



Attn: Herman Pinales
BLM Las Vegas Field Office
4701 N. Torrey Pines Drive
Las Vegas, NV 89130

Via email: blm_nv_snddo_yellowpine@blm.gov

May 4, 2020

RE: Yellow Pine Solar Project Draft Environmental Impact Statement DOI-BLM-NV-S010-2017-0110-EIS

Dear Mr. Pinales,

Basin and Range Watch, Western Watersheds Project, Morongo Basin Conservation Association, Sierra Club California and Nevada Desert Committee, Desert Survivors, and Shoshone Village submits comments on the proposed 500-megawatt Yellow Pine Solar Project which would develop approximately 3,072.5-acres of Federally Threatened Mojave desert tortoise habitat and prime Mojave yucca stands in Pahrump Valley, Nevada. The project would include a photovoltaic solar energy generating facility and associated substation, and a 230-kilovolt (kV) substation and associated 230-kV transmission line.

Basin and Range Watch is a 501(c)(3) non-profit working to conserve the deserts of Nevada and California and to educate the public about the diversity of life, culture, and history of the ecosystems and wild lands of the desert. Federal and many state agencies are seeking to open up millions of acres of unspoiled habitat and public land in our region to energy development. Our goal is to identify the problems of energy sprawl and find solutions that will preserve our natural ecosystems, open spaces, and quality of life for local communities. We support energy efficiency, better rooftop solar policy, and distributed generation/storage alternatives, as well as local, state and national planning for wise energy and land use following the principles of conservation biology. We have

visited the site of the proposed Yellow Pine Solar Project. We have taken photos of the region, hikes on the site and have observed unique flora and fauna on the site.

Western Watersheds Project is a non-profit organization with more than 12,000 members and supporters. Our mission is to protect and restore western watersheds and wildlife through education, public policy initiatives, and legal advocacy.

Morongo Basin Conservation Association advocates for the healthy desert environment that nurtures the region's rural character, cultural wealth and economic well-being.

The Sierra Club California and Nevada Desert Committee works for the protection and conservation of the deserts of California, Nevada, and other areas of the Southwest; monitors and works with public, private, and non-profit agencies to promote preservation of our arid lands; sponsors education and service trips; encourages and supports others to work for similar objectives; and maintains, shares, and publishes information about the desert.

Desert Survivors is a non-profit organization founded in 1981 with the mission of experiencing, sharing and protecting desert wilderness. We recognize the places we love to explore will not remain wild unless we give others the opportunity to experience them and unless we remain vigilant and active in our efforts to monitor and preserve them.

Shoshone Village is situated in the beautiful Death Valley and Amargosa River region of Inyo County California, and is an ecotourism hub.

1. The Draft EIS Review Should Not Be Approved in Spite of the COVID-19 Crisis

It is our understanding that the Southern Nevada district of the Bureau of Land Management (BLM) did request a comment extension for this review over the COVID-19 crisis. Some of us made that request and we do appreciate the efforts that this office made to meet those requests. Ultimately, we were told that the Interior Secretary said no. He is using the pandemic to streamline this review.

This is very irresponsible. Our organizations have several people assisting in our work, some are volunteers and some of them were not able to participate in the narrow time frame of this Environmental Impact Statement (EIS) due to the unique stresses from the crisis. We had our own situation which created problems getting these comments on time. You will most likely miss comments over this. Equally, the Interior Department has eliminated public meetings for this review. It may be legal to eliminate public meetings, but it is very unique to do such a thing and this weakens the public's opportunities to be heard on the issue. We were told by BLM in Reno that this comment period cannot be extended because Yellow Pine has made Fast 41 Status. There is nothing in the Code of Federal Regulations, the Federal Lands Policy Management Act or the National

Environmental Policy Act that requires the BLM to eliminate public meetings or prevents the BLM from extending a public comment period.

Furthermore, the BLM has not really made the case that Yellow Pine is an essential project. In fact, pushing it through like this can further endanger the workers as well as the residents of Pahrump, Nevada, and Charleston View, California. This is because those suffering from COVID-19 symptoms are more susceptible to respiratory issues and no large-scale solar project to date in arid regions of the southwest has ever adequately mitigated the fugitive dust caused by construction. Over 25 workers contracted Valley Fever on a solar project in San Luis Obispo County, California.¹

If someone is COVID-19 positive, Valley Fever could make their immunity even more compromised and there are not enough tests available.

One other suggestion for the Southern Nevada offices of BLM would be to answer questions directly and not make us go to the state office for answers.

It should also be noted that the COVID-19 crisis has reduced America's consumption of energy and there is just not a huge demand for the energy produced by the Yellow Pine Solar Project. Even before this crisis, some power companies have had to pay adjacent states to take their excess energy generated from solar projects during daylight hours.

2. The Purpose and Need Is Faulty

The COVID-19 crisis has created a 16-year low in world energy demand. This should have been factored into an updated Purpose and Need Statement. The BLM is claiming that the streamlined review for the project is essential, yet the demand for the energy it will produce is at an all-time low.²

The Draft EIS states, "In accordance with FLPMA, public lands are to be managed for multiple uses that consider the long-term needs of future generations for renewable and non-renewable resources" (DEIS at 1-1). But this is only a partial and selective quote of the Federal Land Policy Management Act (FLPMA) concerning multiple use, where the same mandate to manage public lands must also include wildlife and fish, scenic values, and historic values, as well as recreation:

...a combination of balanced and diverse resource uses that takes into account the long term needs of future generations for renewable and nonrenewable resources, including, but not limited to, recreation, range, timber, minerals, watershed, wildlife and fish, and natural scenic, scientific and historical values; and

¹ <https://m.lasvegassun.com/news/2020/apr/27/nevada-fight-over-bombing-range-pits-tribes-vs-us/>

² <https://www.weforum.org/agenda/2020/04/united-states-energy-electricity-power-coronavirus-covid19/>

harmonious and coordinated management of the various resources without permanent impairment of the productivity of the land and the quality of the environment with consideration being given to the relative values of the resources and not necessarily to the combination of uses that will give the greatest economic return or the greatest unit output. (43 U.S. Code § 1702(c))

A 30-year lease to mow, apply herbicides, drive over, and grade such a large area of public lands in Mojave Desert ecosystems would greatly impair the quality of the environment here, and full restoration of this arid land could take centuries, thus being a virtually permanent impairment. BLM should not simply look at a purpose and need that seeks the greatest economic return on these public lands, but must also consider and balance the watershed, wildlife and fish, natural scenic values, and historic values of the land. BLM's Purpose and Need is faulty for not taking these mandates of FLPMA into account.

The Purpose and Need Statement responds to the applicant's request to build a solar project in the region, but by listing the applicant's objectives directly under the statement, the BLM is self-fulfilling the statement to only reflect on too narrow a scope of alternatives. The statement is crafted to make approval of the project easier for the BLM and would accommodate the applicant. The BLM's National Environmental Policy Act handbook states: "[t]he purpose and need statement for an externally generated action must describe the BLM purpose and need, not an applicant's or external proponent's purpose and need (40 CFR 1502.13)." See 40 C.F.R. §§ 1500.1(b); 1502.13; *Envtl. Law & Policy Ctr. v. U.S. Nuclear Reg. Comm.*, 470 F.3d 676 (7th Cir. 2006); *Simmons v. U.S. Army Corps of Eng'rs*, 120 F.3d 664 (7th Cir. 1997). "An agency may not define the objectives of its action in terms so unreasonably narrow that only one alternative . . . would accomplish the goals of the agency's action, and the EIS would become a foreordained formality. *Nat'l Parks & Conservation Ass'n v. Bureau of Land Mgmt.*, 606 F.3d 1058, 1070 (9th Cir. 2010).

Moreover, an agency may not allow the economic needs and goals of a private applicant to define the purpose and need, and hence the inevitable outcome, of an EIS. *Id.*

Federal agencies must "exercise a degree of skepticism in dealing with self-serving statements from a prime beneficiary of the project and to look at the general goal of the project rather than only those alternatives by which a particular applicant can reach its own specific goals." *Envtl. Law & Policy Ctr.*, 470 F.3d at 683 (quoting *Simmons*, 120 F.3d at 666).

Yellow Pine Solar is a covered project under Title 41 of Fixing America's Surface Transportation Act (FAST-41). FAST-41 established new coordination and oversight procedures for infrastructure projects being reviewed by Federal agencies. The intent of the act is to improve early coordination between government agencies, increase public transparency, and increase government accountability. If the goal is indeed to increase accountability, public transparency and provide early coordination, this is not in the

relevant scope of the project review. This is simply a newer procedure that should not influence the outcome of the project.

There is no Plan Amendment, therefore a Supplemental EIS is needed. The project would be built in a region that has several valuable resources that have been identified by both the 1998 Las Vegas Resource Management Plan and the Clark County Multi-Species Habitat Conservation Plan.

The BLM has contradicted itself by allowing a Land Use Plan Amendment over the Gemini Solar Project, also in Clark County, Nevada because most of that project site lies in lands classified as VRM Class III under the 1998 Las Vegas Resource Management Plan. The BLM has correctly determined that a large-scale solar project would not be consistent with VRM Class III Objectives.

The VRM Class III objective is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.

The Yellow Pine Solar Project is smaller than Gemini, but will still visually impact 4.6 square miles including the viewshed of the Old Spanish National Historic Trail.

Equally, Yellow Pine Solar would be visible for several distance zones including the view approaching the site from the south on Highway 160. This is a higher elevation so a solar project would dominate the entire view-scape.

The below photo shows the proposed Yellow Pine Solar site from approximately 7 miles away looking Northwest from Highway 160.



^Yellow Pine Solar site looking Northwest from Highway 160

It appears arbitrary that the BLM would amend a land use plan for the Gemini Solar Project and refuse to do so for a nearly identical solar project in their same planning area with very similar conflicts.

We believe this and the refusal to delay this review over COVID-19 justifies a supplemental EIS.

The Purpose and Need Statement should consider the following state and federal land use plans and laws:

The Bureau of Land Management Western Solar Plan, which was designated under the Solar Programmatic Environmental Impact Statement, should be updated. Yellow Pine Solar Project would be located outside of these Designated Leasing Areas or Solar Energy Zones. The Yellow Pine Site was not designated as an appropriate Solar Energy Zone or Designated Lease Area. This should also be an alternative listed in the DEIS.

The Yellow Pine Site lies in the limbo of what the BLM calls a “grandfathered application”. But the area should fall in the category of a Variance Area. Variance areas are made up of BLM-administered lands that are outside of [solar energy zones \(SEZs\)](#) or Designated Lease Areas and not otherwise [excluded](#) by the Solar Energy Program. The BLM will consider right-of-way (ROW) applications for utility-scale solar energy development in variance areas on a case-by-case basis based on environmental considerations; coordination with appropriate Federal, State, and local agencies and tribes; and public outreach. The Yellow Pine application has changed ownership so the BLM

called this a “grandfathered application” that nonetheless, must adhere to the Variance Process.

For established Designated Leasing Areas (Solar Energy Zones): The Bureau of Land Management (BLM) defines a solar energy zone (SEZ) as an area well suited for utility-scale production of solar energy, where the BLM will prioritize solar energy and associated transmission infrastructure development. A discussion of the criteria used to identify SEZs is provided in Section 2.2.2.2 of the Draft Solar PEIS.

Through the Solar PEIS Record of Decision, the BLM established a comprehensive Solar Energy Program that allows the permitting of future solar energy development projects on public lands to proceed in a more efficient, standardized, and environmentally responsible manner.

In October 2011, Boulevard Associates, LLC, a subsidiary of NextEra Energy Resources, LLC, filed an application for a Right-of-Way grant with the Southern Nevada District Office of the BLM for the Sandy Valley Solar Project. This original application included an area of approximately 9,290.0 acres on BLM-administered lands and extended north and south of Tecopa Road. The original application was later amended on June 24, 2016, and resubmitted by a new company under the new name, Yellow Pine Solar Project. Almost 10 years have passed, and we believe that the time is up for the “grandfathering in” process. Conditions on the ground have changed, technologies have modernized, governing bodies have changed. It is time that the grace period is ended, and all new solar applicants go through the publically-reviewed Solar Energy Zone permitting process.

The 1998 Las Vegas (Southern Nevada) Resource Management Plan (RMP). The BLM chose not to revise the 1998 RMP. As it stands, the RMP protects the wildlife, visual resources, Areas of Critical Environmental Concern, cultural resources and recreational access of the project site and region. The plan provides an additional protection to sensitive public lands. The plan should be amended over the visual impacts that will be caused by Yellow Pine Solar.

That revision could have designated new Areas of Critical Environmental Concern in the area. In particular, Clark County nominated a large ACEC (Stump Spring) for the entire area located South of Tecopa Road. All of the resources on the Yellow Pine Site are just as important and have the same abundant resources. If the review for Yellow Pine Solar were to be delayed until a new RMP could be written, we would have the opportunity to protect resources that would otherwise be lost from the Yellow Pine Solar Project.

The Clark County Multi-Species Habitat Conservation Plan. Several of the species that will be impacted by Yellow Pine Solar are protected under the Clark County Multi-Species Habitat Conservation Plan. The County has also nominated a major portion of the area to be protected as an Area of Critical Environmental Concern.

Several species protected under the plan occur on the site. This is not addressed in this application.

The Desert Tortoise Recovery Plan. Yellow Pine Solar will have a major impact on the threatened desert tortoise. A Recovery Plan for the tortoise was written in 1994 and updated in 2011.

A "recovery plan" determines the "threats" that are hurting the species, suggests actions that will reduce or eliminate these threats so species can fully recover, and recommends ways to ensure that the population remains stable.

The goal of the Endangered Species Act (ESA) is to conserve the ecosystems upon which listed species depend and to recover species to levels where protection under the ESA is no longer necessary. Section 4 of the ESA directs the Service to develop recovery plans for the conservation and survival of a listed species.

Key elements of the revised plan include the following:

Develop, support, and build partnerships to facilitate recovery;

Protect existing populations and habitat, instituting habitat restoration where necessary;

Augment depleted populations in a strategic, experimental manner;
Monitor progress toward recovery, including population trend and effectiveness monitoring;

Conduct applied research and modeling in support of recovery efforts within a strategic framework; and implement a formal adaptive management program that integrates new information and utilizes conceptual models that link management actions to predicted responses by Mojave desert tortoise populations or their habitat.

The Draft EIS fails to integrate new information about drastic declines in most Recovery Units of the Mojave Desert tortoise in the last 10 years. We discuss more about these details of desert tortoise declines below.

The Utility Environmental Protection Act of Nevada. The Utility Environmental Protection Act (UEPA) was enacted in 1971 to address environmental issues related to the construction of utility facilities. UEPA permits granted by the Public Utilities Commission of Nevada (PUCN) apply to: Conventional power plants. ... Electric transmission facilities rated over 200 kilovolts.

The PUCN cannot approve or modify a permit unless it finds and determines:

- The probable effects on the environment.

- The extent to which facility is needed for reliability if it emits greenhouse gases and does not use renewable energy as its primary source for generating electricity.
- The need for the facility balances any adverse effects on the environment.
- The facility represents the minimum adverse effects on the environment given current technology and feasible alternatives.
- All permits, licenses and approvals required by federal, state, and local jurisdictions are obtained or in the process of being obtained for construction.
- The facility will serve the public interest.

These points are not addressed within this application.

The Nevada Natural Heritage Program (NNHP). The mission of NNHP is to develop and maintain a cost-effective, central information source and inventory of the locations, biology and status of all threatened, endangered, rare and at-risk plants and animals in Nevada. The Mojave desert tortoise, Pallid bat, loggerhead shrike, and Gila monster are some of the species recognized by NNHP. The Draft EIS leaves out significant analysis of these species.

The Impacts of Lithium Mining and Battery Cost Should Be Considered

The Need for this project should also be evaluated based on the monetary and environmental costs of lithium mining. In fact, the cumulative impacts of lithium extraction should be evaluated in the Draft EIS.

Renewable energy battery storage has not been perfected to meet the energy demands and needs of the USA. In fact, it would cost trillions of dollars just to power California with renewable energy using the lithium ion battery storage. The environmental costs of lithium mining have caused environmental justice problems in South American nations, causing groundwater loss and contamination of water sources. Equally, lithium mining uses up 24,000 acre feet of water annually in Clayton Valley NV.³

A proposed lithium mine near Fish Lake Valley, Nevada threatens the survival of the rare Tiehm's buckwheat which grows only on 20 acres in Esmeralda County, Nevada.⁴

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https://www.leg.state.nv.us/74th/Interim_Agendas_Minutes_Exhibits/Exhibits/Lands/E071408G.pdfNevada

⁴ <https://biologicaldiversity.org/w/news/press-releases/endangered-species-protections-sought-rare-nevada-wildflower-imperiled-mining-2019-10-08/>

Lithium-ion batteries are not a cost-effective solution. Long-lasting and power-dense, lithium-ion batteries are already the top choice in today's electronics, including iPhones and Tesla electric vehicles. As such, many renewable energy experts have turned to lithium batteries as the energy storage solution of the future – a strategy with which the experts at MIT disagree.⁵

On a small scale, lithium-ion batteries seem like an effective storage method for excess energy created by renewables. However, building enough lithium-powered storage to bring California to 100 percent renewable power, at its current cost, would equate to roughly \$2.5 trillion. At one-third of today's price, lithium battery storage would cost \$1,612 per generated MW. Considering these costs would be added to ratepayers' electricity bills, it is unfair, unnecessary and unsustainable to pursue large-scale lithium battery storage.

3. The Proposed Action, Alternatives, and Environmental Consequences Analysis Is Inadequate

The only two available alternatives are an All Mowing Alternative and a No Action Alternative.

The BLM Preferred Alternative is the All Mowing Alternative: with the same land footprint.

Vegetation would be mowed to a height of 18 to 24 inches throughout the project site prior to construction and maintained at a height of 18 to 24 inches in areas outside of necessary vegetation removal (areas that would be graded to level for pads, O&M building, roads, etc.). This Alternative Action 2 was developed to address the difficulty in restoration of Mojave Desert ecosystems after disturbance; conservative estimates are that disturbed soils can take a century to recover. Vegetation and/or soil removal at these large scales removes multi-use functionality from these sites, even after the 30-year ROW has ended. Mowing is becoming the standard on large site type ROWs to prevent permanent impairment of public lands (as mandated by FLPMA) and in lieu of offsite mitigation. BLM's IM 2019-018 directs BLM to attempt to minimize impacts by limiting the degree or magnitude of the action and its implementation. The Southern Nevada District Office is working toward minimizing impacts of all development through on-site project development minimization measures, such as mowing. Mowing methods are designed to help preserve soils, biological soil crusts, soil seed banks, native perennial vegetation diversity and structure, and cacti and yucca species, and to resist weed invasions, dust, and erosion.

The No Action Alternative is the best offered alternative due to the inadequacies of the Draft EIS.

⁵ <https://www.chooseenergy.com/news/article/lithium-batteries-might-not-answer-renewables-storage-problem/>

Under the National Environmental Policy Act, the BLM is required to consider a full range of alternatives. NEPA directs the BLM to “study, develop, and describe appropriate alternatives to recommended courses of action in any proposal that involves unresolved conflicts concerning alternative uses of available resources;...” (NEPA Sec102(2)(E))

The BLM needs to review the full range of alternatives. According to the BLM’s NEPA Handbook: “For renewable energy rights-of-way, there are many different types of alternatives that are considered by the BLM and the applicant during pre-application activities and that are suggested to the BLM by external parties through scoping and comments on the draft NEPA document. These alternatives typically include: modified site configurations (e.g., varied turbine or solar panel layouts, or different configurations for support and access facilities), modifications to the proposed technology (e.g., wet vs. dry cooling), different technologies (e.g., photovoltaic vs. concentrated solar power), other BLM land locations, non-Federal land locations, reduced project footprint/MW, and phased construction.”

The BLM failed to review a reduced footprint alternative for Yellow Pine Solar. The BLM claims that the Mowing Alternative is becoming the standard on large site type ROWs to prevent permanent impairment of public lands (as mandated by FLPMA) and in lieu of offsite mitigation. This is a premature statement. Vegetation mowing has only been used and documented on the 80-acre Pahrump Solar Project. There is no peer reviewed information that vegetation mowing is better for the desert tortoise or that tortoises and solar panels work well together. Equally, there is no information that mowing is good for native plants as there is evidence that much of the regrowth is from invasive, non-native species.

Even though BLM has the Mowing Alternative as its Preferred Alternative, the Draft EIS contradicts itself later in the document, seeming to find problems with allowing mowed vegetation to grow back in the solar field:

The presence of the facility and associated operations and maintenance activities may increase the risk for fire or spread of invasive and noxious weeds, which could degrade habitat within and adjacent to the project area. However, as vegetation regrowth underneath the solar arrays would be discouraged and a noxious weed and invasive plant management plan would be implemented, the risk of fire and/or habitat degradation of surrounding habitat would be reduced. (at 3-17, emphasis ours)

Will Mojave Desert vegetation be allowed to grow, or will herbicide treatments need to be allowed to prevent invasive weeds and fire fuel build-up? The project cannot have both.

Because there are no peer reviewed studies concerning the success of vegetation mowing relating to the desert tortoise, it only makes sense to try this experiment on a smaller footprint.

The following impacts could be associated with vegetation mowing, and are not analyzed:

1. Vegetation mowing creates a large amount of fugitive dust.
2. Vegetation mowing uses vehicles that weighs tens of thousands of pounds running over multiple habitats.
3. Vegetation mowing on 4.6 square miles will directly kill many thousands of plants and animals. These include kangaroo rats, leopard lizards, horned lizards, badgers, kit foxes, bird nests, countless insect species, tarantulas - the list is too big.
4. Vegetation mowing disturbs stable soils and proliferates invasive weeds. This can be seen on the Pahrump Solar Project.
5. Vegetation mowing and routine maintenance compacts soils and creates problems for burrowing animals.
6. Vegetation mowing will disturb aeolian habitat and there is no prediction on how long that would take to recover.
7. Loud machines could deafen animals that are not crushed.

The vehicles used for vegetation mowing weigh tens of thousands of pounds, far more than the heaviest species out there.

In 2005, the Medford Oregon BLM district reviewed the Timber Mountain Recreation Plan Environmental Impact Statement. This is a management plan for an off-highway vehicle recreation area. BLM looked at impacts to cultural, biological, visual, and recreational resources. There were 4 action alternatives including reduced route and recreation alternatives. While Off Highway Vehicle Recreation is different from vegetation mowing, there will be similar impacts. After all, there are no roads where the mowers will be used. We made observations of other utility-scale solar projects where mowing of creosote-bursage desert was undertaken in the solar field (Basin and Range Watch 2019).

If Mojave yuccas or taller vegetation such as catclaw acacias are present, these would likely be masticated, as they grow too tall to be in a solar field. The amount of construction disturbance on the Mojave Desert scrub is unacceptable: at the 780-acre Sunshine Valley Solar project in Amargosa Valley NV, we observed high impacts to the creosote-bursage desert in July and August 2019: masticators driving over the delicate desert soils and desert pavement; several large tractor-trailer semi-trucks delivering equipment to pound the solar facility framework poles into the ground, and more. All this construction traffic created dust whirlwinds and clouds of fine particulates as the desert surface was significantly disturbed during mowing and construction of the solar panel rows. Further desert soil was damaged on adjacent lands as large new power poles and gen-tie lines were constructed, and a new substation.

If this project were to be constructed, desert pavement, biological soil crusts, native annual plants, native perennial forbs, and the root systems of many shrubs would be significantly damaged, disturbed, or destroyed by these activities, and lasting effects would occur for decades. Animal burrows would be collapsed and small animal species crushed or scared away from their territories and cover.

For more on mowing under solar projects, see our field observations on the Pahrump Valley Solar Project at <https://www.basinandrangewatch.org/Pahrump-Solar.html>, attached (Basin and Range Watch 2019).

We believe these oversights and contradictions require that a Supplemental Environmental Impact Statement should be prepared to cover these categories.

4. More Alternatives, Alternative Locations, and Distributed Generation Alternatives Need To Be Analyzed

A Reduced Footprint Alternative: This would satisfy BLM's requirement to review the full range of alternatives and could also reduce impacts to the Old Spanish Trail, visual resources, air quality, desert tortoise and all biological resources. A supplemental EIS should be written for this reason alone. A reduced footprint alternative would reduce several impacts.

Conservation Alternative/Resource Management Plan (RMP) Revision: The RMP could be amended to create a Conservation Alternative for the region. Or better yet, the project review could be placed on hold until a revision of the 1998 RMP can be made. Most of the project site has been designated as Visual Resources Management Class III. The site is one of the most undisturbed sites we have seen for a proposed solar project. A new plan amendment could easily upgrade the visual Class to VRM II. The tourism value and travel frequency along the Tecopa Road has greatly increased since 1998.

The objective of VRM Class III is to *Partially retain the existing character of the landscape. Allow a moderate level of change that may attract attention but should not dominate the view of a casual observer.* It would be impossible for a 4.6 square mile solar project not to dominate the view of the casual visitor. It is not clear why the BLM is refusing to amend the 1998 RMP for Yellow Pine Solar. Poor judgement has been used to meet the deadline for Yellow Pine which as a Fast 41 Infrastructure Project. According to the Code of Federal Regulations – CFR 1610.5-5.

A [resource management plan](#) may be changed through amendment. An amendment shall be initiated by the need to consider monitoring and evaluation findings, new data, new or revised policy, a change in circumstances or a proposed action that may result in a change in the scope of resource uses or a change in the terms, conditions and decisions of the approved plan. An amendment shall be made through an environmental assessment of the proposed change, or an environmental impact statement, if necessary, [public](#) involvement as prescribed in [§ 1610.2](#) of this title, interagency coordination and consistency determination as prescribed in [§ 1610.3](#) of this title and any other data or analysis that may be appropriate. In all cases, the effect of the

*amendment on the plan shall be evaluated. If the amendment is being considered in response to a specific proposal, the analysis required for the proposal and for the amendment may occur simultaneously.*⁶

The BLM is amending the RMP to issue a Record of Decision approving the Gemini Solar Project over downgrading the site from VRM Class III to VRM Class IV.

In 2017, the BLM also was planning on amending the RMP when they reviewing the now cancelled Crescent Peak Wind Project. Their plan was to downgrade the VRM Classes from VRM Class II and VRM Class III to VRM Class IV. The objective of VRM Class IV is to *provide for management activities that require major modifications of the existing character of the landscape. The level of change may be high and may dominate the view and be the major focus of viewer attention.*

In 2014, the Southern Nevada BLM issued a Record of Decision for the Silver State South Solar Project – a 2,500 acre solar project built on BLM lands near Primm Nevada.⁷ All of the BLM lands on the project site were designated as VRM Class III and legally had to be downgraded to VRM Class IV to issue the ROD. It should also be noted that the Silver State South Solar Project is nearly 500 acres smaller than the proposed Yellow Pine Solar Project.

We believe that allowing the Yellow Pine Solar Project to be permitted without downgrading the VRM Class III to VRM Class IV violates the BLM policy. The BLM should amend the Las Vegas Resource Management Plan, incorporate a 90 day comment period and a protest period. There is no other way to do this now unless a supplemental EIS is written. Another option would be to suspend the review until the RMP can be updated.

The whole project site could then be considered for designation as an Area of Critical Environmental Concern.

A conservation alternative would preserve the visual resources, the Old Spanish Trail view-scape, desert tortoise, all wildlife, old growth desert vegetation and biological crust and old desert pavements.

Alternatives considered and eliminated from detailed study need better consideration in our view.

The south unit of the proposed Yellow Pine Project was eliminated, and a north-of-Tecopa-Road unit has moved forward for review. We want to point out that we do not believe that the applicant ever intended to develop the entire project proposal on over

⁶ <https://www.law.cornell.edu/cfr/text/43/1610.5-5>

⁷ <https://www.federalregister.gov/documents/2014/02/21/2014-03685/notice-of-availability-of-the-record-of-decision-for-the-final-supplemental-environmental-impact>

9,000 acres. We believe it is a public relations ruse to propose to develop an approved Desert Tortoise Translocation Area to only later choose the land right next to it and claim to be concerned about environmental impacts.

A Distributed Generation Alternative should be analyzed. Basin and Range Watch and Western Watersheds Project asked the BLM to consider a distributed generation alternative. Under the National Environmental Policy Act, the BLM is required to consider alternatives outside of the jurisdiction of the lead agency.

In this case, the BLM did not even acknowledge the request. We are pasting our scoping comments on this and would like BLM to respond to this question in the Final Environmental Impact Statement.

This is our request:

*The Draft Environmental Impact Statement should consider an alternative that utilizes degraded brownfields and distributed generation. Under the National Environmental Policy Act, agencies are required to consider alternatives outside of their jurisdiction. Since our above comments raise the issue of lacking Need for this project, BLM can easily justify a **No Action Alternative** based on available distributed resources located close by.*

The BLM rejected our long comments on distributed generation (DG) for the scoping phase of the project. BLM responded to very few of the issues we raised. Again, the reasoning is that these areas are not close enough to the proposed project site. There was never a mandate to develop Pahrump Valley in this manner, and BLM simply did not do their homework on distributed generation. The BLM rejects DG because they say DG facilities can only generate ten megawatts. But the goal is to use solar energy, so BLM could simply do math and determine that 65 ten megawatt sites could fulfill this need.

We request that the BLM reconsider our long scoping comments on DG in a supplemental EIS. In September, 2016, Dr. Rebecca Hernandez of University of California, Davis published a study, Solar Energy Potential on the Largest Rooftops in the United States. This study was conducted on the rooftops of 5,418 elementary schools in Korea to determine the feasibility of achieving net-zero energy solar buildings through rooftop PV systems (Hernandez et al. 2013).

The study found that the potential for the building to become net zero-energy is higher if the ratio of (person/roof area) is lower. Another study by Ordonez compared the technical potential of rooftop PV system on residential homes in Spain with the total energy consumption of the residential sector in the country and found that PV installations would satisfy 78.89% of all energy needs. With increasing energy efficiency and reduction in energy consumption, rooftop PV systems can be a viable method to optimizing energy generation.

5. No Mitigation Measures Are Provided For Significant Impacts To The Environment

No Mitigation Measures are listed in the Draft EIS. These help us to evaluate the BLM's attempts to offset the impacts. A supplemental EIS should include the list of Mitigation Measures.

6. Mojave Yuccas and Rare Cactus Will Be Significantly Impacted With No Mitigation

For Vegetation on the proposed project, the number of native Mojave yuccas and cactus that will be destroyed to construct the solar plant is a significant impact that is not mitigated. From the Draft EIS:

Mojave yucca (*Yucca schidigera*) - 140,325 individuals present on the project area

Beavertail pricklypear (*Opuntia basilaris*) – 5,664

Wiggins' cholla (*Cylindropuntia echinocarpa*) – 5,081

Matted cholla (*Grusonia parishii*) – 4,885

Cottontop cactus (*Echinocactus polycephalus*) – 3,199

Engelmann's cactus (*Echinocereus engelmannii*) – 2,059

Buckhorn cholla (*Cylindropuntia acanthocarpa*) – 1,028

(3-83-84)

The Proposed action would directly impact 106,771 cactus and yuccas. Approximately 92,930 Mojave yuccas would be destroyed. 4,885 Parish's club-cholla (*Grusonia parishii*) would also be destroyed, which is on BLM California's sensitive species list, has a limited range in Nevada and is uncommon in our observations. This is unacceptable, and a significant impact that is not mitigated.

Alternative 2, the Mowing Alternative, is BLM's Preferred Alternative. Under the mowing alternative, all cacti and yucca would be left on-site and treated the same as any other vegetation—they would be mowed or ground down to between 18 and 24 inches. Some cacti may be crushed as part of construction activity. BLM says cacti can successfully reproduce vegetatively, so they may be able to resprout even if crushed. But on solar projects we have observed, the amount of heavy equipment and truck traffic across the desert to build the project would result in very large impacts to delicate soils and desert vegetation: soil compaction, elimination of biological soil crusts, erosion and wind removal of loose soil particles.

BLM claims most of the cacti species within the project area are under 4 inches, so they would avoid most impacts if they are not directly crushed. In our observations on the project site this is not the case—chollas and cottontop cactus are often 12 to 24 inches tall or higher, so most will be destroyed.

According to BLM, Mojave yuccas resprout from the base after damage, so although some mortality is expected, these species may be able to resprout. The impacts of the mowing alternative are expected to have a low to moderate effect because of the site preparation method and with implementation of project design features. (3-91)

We disagree. The Mojave yuccas present on the proposed project site are unusually tall and sometimes tree-like. We have recorded tree-like yuccas on the project site that are over 10 feet tall.



^Unusually tall Mojave yucca, 10 feet or over, on the proposed project site north of Tecopa Road. BLM is allowing this yucca to be masticated down in their preferred alternative, with no mitigation.



^Tall Mojave yucca on the proposed northern unit of the Yellow Pine Solar Project. Will this old-growth yucca be mowed and masticated with no mitigation?

Cacti and Yucca are considered Forest Products under 43 CFR 5420.0-6. Even with a site plan that avoids washes, the majority of these plants would be destroyed. Will the BLM attempt to transplant any of these plants? Will the BLM hold a sale for some of these plants?

Mojave yuccas can live to be over 500 years old and provide essential habitat and cover for several desert species, many of which are protected under the Clark County Multi-Species Habitat Conservation Plan. These include the desert tortoise, the western banded gecko, the desert iguana, the Mojave green rattlesnake, California kingsnake, large-spotted leopard lizard, and Western long-nosed snake.

Mastication of Mojave Yuccas can directly kill other species that also depend on them, such as Desert night lizards (*Xantusia vigilis*).

This is another reason to review a reduced footprint alternative and an offsite location alternative.

7. Rare Plants Will Be Harmed

Pahrump Valley buckwheat (*Eriogonum bifurcatum*), a BLM Sensitive Species. Alkaline sand flats and slopes, within saltbush communities at elevations of 1,969–2,700 feet amsl. Associated with Corncreek-Badland-Pahrump soils due to its salinity and association with relict lakebeds and lake terraces. May occur. Evaluation of this soil type during reconnaissance surveys indicated the habitat for Pahrump Valley buckwheat is limited. The project area lacks the loose sandy soils where Pahrump Valley buckwheat is typically identified. During vegetation surveys, no individuals of Pahrump Valley buckwheat were observed, yet we request that the project be completely moved off this soil type to avoid potential for destroying populations of this species that did not flower during 2018 and 2019..

Pahrump Valley buckwheat is a BLM Sensitive species, meaning population or distribution of the wildlife is in a significant decline, the population is threatened as a result of disease or predation or ecological or human causes, and/or the primary habitat of the wildlife is deteriorating.

There are other rare plants potentially found in the project area, that are not addressed in the Draft EIS:

Aven Nelson Phacelia (*Phacelia anelsonii*)

Rosy Twotone Beardtongue (*Penstemon bicolor* ssp. *roseus*)

Yellow Twotone Beardtongue (*Penstemon bicolor* ssp. *bicolor*) (deserving of ESA protection)

White-Margined Beardtongue (*Penstemon albomarginatus*) (deserving of ESA protection)

Death Valley Ephedra (*Ephedra funerea*)

New York Mountains Catseye (*Cryptantha tumulosa*)

Spring Mountains Milk-Vetch (*Astragalus remotus*)

Nye Milk-Vetch (*Astragalus nyensis*)

Mojave Milk-Vetch (*Astragalus mohavensis* var. *mohavensis*)

White Bear Poppy (*Arctomecon merriamii*)

8. Invasive Plants Will Proliferate

Many invasive, non-native plant species were observed within the project area by BLM surveys, including red brome (*Bromus madritensis* var. *rubens*), cheatgrass (*Bromus tectorum*), Mediterranean grass (*Schismus barbatus*), African mustard (*Malcomia africana*), Indian hedgemustard (*Sisymbrium orientale*), saltlover (*Halogeton glomeratus*), Russian thistle (*Salsola tragus*), and redstem stork's bill (*Erodium*

cicutarium). We found red brome and *Schismus* to be present in our field trips, and all these species could increase with soil disturbance during construction activities. We are concerned that herbicides will be used to control these exotic invasive plant outbreaks under the solar field, which could do significant damage to native grasses, forbs, and other native plants present. We found native desert needlegrass (*Stipa speciosa*) on the project site—how will this native grass be impacted by herbicide application?

9. Sensitive Invertebrates Will Be Impacted

The Northern Mojave blue (*Euphilotes mojave virginensis*) (BLM Sensitive Species) inhabits dry desert washes and sandy areas where caterpillar host plant species of *Eriogonum* spp. occurs. Plants observed within the project area include buckwheats and several ephemeral washes are present within the project area and vicinity; therefore, the project area may provide suitable breeding habitat for this species. How will loss of habitat and potentially individuals of this species be mitigated?

10. Desert Tortoise Will Be Significantly Impacted

A portion of the analysis area (the proposed project footprint and vicinity [5,032.2 acres]) was surveyed in accordance with USFWS Mohave desert tortoise survey protocol (USFWS 2017). Fifty-four tortoises were encountered during the surveys, 41 of which met the USFWS criteria (adult tortoises greater than 180 mm) to be included in a population estimate. Tortoise density was estimated at 3.04 adult tortoises per square km (km²). The estimated number of adult tortoises within the surveyed area is 62, as well as an estimated 322 subadult and juvenile tortoises. (3-29)

This is a density on the verge of being non-viable indicating that this area should be conserved, not developed. The Eastern Mojave Recovery Unit has declined 67% from 2004 to 2014.

The Mojave Population of the Agassiz's desert tortoise was listed as Threatened by the US Fish and Wildlife Service (USFWS) in 1990 followed by the designation of critical habitat in 1994. In 2000, the USFWS began systematically surveying tortoise populations in critical habitat and recovery unit areas to determine population trends. Based on their findings (USFWS 2015), which are briefly summarized in the chart, we convinced that the Mojave Population of the Agassiz's desert tortoise should be federally listed as Endangered rather than Threatened.

Recovery Unit: Designated Critical Habitat Unit/Tortoise Conservation Area	Surveyed area (km²)	% of total habitat area in Recovery Unit & CHU/TCA	2014 density/km² (SE)	% 10-year change (2004–2014)
Western Mojave, CA	6,294	24.51	2.8 (1.0)	–50.7 decline
Fremont-Kramer	2,347	9.14	2.6 (1.0)	–50.6 decline
Ord-Rodman	852	3.32	3.6 (1.4)	–56.5 decline
Superior-Cronese	3,094	12.05	2.4 (0.9)	–61.5 decline
Colorado Desert, CA	11,663	45.42	4.0 (1.4)	–36.25 decline
Chocolate Mtn AGR, CA	713	2.78	7.2 (2.8)	–29.77 decline
Chuckwalla, CA	2,818	10.97	3.3 (1.3)	–37.43 decline
Chemehuevi, CA	3,763	14.65	2.8 (1.1)	–64.70 decline
Fenner, CA	1,782	6.94	4.8 (1.9)	–52.86 decline
Joshua Tree, CA	1,152	4.49	3.7 (1.5)	+178.62 increase
Pinto Mtn, CA	508	1.98	2.4 (1.0)	–60.30 decline
Piute Valley, NV	927	3.61	5.3 (2.1)	+162.36 increase
Northeastern Mojave	4,160	16.2	4.5 (1.9)	+325.62 increase
Beaver Dam Slope, NV, UT, AZ	750	2.92	6.2 (2.4)	+370.33 increase
Coyote Spring, NV	960	3.74	4.0 (1.6)	+ 265.06 increase
Gold Butte, NV & AZ	1,607	6.26	2.7 (1.0)	+ 384.37 increase
Mormon Mesa, NV	844	3.29	6.4 (2.5)	+ 217.80 increase
Eastern Mojave, NV & CA	3,446	13.42	1.9 (0.7)	–67.26 decline
El Dorado Valley, NV	999	3.89	1.5 (0.6)	–61.14 decline
Ivanpah, CA	2,447	9.53	2.3 (0.9)	–56.05 decline
Upper Virgin River	115	0.45	15.3 (6.0)	–26.57 decline
<i>Red Cliffs Desert</i>	<i>115</i>	<i>0.45</i>	<i>15.3 (6.0)</i>	<i>–26.57 decline</i>
Range-wide Area of CHUs - TCAs/Range-wide Change in Population Status	25,678	100.00		–32.18 decline

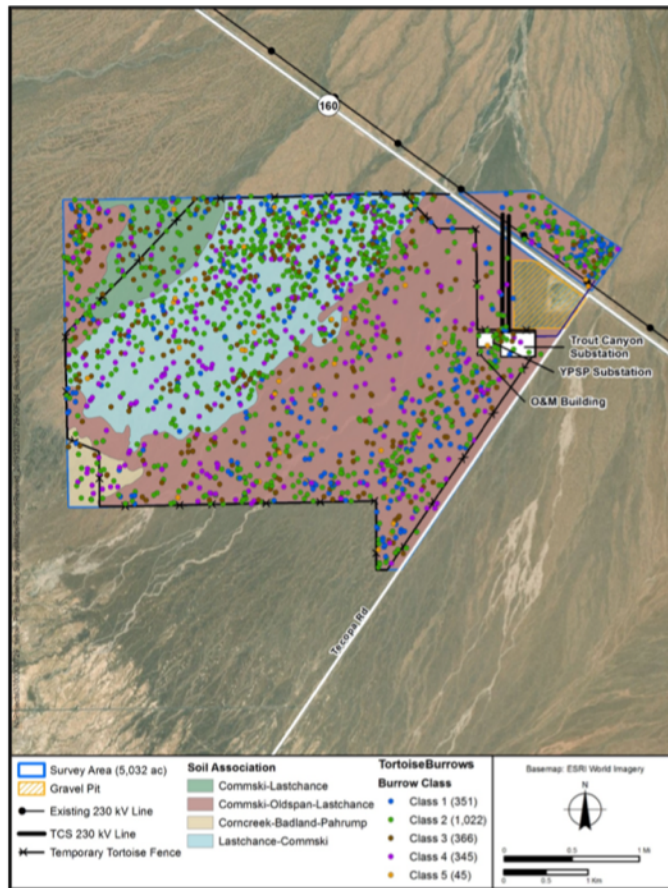
The table includes the area of each Recovery Unit and Tortoise Conservation Area (TCA), percent of total habitat, density (number of breeding adults/km² and standard errors = SE), and the percent change in population density between 2004 and 2014. Populations below the viable level of 3.9 breeding individuals/km² (10 breeding individuals per mi²) (assumes a 1:1 sex ratio) and showing a decline from 2004 to 2014 are in red.

The results of USFWS surveys show that 10 of 17 populations of the Mojave desert tortoise declined from 2004 to 2014, and 11 of 17 populations of the Mojave desert tortoise are no longer viable.

The project site is not within Critical Habitat or a TCA, but shows how much of a decline has occurred in those protected areas, and how tortoise habitat in Variance Lands is equally important with densities that match Critical Habitat currently.

The Desert Tortoise Translocation Plan would address the outstanding data needs for translocation of desert tortoises outside of the area contained within the preclusion fencing, and describe the USFWS-approved procedures and protocols for relocation. The Stump Springs Desert Tortoise Translocation Area has been identified as the recipient area where tortoises would be translocated. BLM is engaged in formal consultation with USFWS under Section 7 of the ESA, during which impacts will be assessed and additional measures identified as necessary to minimize impacts to the species. (3-30-31)

Figure 4. Locations of desert tortoise burrows observed during presence/absence surveys.



^Map from Draft EIS showing the high density of new and old tortoise burrows. Numbers of tortoises here are as good as many Critical Habitat units. (Mojave Desert Tortoise Survey Report at 8)

The tortoise fencing would fragment existing habitat for some ground-dwelling species. As the four solar array sub-areas would be sited around large wash channels, access to these habitats by most ground-dwelling species would be temporarily precluded (3-16). How will this fragmentation of high quality habitat be mitigated?

Construction activities are anticipated to result in an increase in project-related traffic along regional transportation routes (SR 160 and Tecopa Road). The increase in traffic would result in an increase in the risk for direct mortality or injury of wildlife individuals from vehicle strikes; however, due to the temporary fencing of the disturbance area and the implementation of site-specific speed limits, BLM said increased risk is anticipated to be low. Yet how will a speed limit be permanently imposed on SR 160?

The project is adjacent to the Stump Springs Desert Tortoise Translocation Area. The Stump Springs Desert Tortoise Translocation Area covers approximately 85,000 acres northwest of the town of Sandy Valley and lies within an undesignated multiple-use area managed by the BLM. (3-43)

The Purpose and Need for establishing the Stump Spring Translocation Area was to have a place for displaced desert tortoises from a variety of habitats and locations in Nevada, not be a dumping ground for adjacent solar projects. It is quite possible that the number of desert tortoises has been underestimated by the Draft EIS. What is the potential carrying capacity of the Stump Spring Translocation Area? Other solar applications are present in the translocation area? Is a vegetation mowing mitigation enough to maintain healthy tortoise populations under solar panels?

Below is the purpose and need for the Stump Spring Translocation Area and it was never intended to be the dumping ground for just large-scale solar projects.

The purpose of this action is to implement the Desert Tortoise Recovery Plan, which identifies augmentation of depleted populations through a strategic translocation program as a recovery action; thus translocation of healthy and genetically compatible tortoises from appropriate source populations (See section 2.1.4 Desert Tortoises Available for Translocation) to recipient areas meets that specific recovery action. The need for this action is to augment desert tortoise populations in areas with depleted populations, while allowing for translocation of animals that would no longer be able to persist in areas in which projects are being developed or areas being transferred from public to private ownership. Due to the documented decreases in, or otherwise low, tortoise densities in the Eastern Mojave, Northeastern Mojave, and Colorado Desert recovery units, within Clark and Lincoln Counties, population augmentation will be used to aid in the recovery of the desert tortoise. By increasing population numbers, there will be increased intraspecific interactions which may lead to higher rates of reproduction, increased incidence of gene flow with adjacent populations, and potential for translocatees to repopulate nearby areas with decreased population numbers.⁸

Tortoise translocation averages 50 percent mortality. The below numbers from the Fish and Wildlife Service indicate 50 percent mortality from translocation of desert tortoise.

Threats from the raven population are not addressed. From the Draft Final Avian Pre-Construction Survey Report for the Proposed Yellow Pine Solar facility at 9:

A summary of large-bird use by species and season is presented in Table 3. Common ravens (*Corvus corax*) exhibited the highest use within the Application Area across all seasons (53 individuals, 0.552 observations/120-minute survey; see Table 3), as well as during each individual season. They were most abundant in the spring (27 individuals, 1.125 observations/120-minute survey). Across all seasons, common ravens accounted for 63.9% of the total observations (83 observations).

⁸ [https://eplanning.blm.gov/epl-front-office/projects/nepa/72810/97162/117318/2-10-17 DRAFT Desert Tortoise Translocation EA 2017.pdf](https://eplanning.blm.gov/epl-front-office/projects/nepa/72810/97162/117318/2-10-17%20DRAFT%20Desert%20Tortoise%20Translocation%20EA%202017.pdf)

Ravens represent a significant threat to tortoises, and may increase due to construction-related activities, increased perches, water sources, and trash. How will this be mitigated? Is there a Raven Management Plan?

11. Gila monster Is Not Addressed

Gila monster (*Heloderma suspectum*) may occur at the project site, as habitat with dense Mojave yuccas is abundant. Surveys should be carried out, and a passive relocation plan for construction work developed.

Gila monsters are fossorial (spend most of their lives in burrows) and are very difficult to locate during surveys. Surveys should take place over a period of 5 years and wet years should be utilized for the best survey results.

12. Eagles May Be Impacted

Golden eagle (*Aquila chrysaetos*) are known to occur in the area, and most likely use the project site as foraging grounds. Eagle prey such as white-tailed antelope squirrel (*Ammospermophilus leucurus*), black-tailed jackrabbit (*Lepus californicus*), and desert cottontail (*Sylvilagus audubonii*) are found in the project area from our observations.

Golden eagles were observed during surveys for a total of 38 eagle-minutes, including six individual eagle observations (p. 9 of Draft Final Avian Pre-Construction Survey Report for the Proposed Yellow Pine Solar Facility).

A cluster of three known eagle nests are located approximately 8 miles from the project area in the Spring Mountains and other ranges. 48 golden eagle nests were found within the 10-mile buffer of the project, with an additional 26 nests that could be either red-tailed hawk or golden eagle (ibid. at 13-14). One golden eagle nest was 3.5 miles away from the Application Area boundary to the northeast. Five territories contained occupied nests.

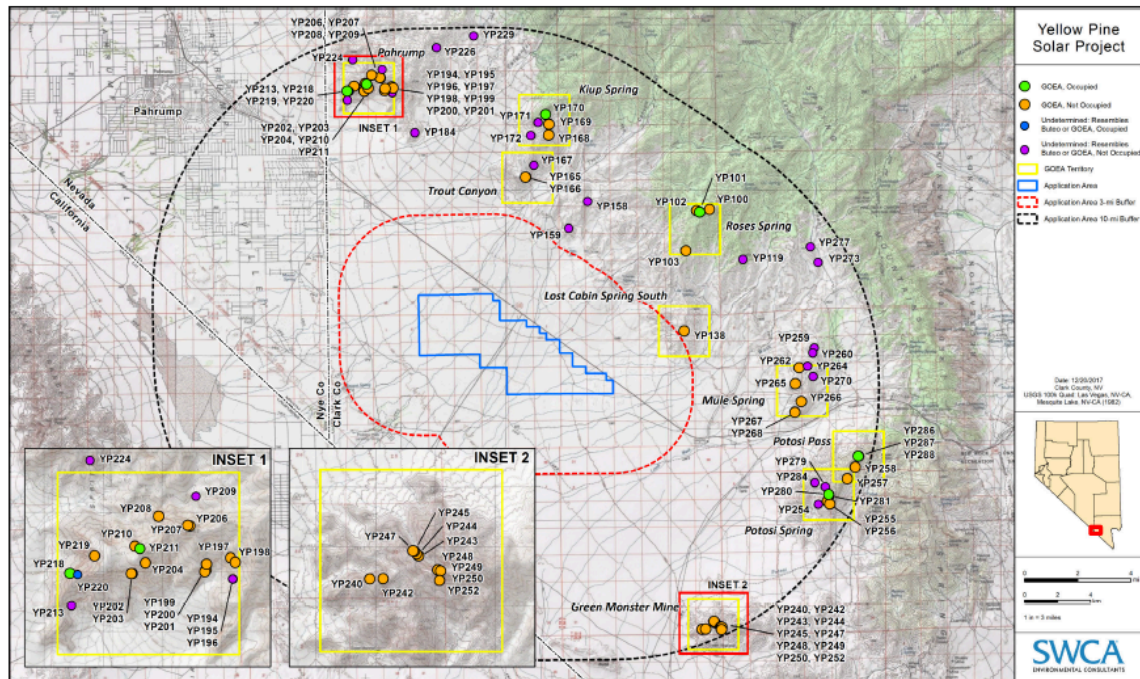


Figure 8. Spatial location and occupancy status of all golden eagle (GOEA) nests in the 10-mile buffer survey area.

^Golden eagle and potential golden eagle nests around the project site. Yellow squares are golden eagle nesting territories. Foraging probably occurs out on the Pahrump Valley desert flats. (P. 16 of the Draft Final Avian Pre-Construction Survey Report for the Proposed Yellow Pine Solar Facility)

There is no discussion about how golden eagles will be impacted, or whether mitigation will be planned to make up for lost foraging habitat.

Bald eagles (*Haliaeetus leucocephalus*) may be affected by the lake effect created by such a large-scale solar project looking like water.

Peregrine falcons (*Falco peregrinus*) similarly could be impacted by lake-effect impacts as these falcons will hunt waterfowl at lakes.

13. Burrowing Owls Will Be Significantly Impacted

Western burrowing owl (*Athene cunicularia*) is known to occur and observed during site visits and suitable burrows were recorded within the project area. Therefore, the project may impact suitable breeding habitat. Biologists recorded a total of seven burrowing owls and 43 burrows with sign of owl use. (p. 6 of Mojave Desert Tortoise Survey Report for the Yellow Pine Solar Project).

Burrowing owls and their resources should be maintained in place rather than minimizing impacts through displacement or owls to an alternate site. Burrowing owls are seeing declines in other nearby desert ecosystems.

California's Imperial Valley was one of the last areas in the California desert with a strong population, and the species is declining in other parts of its range. The Imperial Valley has seen a recent crash in burrowing owl populations and should be referenced as an example for other populations. Further disruption of foraging and nesting territories, and disturbance of habitat will lead to a degradation of the population of burrowing owls throughout the southwestern US. The populations in southwestern Nevada are not well documented and major developments could result in population declines. Cumulative impacts due to other proposed large-scale projects will add to the decline.

If compensatory mitigation is no longer used to replace habitat losses, how will this loss of habitat be mitigated? Will burrowing owls be passively relocated out of their burrows? There is no discussion.

14. Sensitive Birds Will Be Impacted

Bendire's thrasher (*Toxostoma bendirei*) may occur. Joshua trees are present in areas near the project, and Mojave yuccas are abundant. Therefore, the project may impact suitable breeding or foraging habitat for this species. Targeted surveys should be undertaken for this species.

Le Conte's thrasher (*Toxostoma lecontei*) was observed during site visits. The project may impact suitable breeding or foraging habitat for this species

Phainopepla (*Phainopepla nitens*) was recorded by Nevada Division of Wildlife (NDOW) within 4 miles of the project area. There are no stands of mesquite and/or acacia located within the project area; however, mesquite stands are present in areas near the project; therefore, the project may impact suitable breeding or foraging habitat for this species.

Scott's oriole (*Icterus parisorum*) was recorded by NDOW within 4 miles of the project area. The project may impact suitable breeding or foraging habitat for this species.

15. Migratory Birds Will Be Impacted

Migratory bird species known to occur within the analysis area are commonly found within the Mojave Desert Ecoregion, and include ash-throated flycatcher (*Myiarchus cinerascens*), barn swallow (*Hirundo rustica*), Bewick's wren (*Thryomanes bewickii*), black-throated sparrow (*Amphispiza bilineata*), black-tailed gnatcatcher (*Polioptila melanura*), Brewer's sparrow (*Spizella breweri*), cactus wren (*Campylorhynchus brunneicapillus*), gray flycatcher (*Empidonax wrightii*), horned lark (*Eremophila alpestris*), loggerhead shrike (*Lanius ludovicianus*), rock wren (*Salpinctes obsoletus*), sagebrush sparrow (*Artemisiospiza nevadensis*), and yellow-rumped warbler (*Setophaga coronata*). The black-throated sparrow was the most abundant migratory bird species observed during avian surveys, followed by horned lark and sagebrush sparrow. The USFWS identified the Bendire's thrasher (*Toxostoma bendirei*), black-chinned sparrow (*Spizella atrogularis*), and Le Conte's thrasher (*Toxostoma lecontei*) as Birds of

Conservation Concern that may be present within the project area (USFWS 2019b). (3-28)

How will impacts to migratory birds be mitigated?

16. Avian Impacts Are Not Mitigated, the Lake Effect Will Kill Birds

Section 3.5.3.1 of the DEIS states that “No waterbirds were observed during site-specific avian surveys (SWCA 2018e).” The BLM should consider that this potential lake effect and evaluate what water birds would be potentially impacted by it.

We believe the BLM needs to examine this issue in greater detail. We would like to see more of this information reviewed in a Supplemental EIS. The project will be built in a location that is within several potential local avian flyways. There is quite a bit of water in the region. Birds do use Stump Spring. Less than 2 miles away, Amargosa River in Shoshone and Tecopa, Grimshaw Lake wetlands near Tecopa, Ash Meadows National Wildlife Refuge to the north, the high elevations of the Spring Mountains, the Kingston Range, Clark Mountain and ephemeral water in the Pahrump Dry Lake.

Specifically, the threats to these species from solar panels was not discussed:

- Federal Endangered/Threatened species – Yuma Ridgeway’s (Clapper), Willow flycatcher, and Yellowbilled cuckoo.
- Birds of Conservation Concern – Eared grebe, American white pelican, Burrowing owl, Calliope hummingbird, Bald Eagle, Ferruginous Hawk, Golden Eagle, Peregrine Falcon, Snowy Plover, Long-billed Curlew, Black Swift, Calliope Hummingbird, Lewis's Woodpecker, Willow Flycatcher, Loggerhead Shrike, Virginia's Warbler, and Sage Sparrow.

There is also a potential for the Yellow Pine Solar Project to impact montane “sky island” species that migrate over the project site. In California, these are considered Important Bird Areas. The following information is available from the Audubon Society:

The extreme eastern Mojave Desert features three large mountain ranges whose unique natural habitats warrant their recognition as an IBA: the Kingston, Clark and New York ranges. Visible from I-15 just inside the border of Nevada, each supports large tracts of Joshua Tree woodland on lower slopes, grading into Pinyon-Juniper woodland and a floristically diverse desert chaparral, and finally into tiny groves of White Fir above 7000' on their peaks. Unique in California, these sky islands of forest separated by vast deserts are miniature versions of their larger counterparts in southern Nevada (e.g. Spring Mtns.) and Arizona, with which they share several species. The habitat within the Kingstons is entirely protected as a BLM wilderness area, and the New Yorks are located within the Mojave National Preserve. About of Clark Mountain is protected by the Mojave National Preserve, with the exception of the southeast corner just north of Mountain Pass, which was left outside the preserve boundary for a mining

operation. These mountains have been the subject of long-term studies in biogeography since the early 1900s, and continue to captivate ornithologists (see Cardiff and Remsen 1981).

Ornithological Summary

The relatively lush Joshua Tree woodland on the lower slopes of these peaks support strong populations of desert birds, notably Bendire's Thrasher, Juniper Titmouse, Scott's Oriole, and, in the New Yorks, Gilded Flicker. Broad-tailed Hummingbird, Plumbeous Vireo and Virginia's Warbler are common in pinyon-rich chaparral on Clark Mountain, and wherever this habitat occurs on steep-sloped canyons, Gray Vireo breed in what is likely their largest population away from eastern San Diego County. The most unusual bird communities, however, are restricted to the tops of these peaks, occurring most consistently in the fir grove on Clark Mountain. Hepatic Tanager and Whip-poor-will (*arizonae* race) virtually unknown elsewhere in California, are regular nesters on Clark (and at least the former in the New Yorks as well), and joined by occasional strays from Arizona, including Painted Redstart, Red-faced Warbler, and Grace's Warbler.⁹

There should be a complete list of potential birds that may collide with solar panels. The DEIS does not say what photovoltaic technology would be used. Thin-film panels are very reflective and the projects that have used these have seen greater numbers of bird mortalities. A more complete EIS would talk about this technology. It would be easier to determine what the impacts would be if we knew what photovoltaic technology was planned.

There is also no information on mitigation attempts to make the project less hazardous for birds. The Pahrump Solar Project spaced solar panels further way from one another in an attempt to break up this lake effect. They also created a wavy surface in an attempt to break up the effect.

Solar panel textures could also be changed to reduce polarized glare and lake-like colors. This should also be in the Mitigation Measures. Panels can be tinted Earth tone colors as this article talks about: Colored Solar Panels Address Concerns of Aesthetics, Historic Preservation.¹⁰

We find no Bird and Bat Conservation Plan, which seems to be deferred until after approval and public review. Monitoring should be made public in monthly reports, and independent scientific reviewers used to monitor solar fields. Both the Desert

⁹ <https://www.audubon.org/important-bird-areas/east-mojave-peaks>

¹⁰ <https://www.solarreviews.com/news/coloredsolar-panels-address-concerns-of-aesthetics-historic-preservation/>

Sunlight and Genesis Project in California have reported a diversity of birds that have become avian mortalities and many of the birds were detected to have collision injuries.

While we believe that the biologists hired to survey these projects are highly qualified individuals, we question the accuracy of the reporting because we have been told some biologists have lost jobs over reporting information. Interestingly, this was backed up at the last Desert Tortoise Council Symposium in 2016. Kathryn Simon of Ironwood Consulting told everybody that the politics of management from the solar companies often get in the way of accurate reporting. In the Symposium Abstracts, she reported “the political backing that supports energy development in the western part of the country has also resulted in the neglect or abuse of natural resources. While a great deal of effort is placed on properly siting and permitting a project, little or no oversight happens once the project enters construction and continues into operations and maintenance. This has led to a “power vacuum,” often filled by the project proponent's "environmental" staff who often ensure the least amount of information leaves the project and is reported to wildlife agencies and the public. Specific examples of such behavior are provided and suggestions made for biologists on the ground in achieving their goals of proper monitoring oversight.”

17. Large Mammal Habitat Will Be Fragmented

A Mountain lion (*Puma concolor*) was recorded within the analysis area from NDOW records. We have seen mule deer (*Odocoileus hemionus*) in Mojave yucca and creosote scrub on alluvial fans within a few miles of the project site in Pahrump Valley.

NDOW identified habitat for Rocky Mountain elk (*Cervus canadensis*) in the analysis area. Suitable habitat is limited to approximately 3,347 acres and located approximately 2.5 miles northeast of the project area. It is unlikely that project-related activities would disturb this species. (3-15)

The Draft EIS makes no mention of desert bighorn sheep (*Ovis canadensis nelsoni*), which regularly traverse desert basins to move between mountain ranges. The Spring Range, Nopah Range, Bird Springs Range and other local mountain ranges have bighorn populations. Yellow Pine Solar Project could block these genetic connectivity corridors, and this should be analyzed. Bighorn biologists Dr. John Wehausen and Dr. Vern Bleich have concluded that radio telemetry studies of bighorn sheep in various southwestern deserts, including the Mojave Desert of California, have found considerable movement of these sheep between mountain ranges. Consequently, intermountain areas of the desert floor that bighorn traverse between mountain ranges can be as important to the long-term viability of populations as are the mountain ranges themselves.

18. Bats May Be Impacted

A diversity of bats may feed in the project area, migrate through, and roost in yuccas: Allen's big-eared bat (*Idionycteris phyllotis*), Big brown bat (*Eptesicus fuscus*), Big free-tailed bat (*Nyctinomops macrotis*), Brazilian free-tailed bat (*Tadarida*

brasiliensis), Brazilian free-tailed bat (*Tadarida brasiliensis*), Canyon bat (formerly western pipistrelle) (*Parastrellus hesperus*), Fringed myotis (*Myotis thysanodes*), Hoary bat (*Lasiurus cinereus*), Long-eared myotis (*Myotis evotis*), Long-legged myotis (*Myotis volans*), Pallid bat (*Antrozous pallidus*), Silver-haired bat (*Lasionycteris noctivagans*), Spotted bat (*Euderma maculatum*), Townsend's big-eared bat (*Corynorhinus townsendii*), Western red bat (*Lasiurus blossevillei*), Western small-footed myotis (*Myotis ciliolabrum*), and Yuma myotis (*Myotis yumanensis*).

Night-lighting installed for safety purposes may create light pollution in bat foraging areas, which may disorient foraging bats. Long term impacts of operational night lighting is not addressed.

19. Cultural Resources and National Trails Will Be Significantly Impacted

The Old Spanish National Historic Trail: the project falls within the informal 5-mile buffer of the trail, yet this is not addressed.

The DEIS has omitted a comprehensive Cultural Resources report. There is nothing in the appendices or posted on the eplanning site. The lack of information justifies a supplemental EIS.

The industrial view that will be created by the solar panels, transmission lines, battery storage buildings operation and maintenance buildings, as well as dust plumes and large clearings from construction will compromise the experience for visitors to the region. The main road, the Old Spanish Trail Highway is part of the visitor experience to the historic Old Spanish Trail region.

Twelve Inventory Observation Points (IOPs) were created.

The DEIS states:

3.8.5.1 Construction Impacts

Impacts to the scenic resources and settings inventoried are anticipated to be typically weak, with little potential to be affected by the project. This impact intensity of "Weak" was determined based either on the project area being obscured by localized topography or by distances of several miles (between 4.4 and 13.0 miles away) or by both geographic interference and distance together.

The IOPs inventoried had BLM Visual Resource Management (VRM) classifications of I, II, and III, with the majority classified as VRM Class II. For the purposes of this analysis, an average visual classification goal of VRM Class II was assumed for the entire area of potential adverse impact, which also corresponds to the VRM Class II goals established for the project area.

The BLM used the VRM Class II Objectives to evaluate the impacts to the Old Spanish National Historic Trail. This is a high VRM Class Objective and since the project site actually rises in elevation from the OST and Stump Spring, it will be very visible. This again raises the question of why the BLM refuses to amend the 1998 Resource Management Plan and downgrade the VRM Class to approve this project. Not only would the project be inconsistent with the VRM III Class Objectives designated on the project site, but would have large cumulative impacts from adjacent lands that have VRM II Class Objectives 4 to 5 miles away.

A supplemental EIS with a RMP Plan Amendment should be prepared.

For section 3.8.5.4 Cumulative Impacts, the FDEIS should be talking about all the additional solar applications in the area.

What mitigation measures, if any will be taken to protect the resources of the Old Spanish National Historic Trail?

4.2 SUMMARY OF TRIBAL CONSULTATION AND COORDINATION

As part of the Government-to-Government consultation efforts for the proposed YPSP, letters were sent to 11 tribes to inform them of the Proposed Action. These letters were sent on July 16, 2018, and mailed to the following tribes: Paiute Indian Tribe of Utah; Timbisha Shoshone Tribe; Chemehuevi Indian Tribe; Twenty-nine Palms Band of Mission Indians; Bishop Paiute Tribe; Big Pine Paiute Tribe of the Owens Valley; Moapa Band of Paiute Indians; Las Vegas Paiute Tribe; Fort Mojave Indian Tribe; Fort Independence Community of Paiute; and the Colorado River Indian Tribes. Additional correspondence was sent informing them of the public scoping meetings they could attend. The letters and ensuing conversations between the BLM and consulted tribes resulted in one field meeting to examine the proposed project area.

Did the BLM only send letters to tribes that one time? Was there any additional attempts to reach out to them after the scoping meetings?

20. Visual Resources Will Be Significantly Impacted

The Environmental Impact Statement is inadequate. The Draft EIS does not include any of the Key Observation Point Simulations that were created for the project. It is not possible to provide substantive comments on KOP's when we can't view them.

The Project would be built in a high conflict Visual Resource area. Although the lands directly impacted would be in the VRM III Class Objective, the massive size of the project would impact other conservation and specially designated areas in the region. The Yellow Pine Solar Project would be visible in Nevada from the Old Spanish National Historic Trail, Potosi Mountain, Lovel Summit, Mt. Charleston, the Griffith Peak Trail and the Bonanza Peak Trial in Nevada. In California, the project would be visible from the Nopah Range Wilderness Area, Pahrump Valley Wilderness Area, Clark Mountain in

the Mojave National Preserve and the Kingston Wilderness. Because of this, these resources should be reviewed for Visual Impacts under VRM II standards also.

VRM Class II Objective: To retain the existing character of the landscape.
Allowed Level of Change: The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.

The project would also be visible from major roads including Highway 160 going north from Las Vegas. The project would dominate that view. The project would impact the view and experience for people driving on the Tecopa Road and Old Spanish Trail Highway.



^View of project site from Highway 160

Visual resources must be protected under the Federal Land Policy and Management Act of 1976, 43 U.S.C. 1701 et. seq.;

1. Section 102 (a)(8). States that “...the public lands be managed in a manner that will protect the quality of the...scenic...values....”
2. Section 103 (c). Identifies “scenic values” as one of the resources for which public land should be managed.
3. Section 201 (a). States that “The Secretary shall prepare and maintain on a continuing basis an inventory of all public lands and their resources and other values (including...scenic values)....”
4. Section 505 (a). Requires that “Each right-of-way shall contain terms and conditions which will... minimize damage to the scenic and esthetic values....” B. National Environmental Policy Act of 1969, 43 U.S.C. 4321 et. seq.; 1. Section 101 (b). Requires measures be taken to “ ...assure for all American...esthetically

pleasing surroundings....” 2. Section 102. Requires agencies to “Utilize a systematic, interdisciplinary approach which will ensure the integrated use of...Environmental Design Arts in the planning and decision making....”

5. Both NEPA and FLPMA recommend that Visual Resource Management be decided on the RMP level. The Action Alternatives of the cancelled RMP proposed to upgrade the Visual Class of the region.

On a cumulative level, there are distant visual impacts including transmission lines, and Highway 160, but these are too far away to dominate the entire view.

The project site is far away enough from Pahrump to provide a pristine, unbroken landscape. These views are being lost by several development proposals in Southern Nevada.

The Draft EIS does not say what photovoltaic technology would be used and that could impact any potential glint and glare that would be produced by this project.

Key Observation Point Simulations: There are none in the Draft EIS or appendices! It is impossible to submit substantive comments on visual resource KOPs without being able to see them. The Draft EIS says 11 KOPs were created. These KOP observations had to appear either in the text of the EIS or in the appendix, and in any event were not “made available” to the public on the eplanning website, nor anywhere else. Below we include a screenshot of the current eplanning page.

Again, a proper review of this project will need a Supplemental EIS.

ePlanning **DOI-BLM-NV-S010-2017-0110-EIS (Yellow Pine)**

> NEPA Register > DOI-BLM-NV-S010-2017-0110-EIS > Documents

Project Search:

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Documents

Contact Information

How to get involved

Meetings

Maps

Data

Links

FAQs

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04/17/2020 15:23:02 MDT

Documents

The Notice of Availability for the Draft Environmental Impact Statement for the Yellow Pine Solar Project in Clark County, NV was published on March 20, 2020

Draft EIS Public Participation Materials

Document Name	Release Date	Available Formats	Public Participation
YPSP_DEIS_Presentation_20200417	04/17/2020	(994 KB)	
YPSP_DEIS_Posters_20200417	04/17/2020	(1468 KB)	

Draft Environmental Impact Statement

Document Name	Release Date	Available Formats	Public Participation
NOA Draft EIS Yellow Pine Solar Project	04/15/2020	(261 KB)	
Yellow Pine Solar Draft Environmental Impact Statement	03/20/2020	(2 Files)	

Supporting Reports

Document Name	Release Date	Available Formats	Public Participation
Yellowpine_Botany_Survey_072419_508	08/05/2019	(4674 KB)	
Final YPSP Supplemental Survey Tech Memo	08/05/2019	(371 KB)	
Tortoise Survey Report	04/01/2020	(4821 KB)	
Habitat Assessment	08/28/2018	(2 Files)	
Avian Report	08/15/2018	(12634 KB)	

Public Scoping

Document Name	Release Date	Available Formats	Public Participation
Yellow Pine Federal Register Notice	06/11/2018	(193 KB)	
Public Scoping	06/27/2018	(7 Files)	
Yellow Pine Solar Scoping Report	02/20/2019	(41218 KB)	

Plan of Development

Document Name	Release Date	Available Formats	Public Participation
Plan of Development (POD)	07/22/2019	(12781 KB)	

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^Screenshot of the [BLM eplanning page documents](#), accessed on May 4, 2010.

(1) Discussion of significant environmental impacts must appear in the text of an EIS. 40 C.F.R. § 1502.1. (2) Material that “substantiates any analysis fundamental to the [EIS]” may appear in an appendix. *Id.* § 1502.18. (3) Material may be incorporated by reference so long as its omission from the EIS does not “imped[e] agency and public review.” *Id.* § 1502.21; *see also* Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations, 46 Fed.Reg. 18026, 18033–34 (March 17, 1981) (“FAQs”).

In *Pacific Rivers Council v. Forest Service*,¹¹ if the Biological Assessment (BAs) were intended to serve as the analysis of the environmental consequences of the 2004 Framework for fish, the 2004 EIS needed to do more than incorporate them by reference. They should have been described and analyzed in the text of the 2004 EIS, and the BAs themselves should have been included in an appendix.

¹¹ *Pac. Rivers Council v. Forest Serv.*, 689 F.3d 1012, 1031-32 (9th Cir. 2012), judgement vacated, 570 U.S. 901 (2013)

This is not a mere formality. The purpose of an EIS is to inform decision-makers and the general public of the environmental consequences of a proposed federal action. That purpose would be defeated if a critical part of the analysis could be omitted from an EIS and its appendices. The EIS is circulated to the general public. “If at all possible,” the appendices are also circulated to the public. *Id.* at 18034 (FAQ 25a). The material that is incorporated by reference is not circulated to the public; it need only be “made available.” *Id.* Material that is incorporated by reference must be “briefly described” in the body of the EIS, 40 C.F.R. § 1502.21, but a brief description cannot fulfill the purpose *1032 of the EIS if the substance of what is incorporated is an important part of the environmental analysis.

Second, even if they had been fully described and analyzed in the 2004 EIS, the BAs could not have satisfied the “hard look” requirement. The BAs functioned as a trigger to the consultation process required under Section 7 of the Endangered Species Act. They merely enumerated the several species of “listed” fish that may have been affected by the alternatives considered in the 2001 and 2004 EISs. There was no analysis in either of the BAs of the manner or degree to which the alternatives may have affected these fish. To the degree that any analysis was performed, it was performed by the Fish and Wildlife Service when it prepared Biological Opinions in response to the BAs. The 2004 EIS makes no reference, in any form, to either of the Biological Opinions. Third, even if the BAs could have satisfied the hard look requirement, they applied to only one group of fish species. As described above, the 2001 EIS analyzed the environmental consequences for three groups: (1) “federally threatened and endangered fish species” (9 species); (2) “sensitive fish species” (11 species); and (3) “moderate and high vulnerability fish species” (14 species). The BAs analyzed only the individual species in the first group. They said nothing about the individual species in the second and third groups. *Pac. Rivers Council v. Forest Serv.*, 689 F.3d 1012, 1031-32 (9th Cir. 2012), judgement vacated, 570 U.S. 901 (2013)

The Draft EIS States:

VEHICLE TRAVEL ROUTES There would be low impacts to vehicular travel routes from project components to KOP 3/4 Tecopa Road/ Old Spanish Highway (California) and KOP 6/8 SR 160. The introduction of project components within the landscape would be visually subordinate when viewed from these KOPs. Weak contrast is associated with the introduction of elements in the landscape associated with line and color that would not attract attention of the casual observer traveling along the routes. The landscape character of the project area would appear intact. (p.3.15.6.2.1)

We are unable to view the KOP's, as they are not included in the Draft EIS, but we believe that this is a very inaccurate statement and does not justify the failure to amend the RMP.

The project site looking north from the Old Spanish Trial Road rises on topographical elevation nearly 1 percent. It is likely that the solar panels will attract the

attention of the casual observer because the panels will rise slightly in elevation. We believe this will be more visible from the road than the Draft EIS suggests. Depending on the time of day, the single axis tracking panels could be significantly more visible. Late afternoon and early morning light angles could increase the contrast as panels will need to be more vertical to maximize sun exposure. Equally, this will be a bigger problem in the winter when sun angles are generally low. The project components would include new roads, battery storage buildings, mobile office buildings, new transmission lines all of which will be highly visible.

The Trout Canyon Substation will also create a dense cluster of transmission wires, towers and other complex components and will create a large visual contrast and impact. The Trout Canyon Substation and associated transmission would also be visible from Highway 160 and the Spring Mountain National Recreation Area. The Trout Canyon Substation would occupy 30 acres adjacent to Yellow Pine Solar Project and use approximately 39.4 acres for transmission infrastructure to convey power from the proposed TCS to the existing Pahrump to Sloan 230-kV transmission line. This would be a highly visible vertical intrusion on the viewscape, which includes dramatic views of the Spring Range and Kingston Range in a relatively undisturbed landscape.

21. The Draft EIS Fails To Fully Analyze Socioeconomics

The DEIS fails to adequately analyze the projects effects on the tourist route between Death Valley National Park and Las Vegas. One of the commenters for this EIS worked in Death Valley National Park for 12 years. Tourists visiting Death Valley often use Las Vegas as a base where they rent vehicles. One of the more common questions in the Death Valley Visitor Center is “What is the most scenic route to Las Vegas?” The answer always is go through the south part of the park through Shoshone and Tecopa by China Ranch Date Farm and take the Old Spanish Trail Highway to Highway 160 and Las Vegas.

Compromising the view with a large-scale solar project will diminish that experience and perhaps even cause an impact to tourism.

A solar project like this usually only creates 5 to 10 full time jobs. After the initial construction boom is up, these projects employ very few people.

The California community of Charleston View is the closest population to the project. How would property views and quality of life be impacted by the project?

A grassroots effort is underway to nominate an Amargosa National Monument in California, which would encompass the Shoshone, Death Valley Junction, and Tecopa region, the Wild and Scenic Amargosa River and other reaches, as well as the unique wildlands and open desert spaces from Amargosa Valley, the California portion of Pahrump Valley, to the Kingston Range and Shadow Valley. The diverse history and ecology of the region has attracted many visitors seeking soft recreational opportunities. Developing industrial energy-sprawl projects adjacent to the proposed monument would ruin the views and historic character of the region. Yellow Pine Solar Project is proposed

to be built right along Tecopa Road, which would be a main entrance road and scenic route to enter the proposed National Monument. This should be considered in the Final EIS.

22. Soils and Biological Soil Crusts Will Be Significantly Impacted

Biotic soils and desert pavement commonly occur as a mosaic on the project site. Desert pavements are a matrix of rock fragments that form smooth, pavement-like surfaces. Biotic soils are living surface features comprised of soil particles enmeshed in a complex web of cyanobacteria, mosses, lichens, bacteria, algae, and fungi that send roots and filaments deep into the soil, helping to sequester Carbon. Both desert pavements and biotic soils provide a protective soil covering that reduces wind and water erosion potential and further impact soil moisture dynamics.

Disruption of fragile biotic soils or removal of desert pavements generally increase wind and water erosion potential. The Yellow Pine Solar Project Botanical Survey Report (SWCA 2018c) identified biotic soils and desert pavements within all soil types, with the greatest density of biotic soil cover estimated within the Lastchance-Commski association and the greatest cover by desert pavements estimated to occur within Corncreek-Badland-Pahrump association Table 3.12-1. (3-70)

BLM said biotic soils are said to cover only 103.1 acres of the Proposed Action Alternative, or 3% of the project area. We found this to be more like 70-80% of the project area when we walked the site.



^Biological soil crust with predominant liverworts, on the Yellow Pine Project site proposal, north of Tecopa Rd.

Desert pavement is said to only cover 374.6 acres, or 12% of the site. We found the percentage to be somewhat higher than that, more like 20-30%.



^Desert pavement with an active tortoise burrow, proposed Yellow Pine Solar Project site, 2020.

Various site preparation methods are proposed for the project's construction phase in the differing alternatives, which would significantly impact the environment: 1) grading and leveling, 2) clear and cut with soil removal (tilling), 3) clear and cut (no tilling), 4) mowing of vegetation to 18-24 inches, and 5) drive-and-crush disturbance. (3-71)

These would all have significant impact on tortoises, burrowing owls, rare plants, Mojave yuccas, cacti, biological soils, nesting birds, local human communities—yet we find no Best Management Practices or mitigation measures to lessen or avoid these impacts, in the draft EIS.

We agree with this:

Generally, biotic soils require tens to thousands of years to recover after loss from disturbance (Belnap and Warren 2002; Williams et al. 2013). The vesicular soil horizons that develop below biotic soils and desert pavements develop through incremental dust capture over decades to millennia (Williams et al. 2013). Therefore, loss of desert pavements, biotic soils, and vesicular horizons through disturbance and erosion would have long-lasting impacts on soil function. (3-74).

How will this be mitigated? There is no discussion we can find.

23. Climate Change and Carbon Sequestration Will Be Impacted

The Yellow Pine Solar Project is sited on 4.6 square-miles of carbon sequestering soils. The Draft EIS does not account for the CO₂ as it is inhaled by plants above ground and exhaled by their roots below. This carbon is stored in a biological web of root-partnering fungi with plant roots (a mycorrhizal relationship), as well as in layers of calcium carbonate (“caliche”) that is created by this relationship. This process of photosynthesis and respiration is as old as plant life systems. The layered caliche underground at shallow depths is captured carbon that has been locked into the soil for thousands of years if not disturbed (Kobaly 2019).

Evans et al. (2014) published the results of a 10-year project studying carbon sequestration in Mojave Desert soils. “This study quantifies the economic value of one specific ecosystem service provided by NPS lands – the benefits of climate regulation resulting from terrestrial carbon sequestration.” Figure 2 shows the top 20 NPS Units by Carbon Sequestration Value. Within the top 15 are the four desert national parks: Joshua Tree NP, Mojave National Preserve, Death Valley NP, and Lake Mead National Recreation Area. The desert parks rank so high because of the vast acreage that is preserved. Lake Mead’s value is approximately \$12 million/year. We also learn that Lake Mead annually sequesters 0.5 Metric Tons of CO₂/hectare.

We can use the Lake Mead value to calculate the Metric Tons of Carbon sequestered per year on the intact Yellow Pine Solar Project site.

4.6 square-miles = 1214 hectares X 0.5 Metric Tons = 607 Metric Tons of CO₂ sequestered/year.

Construction of the Project will stop sequestration. Over the 30-year life of the Project 18,210 Metric Tons of CO₂ will be emitted instead of sequestered. Since the functioning underground biological web was destroyed during construction of the project – regardless of the alternative chosen – that number can reasonably be multiplied again by an additional hundreds, if not thousands, of years until complete recovery.

24. Air Quality Will Be Significantly Impacted With Fugitive Dust

Nevada large-scale solar projects have recently had a poor record in violating air quality controls, as we have recorded in photographs such as at the Sunshine Valley Solar Project in Amargosa Valley. This mowed-vegetation project repeatedly has fine particulate whirlwinds, and dust clouds emerging from disturbed desert surfaces in construction zones. Despite water trucks attempting to water-down loose dirt, the solar project was too large to control all dust. Construction continued on windy days, yet even on mild breezy days we saw wind-blown dust and clouds of fine particulates from disturbed ground in the construction site. The Yellow Pine Solar Project would be much larger.

What are the mitigation measures? We find none.

Removal of stabilized soils and biological soil crust creates a destructive cycle of airborne particulates and erosion. As more stabilized soils are removed, blowing particulates from recently eroded areas act as abrasive catalysts that erode the remaining crusts, thus resulting in more airborne particulates.

We are concerned that industrial construction in the region will compromise the air quality to the point where not only visual resources, but public health will be impacted.

Epidemiologists investigated an outbreak of valley fever that had sickened 28 workers at two large solar power construction sites in San Luis Obispo County.¹²

The Yellow Pine Solar site is 11 miles from the City of Pahrump and about 5 miles from Charleston View. Fugitive dust could threaten the 36,000 residents of Pahrump as well as residents of Charleston View, Shoshone and Tecopa. The COVID-19 crisis would make people even more vulnerable to fugitive dust and Valley Fever. Valley fever would be considered a comorbidity to COVID-19 infections.

Below are photos taken by Basin and Range Watch of the dust from the Sunshine Valley Solar Project in Amargosa valley NV in similar Mojave Desert vegetation communities, from the summer of 2020.

¹² <https://www.latimes.com/archives/la-xpm-2013-may-01-lame-ln-valley-fever-solar-sites-20130501-story.html>





We have yet to see mitigation measures that actually work on these already-built projects which have numerous dust and air quality violations.

25. Groundwater Use Could Cause Significant Impacts

There is no technical groundwater report included in the DEIS or appendices.

The Draft EIS states:

The total water usage during construction would be approximately 1,200 acre-feet over a 24-month period for full build. A single 50-MW phase would use approximately 120 acre-feet over a 9-month construction period.

Stump Springs to the east of the project is a valuable resource, and the wells of local residents in Charleston View, California are also an issue that need protection. Modern urbanization and agriculture in Pahrump Valley completely dried out all surface water at Stump Spring.

In 2012, the California Energy Commission reviewed the proposed Hidden Hills Solar Project and it was eventually denied approval, but water use was a big issue. While the Hidden Hills Project would have been a concentrated solar thermal power tower which would use more water, but residents from the region told stories about water well declines due to urban growth.

At the hearings,¹³ some local residents said they were concerned about how the project would dry up their wells. One resident said her well lowered 7 feet a few years ago and she had to dig deeper. Another resident of Charleston Heights said when she came to Pahrump Valley in 1969, there were gushing artesian wells, that are now dry. In the 1940s and 50s the valley had mound springs that were lush and free-flowing; now these are dry.

A US Geological Survey in the Amargosa Valley showed surprising results. Some areas that were supposed to have water did not. Past Yucca Mountain Nuclear Repository testing, which was very extensive in Amargosa Valley, showed a complex picture of drilling hitting carbonate rocks at 200 feet and in other areas 2,000 feet -- there are buried mountain ranges under the valley sediments, it is not just a big fill basin. A representative of the Pahrump Valley Paiute listed several wells of people he knew in the area which went dry since February, 2012.

The Draft EIS states:

Because the hydrographic basin beneath the project area is a “designated groundwater basin,” all water rights in the area have already been appropriated. If the project were to use groundwater, construction activities would withdraw as much as 600 acre-feet per year; however, these withdrawals would be purchased from existing basin allocations and thus there would be no new overdraw associated with the Proposed Action.

The amount of water required to clean the PV modules four times per year is simulated to be up to 13 million gallons per year (approximately 40 acre-feet per year). Depending on site events and conditions, the cleaning frequency may be less.

And 40 acre feet seems like a very large quantity for panel washing. Why is the number so high? Most other solar projects say they will use between 2 and 5 acre feet per year for panel washing. The EIS does not state which PV technology is used. If it were to be thin-film, the water washing requirement would be much lower. In fact, Nextera operates the Desert Sunlight Solar Project and claims that they use NO water for panel washing. Choosing the correct PV modules could actually save water.

The DEIS states that "withdrawals would be purchased from existing basin allocations", but this would be a transfer of water use and would still need to be approved by the Nevada Division of Water Resources and the public would be granted a protest period. So far, there are no proposals to transfer any water allocations to Nextera or Gridliance West.

¹³ <https://ww2.energy.ca.gov/sitingcases/hiddenhills/>

The project lies in the South Pahrump Valley, which is numbered Basin 162, which is one of the most over-allocated basins in Nevada.

In 2017, the Nevada State Engineer issued a temporary moratorium on all residential wells in Pahrump, Nevada due to overallocation of water resources.¹⁴

Will the BLM keep permitting large-scale solar projects in the region? The Nevada Public Utilities Commission posted a BLM application for another large-scale solar project right next to Yellow Pine Solar called Rough Hat Solar.¹⁵

Another project is called the Pahrump Solar Project and BLM has an application for that. What would be the cumulative scenario for water if all these were approved?

We believe BLM should not allow any groundwater pumping for the Yellow Pine Solar Project.

Please give a detailed analysis of how much water would be used for dust control and other construction activities. How many acre feet would be used for the duration of construction? How long would that be? What is the source of the water?

Please include a cumulative scenario of water use, not only for the transmission project, but for all of the projects that could potentially use this transmission line. How will any groundwater pumping impact the Amargosa River and the Death Valley Regional Aquifer? How would this impact private land and water well owners? What other projects could be associated with the transmission line and how much water would they use?

The recent designation of the Amargosa Wild and Scenic River in California requires the BLM to investigate any potential impacts that any projects might have on the river. It is not known yet if the water that supplies the Amargosa River comes from alluvial deposits or a deep carbonate aquifer. Any transmission project set up to accommodate large water using projects should analyze cumulative impacts to the river.

We recommend that a detailed model of groundwater connections between the Pahrump Basin and Amargosa River-Death Valley System be completed before the project and connected transmission line are approved.

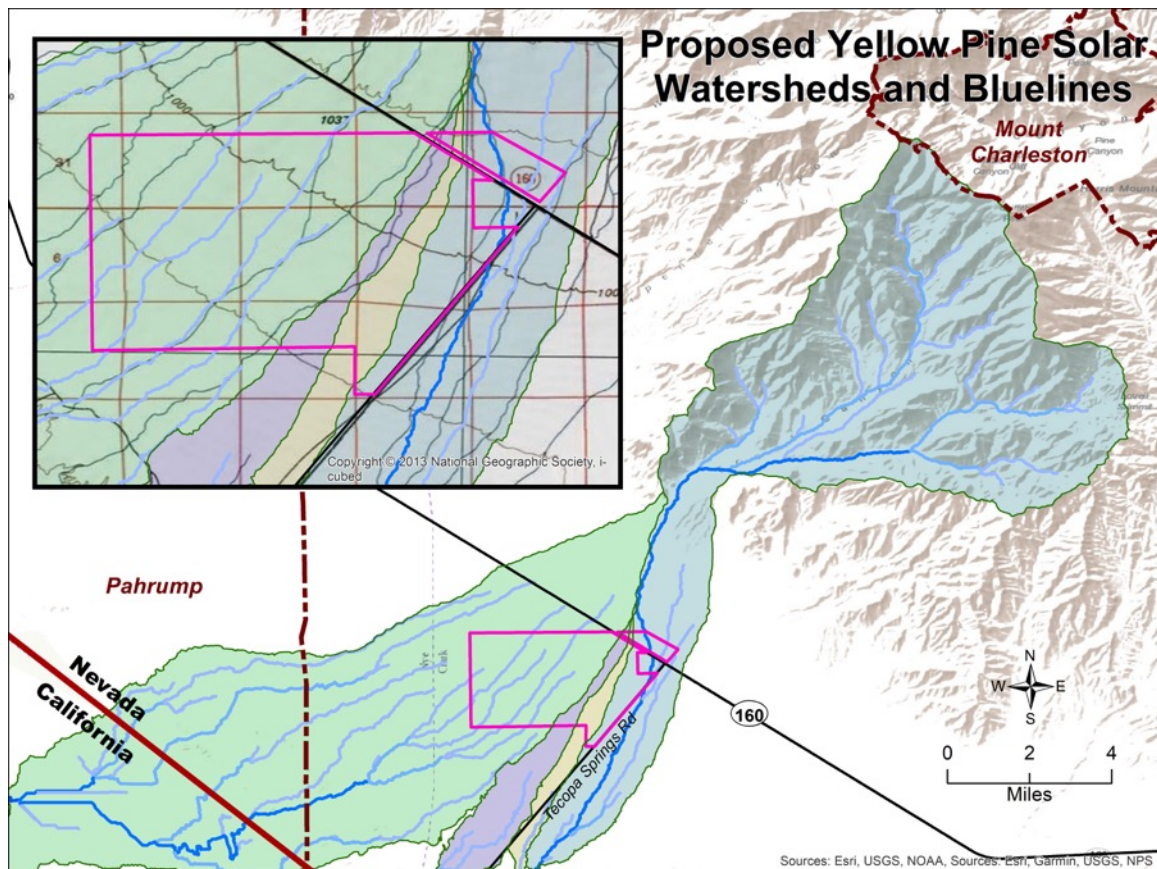
26. An Analysis of Storm Water Drainage Is Missing From the Draft EIS

The applicant should develop a detailed erosion and sedimentation control plan, and a flood risk control plan now for public review. Proposed project sites are often

¹⁴ <https://www.reviewjournal.com/news/politics-and-government/nevada/nevada-bans-new-residential-wells-in-pahrump-over-groundwater-decline/>

¹⁵ <http://pucweb1.state.nv.us/PUC2/DktDetail.aspx>

located on an alluvial fan that acts as an "active stormwater conveyance" between mountains and valleys. Widespread bajada flooding events and sheetwash deposition occurs. The consequences of allowing flooding through the project would be too great. How does the project propose to maintain the solar fields if floodwaters jump the banks of the washes. In addition, alluvial fans often have shifting flow channels and pathways, so there is no guarantee that washes will not shift over 30 years. There is no discussion of berms to protect panels and facilities.



^Map showing watersheds and blue lines, indicating stormwater drainage in the proposed Yellow Pine Project site area. Map prepared Brian Hammer.

The map above shows major alluvial flow patterns in the past and present, and could indicate that severe damage could be done to the proposed substation, transmission lines, and solar fields if the project were to be constructed on this active geological drainage.

27. Cumulative Impacts Are Not Addressed

The BLM has accepted other solar energy applications in the area. Recently, the BLM accepted an application for a solar project called Rough Hat Solar¹⁶ which would

¹⁶ <http://pucweb1.state.nv.us/PUC2/DktDetail.aspx>

overlap with the Stump Spring Translocation Area. There are other solar applications in the area as well. How would the construction of additional solar energy projects cumulatively add to the impacts caused by the Yellow Pine Solar Project? Some applications do not overlap the translocation site, but would still destroy more habitat next to it. The cumulative impacts of Yellow Pine combined with other solar projects will impact species like the desert tortoise even more as well as other species.

28. Mitigation of Significant Impacts Are Not Disclosed Or Assessed

An EIS has to include an assessment of the effectiveness of any proposed mitigation measures. Again, BLM has to both disclose the mitigation measures, and assess their effectiveness in the EIS. BLM has done neither.

In *S. Fork Band Council Of W. Shoshone Of Nevada v. U.S. Dep't of Interior*, 588 F.3d 718, 727 (9th Cir. 2009), although the District Court's written order finds that the EIS discusses the effectiveness of each mitigation measure, close inspection reveals that **the EIS does not in fact assess the effectiveness of the mitigation measures relating to groundwater**. It states only, "Feasibility and success of mitigation would depend on site-specific conditions and details of the mitigation plan." Nothing whatsoever is said about whether the anticipated harms could be avoided by *any* of the listed mitigation measures. **This discussion is inadequate.**

BLM argues that an effectiveness discussion was not required because it is impossible to predict the precise location and extent of groundwater reduction, and that problems should instead be identified and addressed as they arise. But NEPA requires that a hard look be taken, if possible, *before* the environmentally harmful actions are put into effect. *National Parks & Conservation Association v. Babbitt*, 241 F.3d 722, 733 (9th Cir.2001).

BLM needs to circulate a Draft Supplemental EIS for the Yellow Pine Solar Project for actual public comment that actually discloses, and then assesses the effectiveness of the mitigation measures.

29. Conclusion

The Draft EIS for the Yellow Pine Solar Project is incomplete and the BLM has left out important elements like Mitigation Measures and Key Observation Point Simulations. The BLM should amend the 1998 Las Vegas Resources Management Plan because the project lies on higher value VRM Class III lands. That would give us an additional 45 days to provide important comments and grant us a protest period for the final EIS. Not only would this help BLM evaluate visual impacts better, but also allow a better analysis of impacts to biological, cultural and hydrologic resources.

Thank you for considering these comments. Thank you for this opportunity to assist the BLM by providing comments for this project. Please keep us informed of all further substantive stages in this and related NEPA processes and documents.

Sincerely,

A handwritten signature in blue ink, appearing to read "Kevin Emmerich", on a light yellow background.

Kevin Emmerich

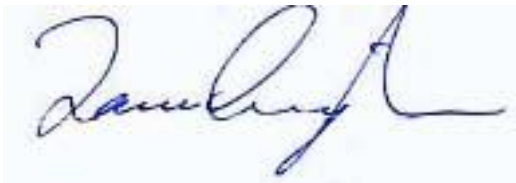
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A handwritten signature in blue ink, appearing to read "Laura Cunningham", on a light blue background.

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