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February 23, 2015

California Energy Commission
Dockets Office, MS-4
Docket No. 09-RENEW EO-01
1516 Ninth Street
Sacramento, CA 95814-5512
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California Energy Commission
DOCKETED
09-RENEW EO-1
TN 75172
FEB 23 2015

Re: National Conservation Lands and Special Recreation Management Areas in the Amargosa Watershed in the Draft DRECP

Please accept these comments regarding potential additions to National Conservation Lands and Special Recreation Management Areas in the DRECP.

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 & 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 years due to reduced spring flows (secondary to groundwater pumping up-watershed) and human-altered hydrology patterns. This imperiled

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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.

In summary:

- The following areas should be designated National Conservation Lands, per Alternative 3 of the DRECP:
    - Southern Amargosa Desert (Carson Slough, Franklin Playa, Ryan)
    - Middle Amargosa Basin (Shoshone, Tecopa, Dublin Hills, Sperry Hills, Alexander Hills)
    - Chicago Valley
    - California Valley
    - Shadow Valley
    - Silurian Hills/Turquoise Mountain
- All Public Lands in the following areas should be designated National Conservation Lands:
    - Charleston View
    - Silurian Valley
- We support the designation of the Amargosa-Grimshaw Lake and Tecopa Pass Special Recreation Management Areas.
- We believe that all management and land use planning actions in the Amargosa Watershed should be explicitly oriented toward protecting, maintaining, and enhancing the quantity of groundwater flows in the region, particularly in the federally designated Wild and Scenic Amargosa River.
- Additionally, we support the designation of other National Conservation Lands in Inyo County, particularly the Panamint Valley, Slate Range, and the entirety of Rose Valley.

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Lands Appropriate for Designation as National Conservation Lands

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 of 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 meets 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. Additionally, this part of the Southern Amargosa Desert attracts many tourists. There is a rich mining history in the Ryan area here, and in spring, it is a well-known destination for flower-seekers. This helps contribute to the local economy in Southern Inyo County.

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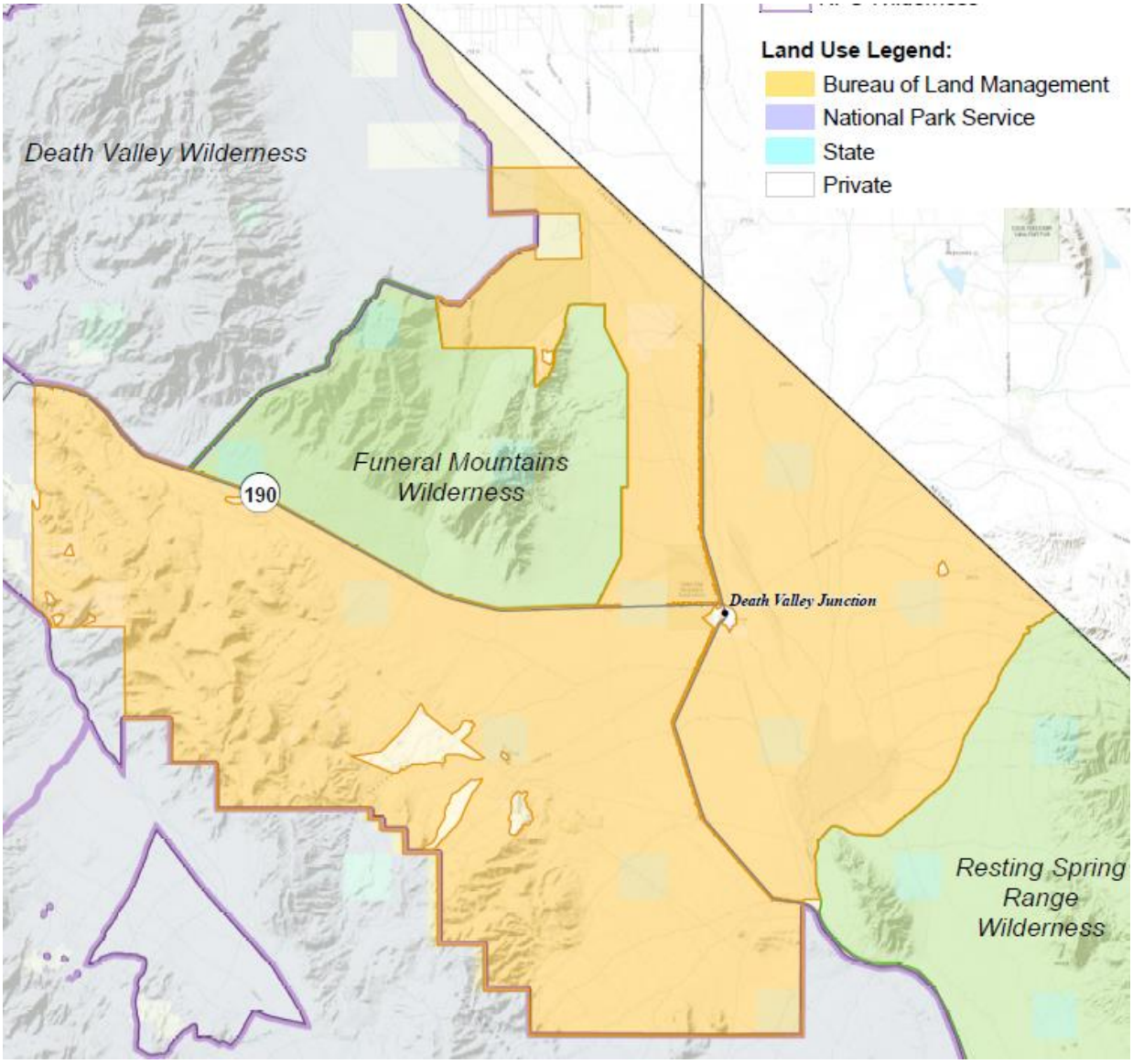

Figure 2: Southern Amargosa Desert. Proposed National Conservation Lands from Alternative 3 are highlighted in orange. Ryan is the mountainous area and benches on the western side of the map, and Carson Slough is the area east of Death Valley Junction. The small strip of land in the northern portion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

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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 an Amargosa speckled dace, another fish. There is a unique endemic scorpion, the Shoshone cave whip-tail. It 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 National Conservation Lands in this area. These hills are a treasure trove of geological intrigue-geode beds, petrified wood, and a long and rich mining history make these ideal lands for conservation status. 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 National Conservation Lands 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 National Conservation Lands status.

Chicago Valley

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 which remain unprotected. A nearby landowner has proposed to Inyo County to build utility-scale solar there.

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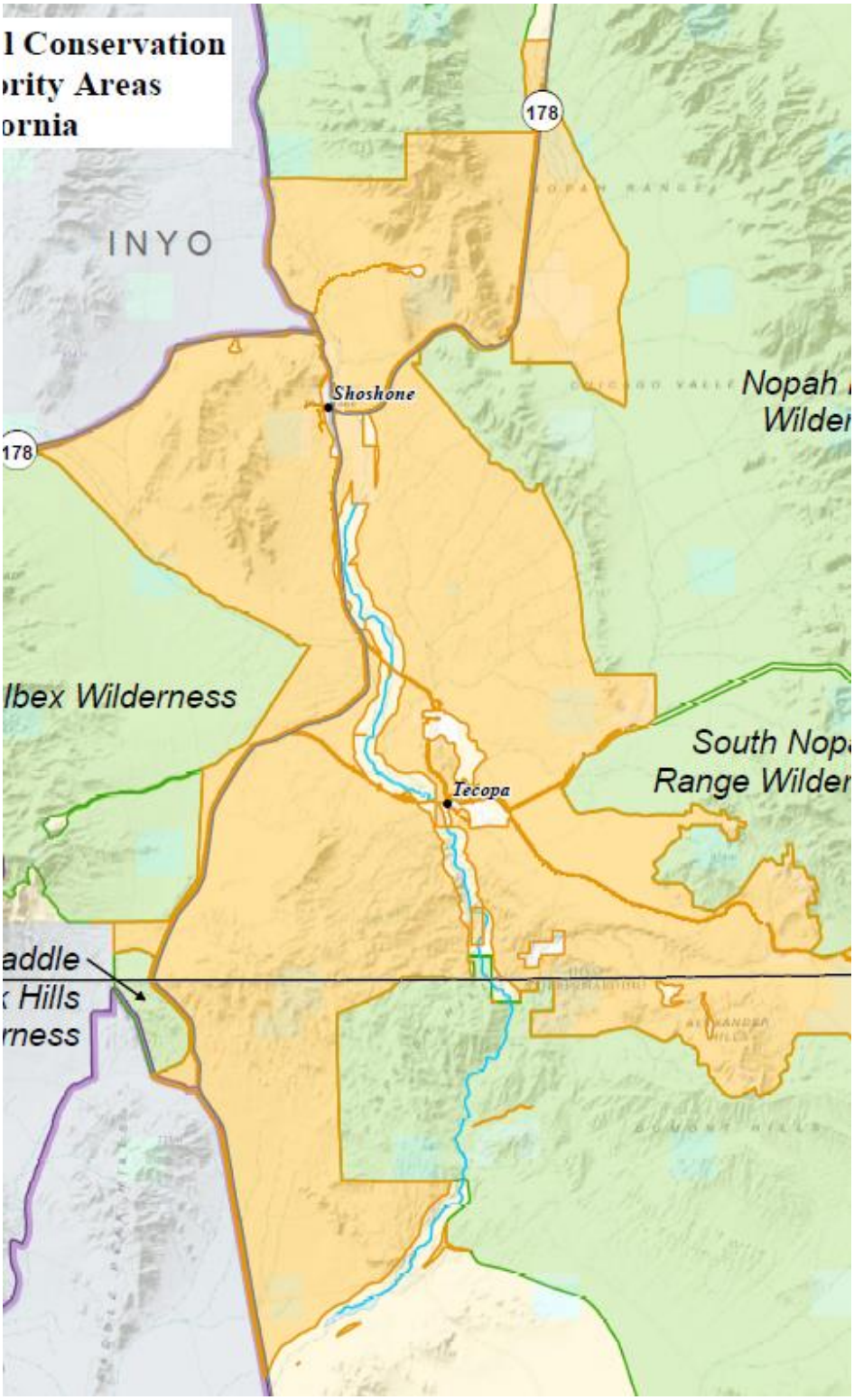

Figure 3: Middle Amargosa Basin & Chicago Valley (visible in the northeast portion of the map). All Public Lands in this area should be designated as National Conservation Lands.

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The defining element of the proposed National Conservation Lands in the Chicago Valley is mesquite bosuqe. 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 PEIR 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 National Conservation Lands.

At the very center of Chicago Valley is private land which is under consideration by Inyo County for designation as a Solar Energy Development Area (SEDA) in their Renewable Energy General Plan Amendment (REGPA). While we recognize that there is little that can be done about such proposals in the DRECP, designating the surrounding Public Lands as National Conservation Lands would prevent large-scale disruption of the landscape by limiting the possibilities for new transmission.

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.

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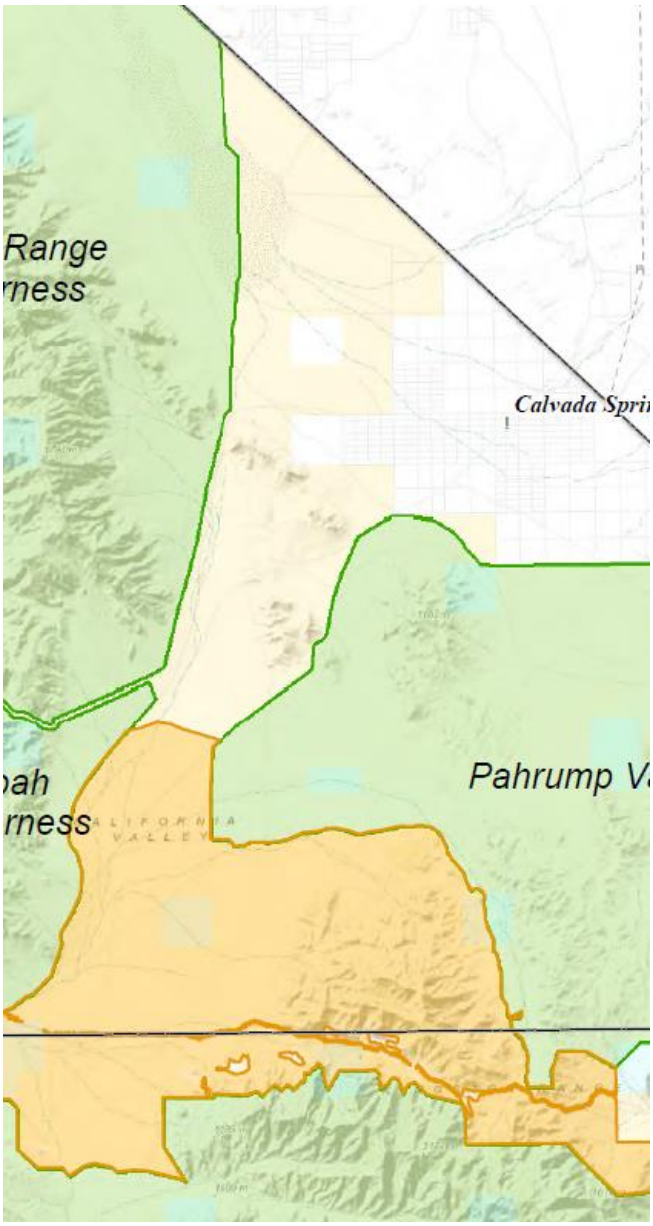

Perhaps most vitally, California Valley provides a critical hydrological link in the Amargosa Watershed. The Kingston Range is among the highest mountain ranges of the immediate area, rising to over 7,300'. It receives significantly more precipitation than the surrounding desert, attracting heavy thunderstorms 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). Boundary shown is Alternative 3. All Public Lands northward to the Nevada border should also be designated National Conservation Lands.

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.

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This area is also tied to Charleston View. Charleston View has been the target of solar energy developers for several years, most recently through the aforementioned Inyo County REGPA. Charleston View contains important tortoise and burrowing owl habitat, and surveys within recent years have documented 17 rare plant species, including four species which 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. Tortoise sightings are frequent by locals in the area. 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 scenic, cultural, biological, hydrologic, and historic resources, the entirety of Public Lands in California Valley and Charleston View should be designated as both ACEC and National Conservation Lands. For a more detailed description of the resources in Charleston View, please see the Amargosa Conservancy's additional comment letter.

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Silurian Valley

The Silurian Valley has been a flashpoint in the debate over utility-scale renewable energy in remote parts of the desert for several years. 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.

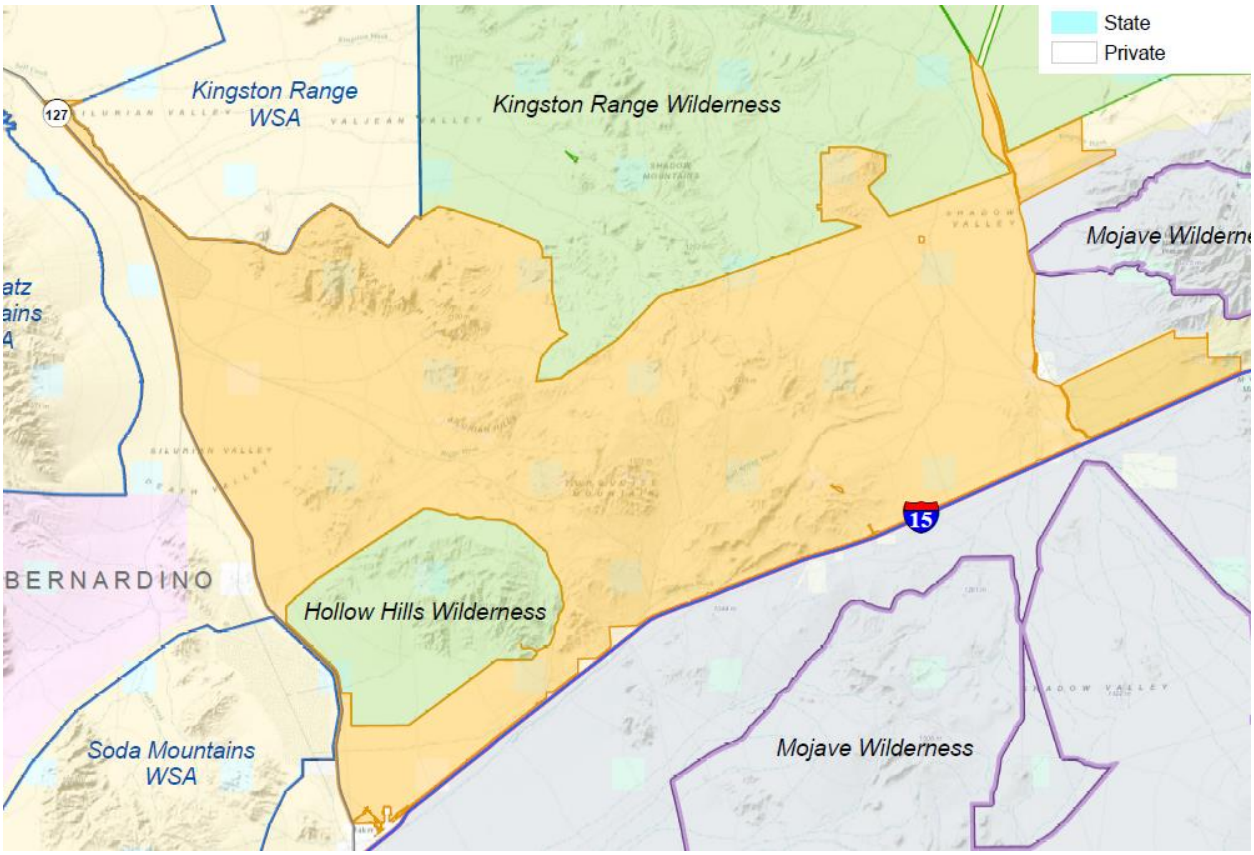

Figure 5*:* Silurian Valley (to the west) and Shadow Valley (to the east), as well as the Silurian Hills and Turquoise Mountain area are all proposed National Conservation Lands and should be designated as such in the DRECP.

Despite its desolate appearance, like the rest of the Valleys of the Amargosa, Silurian Valley provides an essential hydrologic link in the Amagosa 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

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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.

Furthermore, the Silurian Valley is simply an undisturbed landscape. From the Boulder transmission lines in the south to Ibex Pass in the north, there is essentially no trace of modern human development. The only way that industrialization has reached Silurian is via the old Tonopah & Tidewater Railroad grade, which runs north-south across the Valley. At this point, the old T&T is an important cultural relic, a reminder of the Amargosa Watershed's rich mining history. The Old Spanish Trail also passed through Silurian Valley, on the infamous *jornada de muerto*, a long waterless stretch of the trail. This historic resources should be protected from industrial development.

BLM has already recognized the unique resources present in Silurian Valley, and their relative fragility, in denying Iberdrola's 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.

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 National Conservation Lands 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), and area where tortoise conservation has been prioritized. It is also a frequently used forage area for raptors such as golden eagles and prairie falcons, who fly between the two great mountain ranges in search of sustenance. Bighorn are well-documented using Shadow Valley as a connectivity corridor between the two mountain ranges.

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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 which exist nowhere else in the desert. These include white fir forest, giant nolina, and a variety of wildlife which 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.

Special Recreation Management Areas

We support the designation of the Amargosa-Grimshaw Lake Special Recreation Management Area (SRMA). This area provides an opportunity for BLM's multiple use mandate to be showcased in a conservation setting, and BLM has been pro-active in pursuing conservation objectives in the area. Outstanding opportunities for recreation abound, and it is incumbent upon BLM to dedicate the time and resources necessary to manage such opportunities so as to limit any damage to resources that visitors might cause. We strongly support the language which proscribes managing the area for passive recreation. Designating the Amargosa-Grimshaw Lake SRMA would help direct agency resources towards further high-priority conservation actions which would enhance recreation while protecting the land and its denizens. It is important that any such designation be implemented in conjunction with the Amargosa Wild and Scenic River and Amargosa River ACEC management plans. We strongly support BLM's track record of resource management in this area, and the designation of the Amargosa-Grimshaw Lake SRMA will enhance BLM's ability to manage for both recreation and conservation in this ecologically sensitive area.

We also conditionally support the designation of the Tecopa Pass Historic Trails SRMA. The DRECP correctly recognizes that this is an ecologically sensitive and historically significant

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area, and that active management is required to provide for recreational opportunities while maintaining the ecological integrity of this special place. While current motorized use is a perfectly acceptable form of recreation in the area, it is important to maintain said use at current levels. Expansion of motorized routes of travel in this sensitive part of the Kingston Range is unacceptable. Inasmuch as a SRMA designation enhances BLM's ability to manage existing recreation in the area, we support it. But any recreation management should be oriented toward the conservation of resources and the maintaining of the character of the area. Horse Thief Campground is currently ill-defined and poorly marked, and we support limited enhancements to it to provide for concentrated camping impacts. We strongly support the establishment and maintenance of facilities for human waste. However, implementing an RUP program and collecting fees would change the character of recreation in the Kingstons. It is open desert country, adjacent to two National Park system units, and the visitors who come to this area do so to escape heavily developed facilities and fee-based camping. Implementing a fee would simply push campers out into the surrounding Public Lands. Additionally, in order to provide for recreation in the SRMA, modifications should be made to the outflow system from Horse Thief Spring to restore the nature drainage patterns which will provide for enhanced wildlife habitat.

The Amargosa River Wild & Scenic River

Congressionally designated in 2009, the 26 mile Wild and Scenic stretch of the Amargosa River between Shoshone and Salt Creek is one of the crown jewels of the National Conservation Lands. The Wild and Scenic Rivers Act mandates that the Amargosa be maintained in its free-flowing condition, while protecting and enhancing the values for which it was designated. This means that the BLM must safeguard the Amargosa Watershed from groundwater pumping, which potentially would lower spring flows into the Amargosa River. Any and all management actions and land use planning designations must prioritize the quantity of groundwater flows in the region. It is also important that the data from the State of the Basin Report by Andy Zdon and Associates be utilized in order to broaden the reach of the protections offered by the Wild and Scenic designation. The Report proves that the Pahrump Valley aquifer feeds into the Amargosa River, and thus management actions in this area need to prioritize protecting and enhancing groundwater flows. In particular, this means actions in the Charleston View area, which is along the flowpath between Pahrump Valley and the Amargosa River. Please see the Amargosa Conservancy's other comments for a more detailed analysis.

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Conclusion

The Amargosa Watershed is a rare treasure, and the lands therein are deserving of the highest possible standard of conservation. Please designate all Public Lands within the Amargosa Watershed as National Conservation Lands.

Respectfully submitted,

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