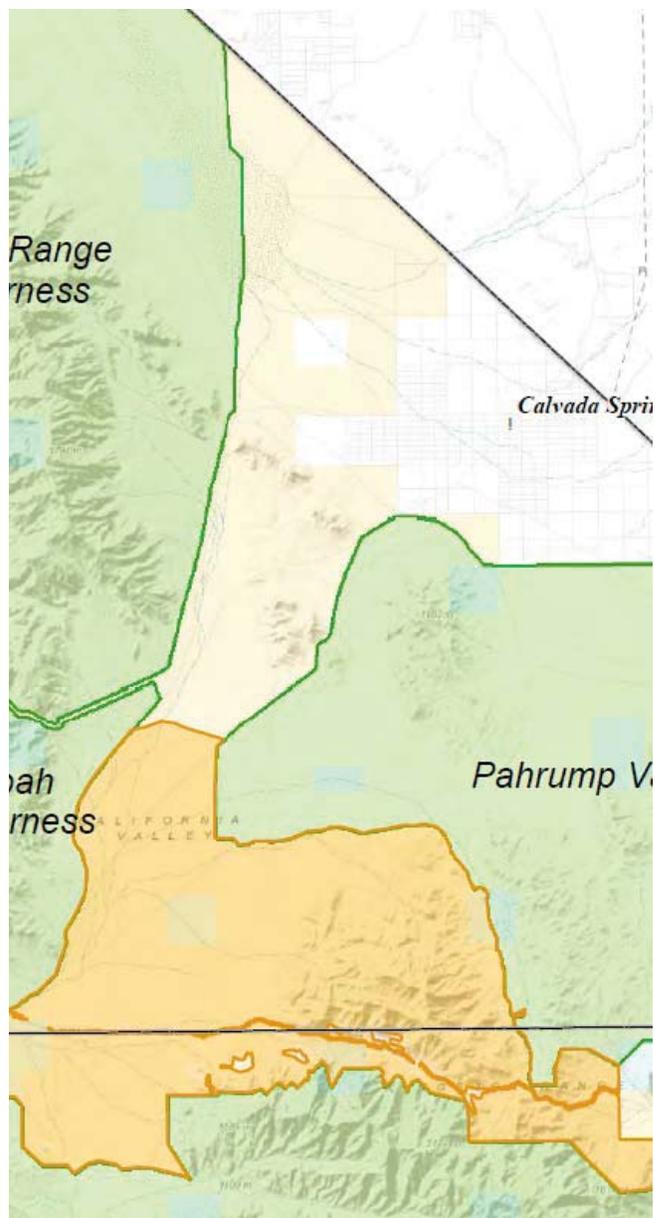


Figure 3: Middle Amargosa Basin & Chicago Valley (visible in the northeast portion of the map). All Public Lands in this area should be designated as part of the NLCS.

The defining element of the proposed NLCS lands in the Chicago Valley is mesquite bosque. Mesquite bosque is considered a special status natural community by CDFW. This habitat is rich in wildlife, important to migratory and resident birds, and holds a treasure trove of archaeological resources. They are considered “very threatened” by the state, and the Draft EIR itself describes it as a habitat type that is “extremely restricted in California.” Almost all of the enormous expanse of mesquite bosque habitat in Chicago Valley is on Public Lands that are proposed for National Conservation Land designation.

Twelvemile Spring, the most reliable water source in Chicago Valley, lies at the boundary of the Nopah Range Wilderness. It is the only perennial water source in the entire valley, and is critical for wildlife such as bighorn sheep, whose sign is easily observable between Twelvemile and the nearby mountains of the Nopah Range. It is also one of the most remarkable archaeological sites in the entire northern Mojave desert, and has never been formally surveyed. Even a casual visitor can't help but notice the tremendous amount of lithic scatter present in the area surrounding the spring. This site should be thoroughly surveyed and

protected as part of the NLCS.



California Valley/Charleston View:

The California Valley is a large sweep of bajada lying between the southern Nopah Range and the north slope of the Kingston Range. Like so many other areas described here, it provides vital connectivity between montane habitats. Bighorn sheep are known to frequent both the Nopah Range and the Kingstons, likely migrating up in elevation to the higher peaks of the Kingstons in summer, and wintering in the lower Nopahs. Tortoises have been observed in California Valley. It is also known to be high quality burrowing owl habitat.

Perhaps most vitally, California Valley provides a critical

hydrological link in the Amargosa Watershed. The Kingston Range is among the highest mountain ranges of the immediate area, rising to over 7,300'. It receives significantly more precipitation than the surrounding desert, attracting heavy thunderstorms in the summer, and getting snow in the winter, which will frequently last on the upper slopes into late spring. All precipitation on the north side of the Kingston Range will either run off on the surface, filling the washes which flow across California Valley and feed Willow Creek (which in turn meets the main Amargosa deep in Amargosa Canyon), or will feed the subterranean aquifer, which flows underneath California Valley and emerges at Tule Spring and again at Willow Spring. Hydrogeologist Andy Zdon estimates that as much as 10% of the surface flow of the Amargosa results from rain and snowmelt from the Kingston Range. Designating the California Valley as National Conservation Lands would protect these critical water resources.

Figure 4: California Valley (south), a portion of the Kingston Range (middle), and Charleston View (north) should all be designated as part of the NLCS to protect resources and maintain the character of the landscape.

The northern extent of the California Valley is proposed for National Conservation Lands, but not as an ACEC, in several of the program alternatives. This part of the Valley provides the closest link between the Kingstons and the Nopahs, and is perhaps the part of the Valley most in need of full conservation status.

This area is also tied to Charleston View. Charleston View has been the target of solar energy developers for several years. Charleston View contains important tortoise and burrowing owl habitat, and surveys within recent years have documented 17 rare plant species, including four species that are known only from Charleston View in California. Public Lands on the west side of Charleston View have been designated as Priority 1 and Priority 2 Desert Tortoise Connectivity Corridors in the Solar PEIS. Again, these lands provide connectivity between protected areas, and should be prioritized for Conservation.

Charleston View is also a valuable historical landscape. The Old Spanish Trail, a National Historic Trail and route taken by explorers and traders, runs directly through Charleston View. The area is sacred to the Pahrump Paiute, a federally unrecognized tribe in Nevada, and has been identified as part of the Salt Song Landscape, a vitally important ethnographic landscape to all Southern Paiute.

Thus for the preservation of cultural, biological, hydrologic, and historic resources, the entirety of public lands in California Valley and Charleston View should be designated as both ACEC and the NLCS.

Silurian Valley:

The many resources conflicts between development in Silurian Valley and maintaining the area's natural character have been well-documented, and will be mentioned in more cursory fashion here. The area is known habitat for desert tortoise and burrowing owls. It is particularly important foraging grounds for golden eagles.

It is worth mentioning that, like the rest of the Valleys of the Amargosa, Silurian Valley provides an essential hydrologic link in the Amargosa Watershed. Salt Creek drains the enormous basin formed by Silurian Valley, capturing relatively high amounts of run-off from the entire south and west slopes of the Kingston Range (through Kingston Wash) and the east face of the very high Avawatz Mountains. The relatively large amount of water flowing through the aquifers here becomes apparent at the large and well-watered Salt Spring. Only a few miles below Salt Spring, Salt Creek meets the Amargosa River on its journey to Death Valley. Designating these lands as National Conservation Lands would protect the critical hydrologic resources of the Amargosa Watershed.

BLM has already recognized the unique resources present in Silurian Valley, and their relative fragility, in denying a permit application for a solar project in the area. It was an implicit recognition that it is a special landscape, worthy of protection. Designating Silurian Valley as National Conservation Lands is essential to keeping the landscape of the southern Amargosa Watershed intact.

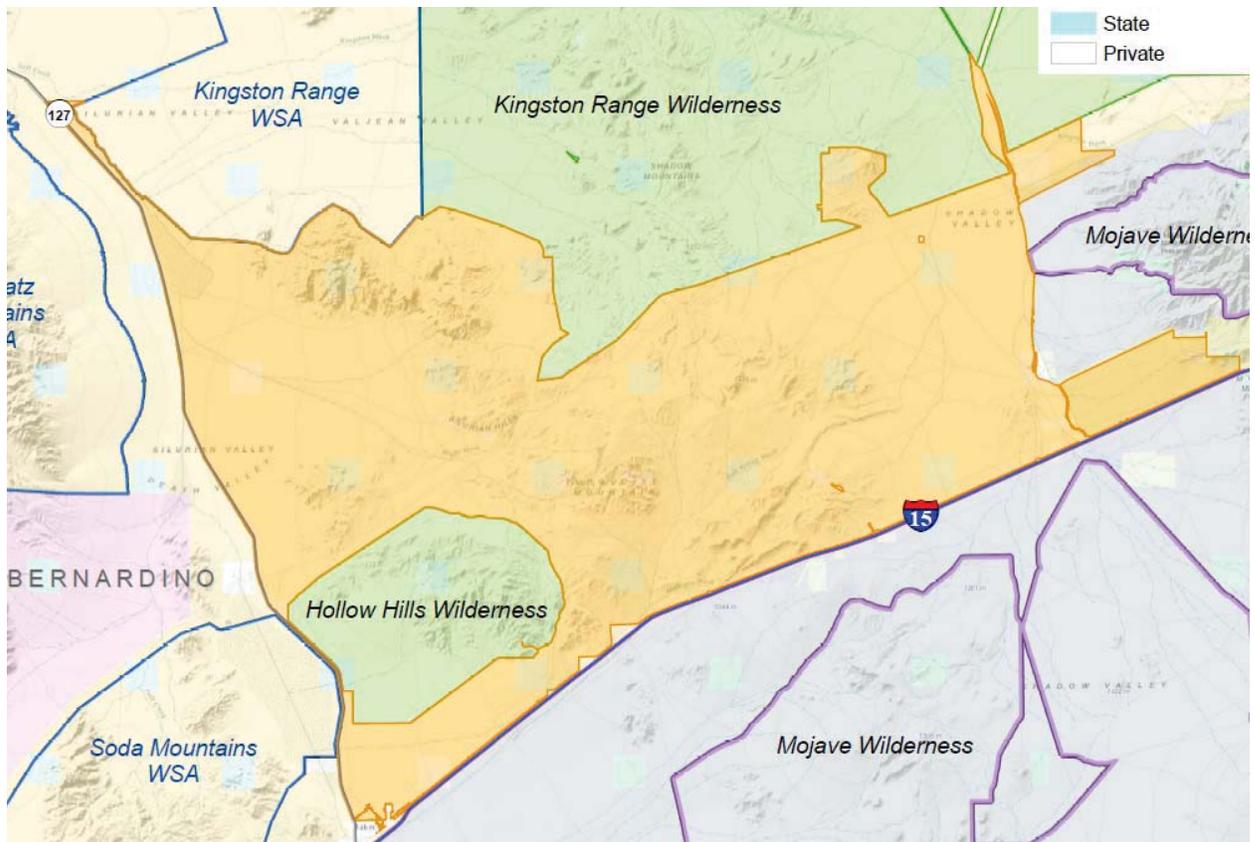


Figure 5: Silurian Valley (to the west) and Shadow Valley (to the east), as well as the Silurian Hills and Turquoise Mountain area are all proposed National Conservation Lands and should be designated as such in the DRECP.

Silurian Hills, Turquoise Mountain:

These areas provide important bat habitat, and the Silurian Hills have been designated as a Bat Conservation Area by BLM. These bats rely on a relatively undisturbed landscape to forage for food and to roost. Designating these areas as part of the NLCS will support conservation priorities for this unique bat area.

Shadow Valley:

Lying between the two sky islands of the Kingston Range and Clark Mountain, the Shadow Valley is an important area for conservation. Ecologically, it contains a northward extension of the famous Cima Dome pygmy Joshua Tree forest, a relatively rare ecosystem which has been a conservation priority for land managers across the desert. As such, it harbors dense populations of desert tortoise, and indeed the southern portion of Shadow Valley is part of the Ivanpah Desert Wildlife Management Area (DWMA), an area where tortoise conservation has been prioritized. It is also a frequently used forage area for raptors such as golden eagles and prairie falcons that fly between the two great mountain ranges

in search of sustenance. Bighorn are well-documented as using Shadow Valley for a connectivity corridor between the two mountain ranges.

Like the aforementioned Kingston Range, Clark Mountain (part of Mojave National Preserve) is quite high, reaching over 7,500'. As a result of their prominence over the rest of the desert landscape, both the Kingstons and Clark Mountain harbor rare and unique life and biomes that exist nowhere else in the desert. These include white fir forest, giant nolina, and a variety of wildlife that one might expect in more montane ecosystems. Shadow Valley provides a critical link between these two sky islands, allowing for genetic exchange and connectivity for animals and plants. Birds also use Shadow Valley as a migratory route between the two ranges, and industrial development within the valley, particularly solar development with the associated "lake effect," could deplete this important function of the valley.

Finally, Shadow Valley is worth recognizing simply for its undeveloped nature. It is a completely intact landscape, providing perhaps the best connectivity between the Amargosa Watershed to the north, and Mojave National Preserve to the south. The only road that runs through the valley is poorly maintained and sparsely traveled. The only development in the valley is a small corral and the power lines traversing it. This is an undisturbed landscape, and such landscapes have become rare across the California desert. Shadow Valley should be designated as National Conservation Lands to preserve these features for future generations.

East Riverside DFA:

Per Figure H-1 in Appendix H, attached, the public land portion of the DFA in East Riverside County presents major conflicts with habitat and climate change connectivity for covered species such as desert tortoise, Mojave fringe-toed lizard and bighorn sheep, as well natural communities such as dry wash woodland, sand dunes and the sand transport areas necessary for their sustenance. The Conservation Management Actions for avoidance of sensitive habitats do not afford adequate protection for the above, and must be strengthened to unambiguously prohibit intrusion into such sensitive habitats except for very minor intrusions such as a single access road incidental to a renewable project.

Habitat linkages and patches with sufficient buffers from intrusion are essential to maintaining range-wide genetic variation, local dispersal and recolonization of unoccupied habitat and population viability, and are critical to the ability of species to shift distribution in response to environmental stressors such as climate change over the long term.

This is especially important in this subarea of the ecoregion, since the public land portion of the East Riverside DFA sits astride the last remaining permeable habitat of sufficient width and freedom from intrusions to provide climate change connectivity for smaller fauna that are obligated to occupy habitat as they shift over time. Permeability will be crucial to fauna moving north through the Sonoran desert towards the Mojave in response to climate change. However, the habitat connectivity proposed in the NCCP reserve design areas (see attached zoom view of the Preferred Alternative NCCP Reserve for the DFA) do not demonstrably provide permeability of the correct width, geomorphology and redundancy to serve that purpose. The foundation for this design must be established. More importantly, the draft MOU between BLM and CDFW does not provide the needed assurance that the NCCP-proposed conservation areas will be protected either short or long term.

The amount of new wind development proposed in this DFA (1300 MW, which is proposed to affect 90 square miles of the DFA), combined with the acknowledgement that there are likely substantial adverse impacts to microphyll woodland (a sensitive natural community), is contrary to the intent of DRECP and unacceptable. Since DRECP is charged with directing development to degraded areas, allowing vast industrialization of the pristine upper McCoy Valley for wind development conflicts with that goal and moreover is unnecessary to meet the Plan energy target. In addition to conflicting with sensitive habitats and natural communities, wind development in that area conflicts with identified Lands with Wilderness Characteristics.

Further, once the BLM ROD is signed, further refinements of DFAs may not be possible and DRECP DFAs will then be considered preferred leasing areas (also known as "Designated Leasing Areas"). The DFA lands will be offered at below fair market leases to renewable developers, and the opportunity to protect resources will be lost. Therefore it is incumbent upon DRECP to make significant refinements to this DFA's boundaries to exclude biological conflicts. No other DFA has as much public land or contains as high a level of conflicts. This refinement, with commensurate protective designations for conservation lands, can and must be addressed now through the DRECP.

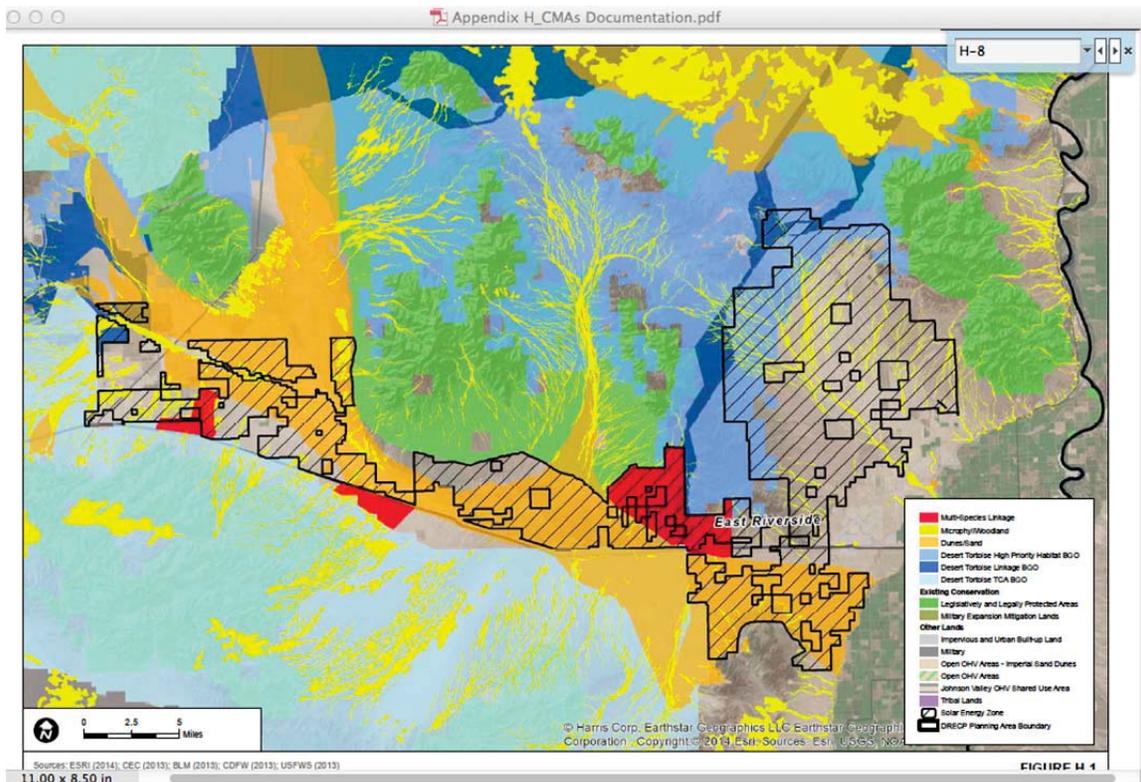


Figure 6: Habitat types and linkages near the Riverside East DFA.

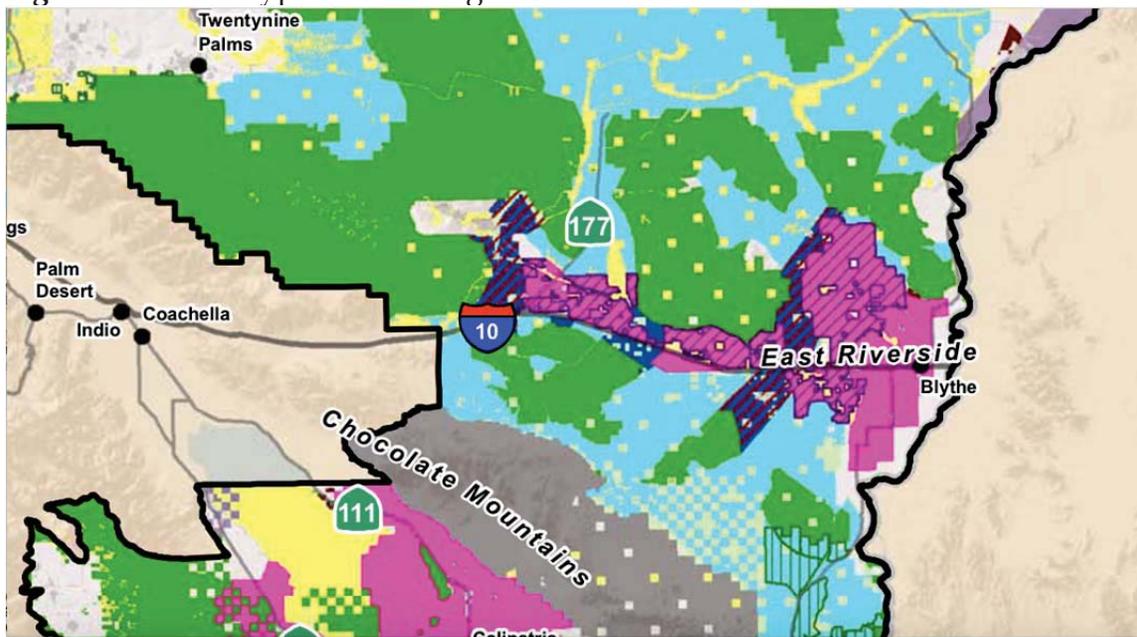


Figure 7: Habitat linkage conflicts within the NCCP/DFA boundaries.

Sierra Club looks forward to working with the DRECP agencies to improve the draft, including ways to protect the areas identified above.

ⁱ Statement of Karen Mouritsen Deputy Assistant Director Energy, Minerals and Realty Management Bureau of Land Management, Department of the Interior, April 29, 2014, <http://www.doi.gov/ocl/hearings/113/hr4458_042914.cfm>

ⁱⁱ "Current Status of the Mohave Ground Squirrel," Philip Leitner, *Transactions of the Western Section of the Wildlife Society*, 44:11-29, 2008

ⁱⁱⁱ Staff Assessment and Draft Environmental Impact Statement and Draft California Desert Conservation Area Plan Amendment, Bureau of Land Management and California Energy Commission, March 2010, page 386.

^{iv} Supplement to the Draft Solar Programmatic Environmental Impact Statement, Appendix B, pages B11-B14.

<<http://www.solareis.anl.gov/documents/supp/index.cfm>>

^v "Adaptive Color Polymorphism and Unusually High Local Genetic Diversity in the Side-Blotched Lizard, *Uta stansburiana*," Steven Micheletti, Eliseo Parra, Eric J. Routman, October 25, 2012,

<<http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0047694>>