

Appendix D

Comments and Responses to Comments (continued)

Appendix D.3

Comment Letters

Comments Received from
Groups, Organizations, and Companies

Continued



Gila Woodpecker, photo by ©George Andrejko

Conservation Profile

Species Concerns	
Increasing Fire Frequency Climate Change (drought)	
Conservation Status Lists	
USFWS ¹	No
AZGFD ²	Tier 1B
DoD ³	No
BLM ⁴	No
PIF Watch List ^{5b}	No
PIF Regional Concern ^{5a}	Reg. Concern and Stewardship Species-BCR 33
Migratory Bird Treaty Act	
Covered	
PIF Breeding Population Size Estimates ⁶	
Arizona	560,000 ○
Global	1,500,000 ○
Percent in Arizona	37.67%
PIF Population Goal ^{5b}	
Maintain	
Trends in Arizona	
Historical (pre-BBS)	Unknown
BBS ⁷ (1968-2013)	-1.2/year ●
PIF Urgency/Half-life (years) ^{5b}	
> 50	
Monitoring Coverage in Arizona	
BBS ⁷	Adequate
AZ CBM	Adequate
Associated Breeding Birds	
White-winged Dove, Elf Owl, Gilded Flicker, Brown-crested Flycatcher, Verdin, Black-tailed Gnatcatcher, Phainopepla, Lucy's Warbler	

Breeding Habitat Use Profile

Habitats Used in Arizona	
Primary: Sonoran Desertscrub Secondary: Lowland Riparian Woodlands ^{8,9,10}	
Key Habitat Parameters	
Plant Composition	Columnar cactus, especially saguaro; less common in cottonwood, willow, paloverde, ironwood, mesquite, and residential shade trees ^{8,9}
Plant Density and Size	Saguaros > 15 feet tall and branching, or softwood snags ⁹ ; preferred plant densities unknown
Microhabitat Features	Cactus or riparian trees > 10 inches DBH, fruit-bearing cacti and trees, mistletoe infections
Landscape	Saguaros in arroyo settings preferred but others also used, riparian patches > 50 acres
Elevation Range in Arizona	
150 – 4,800 feet ⁸	
Density Estimate	
Territory Size: 11 – 25 acres ⁹ Density: 4 – 10 (up to 20 – 25)/100 acre ⁹	

Natural History Profile

Seasonal Distribution in Arizona	
Breeding	early March – late July ^{8,9}
Migration	Year-round resident
Winter	Some wander to adjacent higher elevations in fall and winter ⁹
Nest and Nesting Habits	
Type of Nest	Excavates tree or cacti cavity
Nest Substrate	Saguaro, cottonwoods, willows, sycamore, paloverde, exotic trees in urban areas ^{8,9}
Nest Height	12 – 35 feet ^{8,9}
Food Habits	
Diet/Food	Insects; saguaro fruits and other fruits ⁹
Foraging Substrate	Tree bark; saguaro ⁹

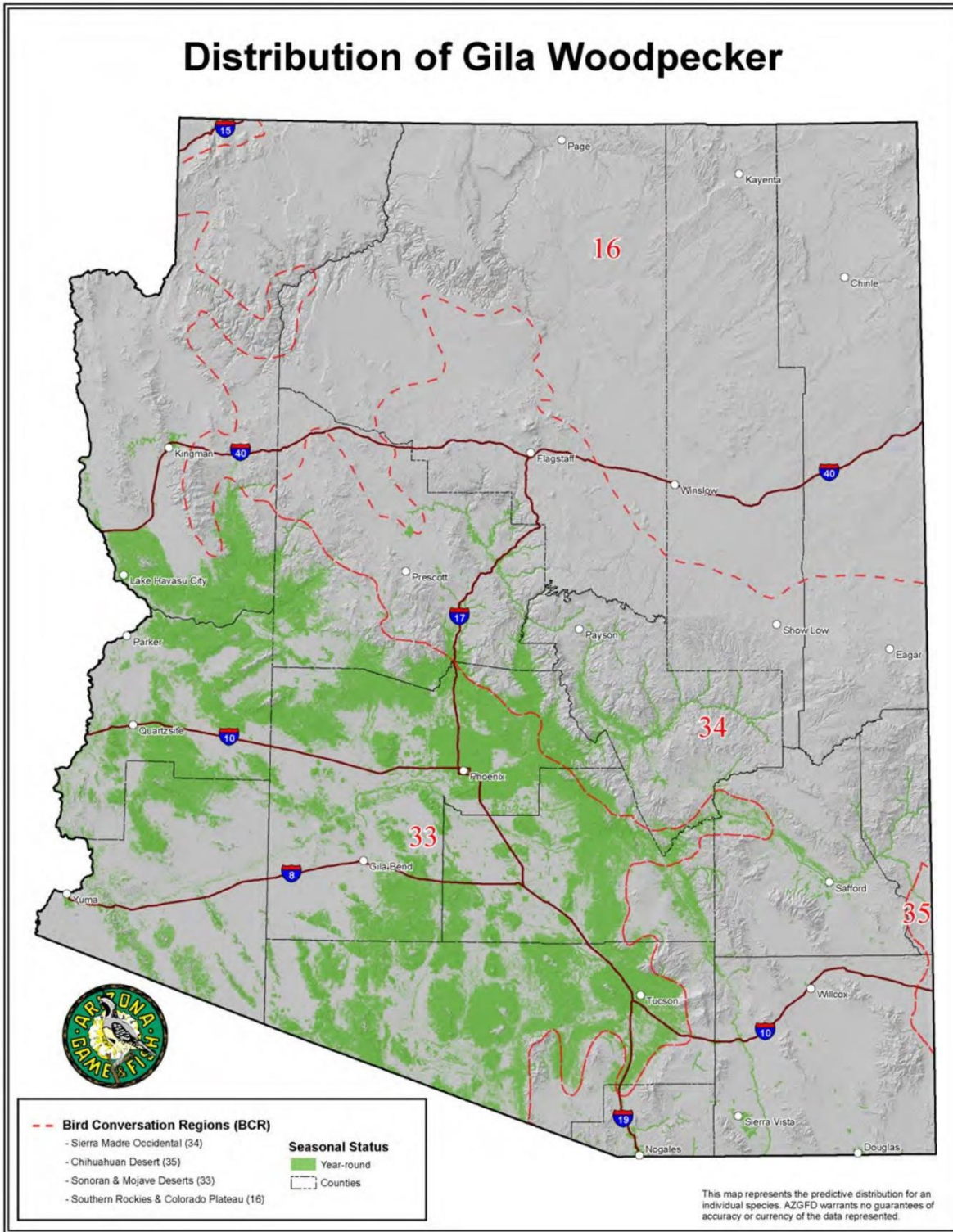
SPECIES ACCOUNT ● GILA WOODPECKER *Melanerpes uropygialis*



Confidence in Available Data: ● High ○ Moderate ○ Low ^ Not provided

Publication Date: 2020

Comment Set B5 – Basin & Range Watch / Western Watersheds Project (cont.)



B5-123
cont.

Comment Set B5 – Basin & Range Watch / Western Watersheds Project (cont.)

B5-123
cont.

General Information

Distribution in Arizona

Similar to the Gilded Flicker, the Gila Woodpecker's distribution in Arizona largely matches the distribution of the Sonoran Desert biome, reaching from the southwest-central region to the far southeastern corner of the state (Bradley 2005). The species occupies lowland areas with saguaros or riparian gallery woodlands. Gila Woodpeckers are year-round residents in Arizona (Edwards and Schnell 2000).

Habitat Description

Most Gila Woodpeckers nest in Sonoran Desert scrub uplands that have tall saguaros or in arroyos with paloverde, mesquite, and ironwood. The remainder of the population nests in riparian and riparian-transitional woodlands with mature cottonwood, willow, mesquite, or Arizona sycamores, and some nest in residential areas with palms and mature shade trees (Edwards and Schnell 2000, Bradley 2005). Wintering habitat and habitat use is similar to nesting habitat, although some individuals wander to adjacent habitats (Philips et al. 1964, Edwards and Schnell 2000).

Microhabitat Requirements

Gila Woodpeckers excavate nest cavities most often in saguaros, but they also regularly use mature native trees, such as cottonwoods, willows, sycamore, ash, and paloverde (Edwards and Schnell 2000, Bradley 2005). Harder woods, such as mesquite, are used less often. In urban and rural settings, Gila Woodpeckers also excavate nesting cavities in palms, eucalyptus, athel tamarisk, mulberry, and other exotic shade trees (Rosenberg et al. 1991, Bradley 2005). Saguaros used for nesting are tall (> 12 feet) and often have arms. Microhabitat details in riparian woodlands have not been studied in detail (Edwards and Schnell 2000). Data on diameters of nesting trees are absent, but based on cavity diameter data (Edwards and Schnell 2000), we estimate a DBH of ≥ 10 inches for nesting trees or cactuses. During nesting, foraging microhabitats include bark of large trees with large branches, particularly thorn trees, and cactus tops that have ripe fruits. In winter, mistletoe berries on mesquite and acacia are a frequent food source when available (Edwards and Schnell 2000).

Landscape Requirements

Gila Woodpeckers nest most often in taller saguaros that are located near wooded arroyos that also provide foraging habitat. Hillsides, ridgetops, and desert flats are also used when saguaro stands are present nearby (Edwards and Schnell 2000). Riparian, xeroriparian, and riparian-transitional areas are also used, if they have mature trees with large branches.

Area requirements of Gila Woodpeckers in saguaro landscapes need further study, but one study determined that riparian woodland patches along the lower Colorado River are only suitable if they are 50 acres or larger (Edwards and Schnell 2000). They are tolerant of low- and medium-density residential areas, particularly if native vegetation is still present; they also readily use taller exotic trees in urban settings (Edwards and Schnell 2000).

SPECIES ACCOUNT ● GILA WOODPECKER *Melanerpes uropygialis*

Comment Set B5 – Basin & Range Watch / Western Watersheds Project (cont.)

Conservation Issues and Management Actions

B5-123
cont.

Threats Assessment

This table is organized by Salafsky et al.'s (2008) standard lexicon for threats classifications. Threat level is based on expert opinion of Arizona avian biologists and reviewers. We considered the full lexicon but include only medium and high threats in this account.

Threat	Details	Threat Level
Residential and Commercial Development <ul style="list-style-type: none"> Housing and urban areas Commercial and industrial areas 		Medium
Agriculture <ul style="list-style-type: none"> Livestock farming and ranching 	Unsustainable livestock grazing	Medium
Natural System Modifications <ul style="list-style-type: none"> Fire and fire suppression 	Desert wildfires kill saguaros and palo verde	High
Invasive and Problematic Species <ul style="list-style-type: none"> Invasive non-native/alien plants and animals 	Invasive grasses, forbs, and tamarisk, European Starlings compete for cavities	Medium
Climate Change <ul style="list-style-type: none"> Ecosystem encroachment Changes in temperature regimes Changes in precipitation and hydrological regimes 		High

In the following section we provide more detail about threats, including recommended management actions. Threats with similar recommended actions are grouped.

Residential and Commercial Development:

- Housing and urban areas
- Commercial and industrial areas

Natural System Modifications:

- Other ecosystem modifications

Gila Woodpeckers tolerate low- and medium-density residential settings if native vegetation is left intact or larger shade trees and palms are incorporated into landscaping.

Recommended Actions:

- Encourage developers to leave large tracts of saguaro landscapes as green-belts and open space.
- Encourage homeowners to plant native paloverde, mesquite, and saguaros.

SPECIES ACCOUNT ● GILA WOODPECKER *Melanerpes uropygialis*

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3. Increase public understanding and appreciation of Gila Woodpeckers and their unique ecological needs, as well their important role in creating cavities for other native species, particularly where native landscapes are adjacent to urban areas.
4. Discourage urban development in saguaro forest.

Agriculture

- Livestock farming and ranching

Across the west, loss of riparian gallery woodlands from alteration of flood regimes and loss of surface water in lower elevation reaches of rivers and streams undoubtedly has affected Gila Woodpecker populations. Unsustainable livestock grazing of riparian areas and invasion of exotic trees can greatly reduce cottonwood, willow, and other native tree recruitment.

Recommended Actions:

1. Reduce livestock grazing activities in perennial and intermittent drainages that affect cottonwood, willow, and other native riparian tree densities and recruitment. This could include fencing, providing alternative water sources, or adopting a “winter-only” grazing regime.

Natural System Modifications:

- Fire and fire suppression

Invasive and Problematic Species:

- Invasive non-native/alien plants and animals

The spread of non-native grasses and forbs into desertscrub habitats has introduced fire into an ecosystem where plants are not fire-adapted. This causes habitat conversion, loss of microhabitats, and mortality of saguaros, paloverde, ironwood, mesquite, cottonwoods, and willows. Conversion of cottonwood-willow riparian habitat to agriculture and invasion of exotic tamarisk have also reduced riparian habitats available to Gila Woodpeckers, especially along the lower Colorado River. The spread of European Starlings is problematic because they can out-compete Gila Woodpeckers for cavities, particularly in and near rural and urban areas.

Recommended Actions:

1. Develop and implement fire management strategies, including invasive grass and weed control, that prevent catastrophic fires.
2. Reduce fuel loads along roadways to reduce wildfire risk.
3. Protect large tracts of saguaro landscapes to reduce fire risk.
4. Restore native gallery riparian forests.

B5-123
cont.

SPECIES ACCOUNT ● GILA WOODPECKER *Melanerpes uropygialis*

Comment Set B5 – Basin & Range Watch / Western Watersheds Project (cont.)

B5-123
cont.

Climate Change:

- Ecosystem encroachment
- Changes in temperature regimes
- Changes in precipitation and hydrological regimes

Prolonged droughts are a concern to Gila Woodpecker populations and other saguaro-dependent species because they reduce vigor and fruit-bearing potential of saguaros. Droughts can also lead to greater mortality of mature trees and cacti.

Recommended Actions:

1. Delineate strongholds of Gila Woodpeckers for strategic conservation planning.
2. Determine risks from land uses that may compound the effects of prolonged droughts on cactus.

Research and Monitoring Priorities

1. Use multi-species protocols to conduct periodic ongoing population monitoring surveys of Gila Woodpeckers to determine population trends and status.
2. Determine Gila Woodpecker diet and where they obtain food in both urban and natural settings.
3. Determine long-term effects of open range livestock grazing in desert landscapes, particularly regarding recruitment of saguaros, palo verde, and other desert trees and the spread of invasive grasses and forbs.

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SPECIES ACCOUNT ● GILA WOODPECKER *Melanerpes uropygialis*

Comment Set B5 – Basin & Range Watch / Western Watersheds Project (cont.)

B5-123
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^{5b}Rosenberg, K. V., J. A. Kennedy, R. Dettmers, R. P. Ford, D. Reynolds, J.D. Alexander, C. J. Beardmore, P. J. Blancher, R. E. Bogart, G. S. Butcher, A. F. Camfield, A. Couturier, D. W. Demarest, W. E. Easton, J.J. Giocomo, R.H. Keller, A. E. Mini, A. O. Panjabi, D. N. Pashley, T. D. Rich, J. M. Ruth, H. Stabins, J. Stanton, T. Will. 2016. Partners in Flight Landbird Conservation Plan: 2016 Revision for Canada and Continental United States. Partners in Flight Science Committee.

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⁷Sauer, J. R., J. E. Hines, J. E. Fallon, K. L. Pardieck, D. J. Ziolkowski, Jr., and W. A. Link. 2016. The North American Breeding Bird Survey, Results and Analysis 1966 - 2013, Version 2016. USGS Patuxent Wildlife Research Center, Laurel, MD. Accessed on July 1, 2016.

¹U.S. Fish and Wildlife Service. 2008. Birds of Conservation Concern 2008. United States Department of Interior, Fish and Wildlife Service, Division of Migratory Bird Management, Arlington, Virginia. 85 pp.

Recommended Citation

Arizona Bird Conservation Initiative and Sonoran Joint Venture. 2020. Gila Woodpecker (*Melanerpes uropygialis*) Species Account. Available at <https://sonoranjv.org/accounts/gila-woodpecker.pdf>

SPECIES ACCOUNT ● GILA WOODPECKER *Melanerpes uropygialis*

Comment Set B5 – Basin & Range Watch / Western Watersheds Project (cont.)

California Wildlife Habitat Relationships System
California Department of Fish and Wildlife
California Interagency Wildlife Task Group

B5-123
cont.

GILA WOODPECKER

*Melanerpes uropygialis*Family: PICIDAE
B297

Order: PICIFORMES

Class: AVES

Written by: M. Green
 Reviewed by: L. Mewaldt
 Edited by: R. Duke, D. Winkler

DISTRIBUTION, ABUNDANCE, AND SEASONALITY

An uncommon to fairly common resident in southern California along the Colorado River, and locally near Brawley, Imperial Co. Occurs mostly in desert riparian and desert wash habitats, but also found in orchard-vineyard and urban habitats, particularly in shade trees and date palm groves. Formerly found in farm and ranchyards throughout the Imperial Valley, but most regularly now near Brawley. Numbers have declined greatly in southern California in recent decades (Remsen 1978, Garrett and Dunn 1981).

SPECIFIC HABITAT REQUIREMENTS

Feeding: Eats insects, mistletoe berries, cactus fruits, corn (Gilman 1915, Ehrlich et al. 1988), and occasionally contents of galls on cottonwood leaves, bird eggs, acorns, cactus pulp (Speich and Radke 1975). Gleans from trunks and branches of trees and shrubs.

Cover: Cottonwoods and other desert riparian trees, shade trees, and date palms supply cover in California. Saguaros are important habitat elements outside of California, but are scarce within the state and are not so important.

Reproduction: Nests in cavity in riparian tree or saguaro.

Water: No data found. Characteristically forages and nests in riparian areas in California.

Pattern: Groves of riparian trees, planted shade trees, and date palm orchards provide cover.

SPECIES LIFE HISTORY

Activity Patterns: Yearlong, diurnal activity.

Seasonal Movements/Migration: Resident within California. May wander in nonbreeding seasons. There are 2 old records in southern, coastal California.

Home Range: No data found.

Territory: No data found on territory size, but reportedly highly defensive of territory against all avian intruders (Gilman 1915), particularly northern flickers and European starlings (Ehrlich et al. 1988). Emlen (1974) found 0.3 pair per 40 ha (100 ac) near Tucson, Arizona.

Reproduction: Breeds from April through July, with peak activity in April and May. Apparently a monogamous and solitary breeder; both sexes incubate the 3-5 eggs for about 14 days. Sometimes 2 broods are raised in a season. Nestlings altricial and naked (Harrison 1978).

Comment Set B5 – Basin & Range Watch / Western Watersheds Project (cont.)

B5-123
cont.

Niche: European starlings compete for nest sites; old nest holes also used by owls, American kestrel and purple martin. Loss and fragmentation of riparian woodland to development, and competition for nest holes from European starlings, apparently are major factors contributing to the decline in numbers in California in recent decades (Remsen 1978).

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**B5-123
cont.**

B297

Life history accounts for species in the California Wildlife Habitat Relationships (CWHR) System were originally published in: Zeiner, D.C., W.F.Laudenslayer, Jr., K.E. Mayer, and M. White, eds. 1988-1990. California's Wildlife. Vol. I-III. California Department of Fish and Game, Sacramento, California. Updates are noted in accounts that have been added or edited since original publication.

Comment Set B5 – Basin & Range Watch / Western Watersheds Project

B5-124

A Manual of California Vegetation

Second Edition

John O. Sawyer, Humboldt State University
Todd Keeler-Wolf, Department of Fish and Game
Julie M. Evens, California Native Plant Society



California Native Plant Society
In collaboration with
California Department of Fish and Game
Sacramento, California

Comment Set B5 – Basin & Range Watch / Western Watersheds Project (cont.)

***Castela emoryi* Shrubland Special Stands**

Crucifixion thorn stands

Castela emoryi grows as individual shrubs or in stands with *Ambrosia dumosa*, *Brickellia incana*, *Encelia farinosa*, *E. virginensis*, and *Larrea tridentata*. Shrubs < 4 m; canopy is open to intermittent.

Substrate: Plains, alluvial bottom lands, sand fields; rocky slopes. Soils are fine-textured silts and clays. **Elevation:** 100–650 m.

Rarity ranking: G2 S1.1. **MCV:** Crucifixion thorn shrub. **NVCS:** Not treated. **Calveg:** Not treated. **Wetland:** Crucifixion thorn woodland. **Munz:** Creosote scrub. **WHR:** Desert scrub.

Remarks

Castela emoryi (a CNPS list 2.3 plant) is a large, leafless shrub that grows to 4 m in height; it has rigid, light green stems that end in stout thorns. Clusters of hard, papery, first yellowish then drying to black, persist on stems for up to 7 years. Seeds apparently require scarification of the seed coat to initiate germination (Shreve and Wiggins 1964, Turner et al. 1995). Regional manuals also use the name *Holacantha emoryi*. This plant is easily confused with *Ziziphus obtusifolia*, with its gray branches, and *Koeberlinia spinosa*, with its dark green branches and black berries.

Stands typically associate with fine substrate in washes or basins and are associated with *Ambrosia*

dumosa, *Brickellia incana*, *Encelia virginensis*, *Ephedra californica*, *Larrea tridentata*, or other species of low-energy wash environments. Plot data are available from CNDDDB (2008).

Observations

Castela emoryi grows in the Colorado Desert (322Cb), Sonoran Desert (322Ba–Be), and southern Mojave Desert (322A1–m, Ao). The best-known stand is near the corner of Coyote Road and State Route 98 in Imperial Co. The Bureau of Land Management has fenced this large stand and designed it as the Crucifixion Thorn Natural Area. It is located in a small playa within the Yuha Desert, where it grows with scattered shrubs of *Ambrosia dumosa* and *Larrea tridentata* and an understory of herbs such as *Hoffmannseggia glauca*. The other 19 known occurrences (CNPS 2001) are scattered in California's deserts, where summer rainfall is common, summer temperatures are hot, and frost is rare. We need further information to understand the relationships of this species in the state's desert vegetation.

References

Shreve and Wiggins 1964, Turner et al. 1995.

B5-124
cont.

Comment Set B5 – Basin & Range Watch / Western Watersheds Project (cont.)

DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
CASE RECORDATION
(MASS) Serial Register Page

B5-124
cont.

Run Date/Time: 9/18/2021 13:51 PM

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01 10-21-1976;090STAT2776;43USC1761

Total Acres:
4,574.848

Serial Number
CACA 058539

Case Type 283103: ROW SOLAR DEV GRANT

Commodity 975: SOLAR ENERGY FACILITIES

Case Disposition: PENDING

Case File Juris: PALM SPRINGS/S COAST FLD OFC

Serial Number: CACA-- - 058539

Name & Address						Int Rel	% Interest
IP OBERON LLC C/O INTERSECT POWER	9450 SW GEMINI DR	BEAVERTON	OR	970087105	APPLICANT	100.000000000	
IP LAND HOLDINGS LLC C/O INTERSECT POWER LLC	9450 SW GEMINI DR PMV # 68743	BEAVERTON	OR	97008	PARTY-IN-INTEREST	0.000000000	

Serial Number: CACA-- - 058539

Mer	Twp	Rng	Sec	SType	Nr	Suff	Subdivision	District/ Field Office	County	Mgmt Agency
27	0050S	0150E	013	ALIQ		S2;		PALM SPRINGS/S COAST FLD	RIVERSIDE	BUREAU OF LAND MGMT
27	0050S	0150E	014	ALIQ		S2;		PALM SPRINGS/S COAST FLD	RIVERSIDE	BUREAU OF LAND MGMT
27	0050S	0150E	015	ALIQ		E2SE;		PALM SPRINGS/S COAST FLD	RIVERSIDE	BUREAU OF LAND MGMT
27	0050S	0150E	022	ALIQ		E2NE,NESE;		PALM SPRINGS/S COAST FLD	RIVERSIDE	BUREAU OF LAND MGMT
27	0050S	0150E	023	ALIQ		N2,SE;		PALM SPRINGS/S COAST FLD	RIVERSIDE	BUREAU OF LAND MGMT
27	0050S	0150E	024	ALIQ		N2,SW,E2SE,SWSE;		PALM SPRINGS/S COAST FLD	RIVERSIDE	BUREAU OF LAND MGMT
27	0050S	0150E	025	FF		PORTION N OF I-10;		PALM SPRINGS/S COAST FLD	RIVERSIDE	BUREAU OF LAND MGMT
27	0050S	0150E	026	FF		PORTION N OF I-10;		PALM SPRINGS/S COAST FLD	RIVERSIDE	BUREAU OF LAND MGMT
27	0050S	0160E	018	ALIQ		S2;		PALM SPRINGS/S COAST FLD	RIVERSIDE	BUREAU OF LAND MGMT
27	0050S	0160E	019	ALL		ENTIRE SECTION		PALM SPRINGS/S COAST FLD	RIVERSIDE	BUREAU OF LAND MGMT
27	0050S	0160E	020	ALL		ENTIRE SECTION		PALM SPRINGS/S COAST FLD	RIVERSIDE	BUREAU OF LAND MGMT
27	0050S	0160E	027	FF		PORTION FOR GEN-TIE;		PALM SPRINGS/S COAST FLD	RIVERSIDE	BUREAU OF LAND MGMT
27	0050S	0160E	028	FF		PORTION N OF I-10;		PALM SPRINGS/S COAST FLD	RIVERSIDE	BUREAU OF LAND MGMT
27	0050S	0160E	029	FF		PORTION N OF I-10;		PALM SPRINGS/S COAST FLD	RIVERSIDE	BUREAU OF LAND MGMT
27	0050S	0160E	030	FF		PORTION N OF I-10;		PALM SPRINGS/S COAST FLD	RIVERSIDE	BUREAU OF LAND MGMT
27	0050S	0160E	034	FF		PORTION FOR GEN-TIE;		PALM SPRINGS/S COAST FLD	RIVERSIDE	BUREAU OF LAND MGMT

Relinquished/Withdrawn Lands

Serial Number: CACA-- - 058539

Serial Number: CACA-- - 058539

Act Date	Act Code	Action Txt	Action Remarks	Pending Off
05/09/2019	124	APLN RECD	500MW PV	
05/09/2019	500	GEOGRAPHIC NAME	OBERON;	
05/13/2019	065	COST RECOV (MON) RECD	\$52050.00;1	
05/20/2019	429	APLN ACKNOWLEDGED		

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09/05/2019	347	FILING FEE RECEIVED	\$51750.00;1	
09/17/2019	429	APLN ACKNOWLEDGED	AMENDED APPLN;	
04/13/2020	114	AMEND/CORR APLN RECD	GEN-TIE ALTERNATIVES	
07/07/2020	845	CAT 6 COST RECOVERY-PROC		
08/10/2020	950	COMPLIANCE APPROVED		
08/28/2020	971	COST RECOV (PROC) RECD	\$9120.28;1	
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06/17/2021	065	COST RECOV (MON) RECD	\$120050.00;1	
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Serial Number: CACA-- - 058539

Line Number	Remark Text
0001	500MW SOLAR
0002	ORIG 3,470 AC; AMENDED TO 6,920 AC 9/5/2019
0003	4/13/2020: AMENDED FROM 6,920 AC TO 4,574.84 AC
0005	11/25/2020:AMENDED FROM 4,584.84AC TO 4,700AC

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Geophysical Research Letters

RESEARCH LETTER

10.1029/2020GL090789

Key Points:

- A set of state-of-the-art Earth-system model simulations are used to study the impacts of large-scale (20% coverage or more) Sahara solar farms
- These hypothetical solar farms increase local rainfall and vegetation cover through positive atmosphere–land(albedo)–vegetation feedbacks
- Conveyed by atmospheric teleconnections, the Sahara solar farms can induce remote responses in global climate and vegetation cover

Supporting Information:

- Supporting Information S1

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Impacts of Large-Scale Sahara Solar Farms on Global Climate and Vegetation Cover

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Abstract Large-scale photovoltaic solar farms envisioned over the Sahara desert can meet the world's energy demand while increasing regional rainfall and vegetation cover. However, adverse remote effects resulting from atmospheric teleconnections could offset such regional benefits. We use state-of-the-art Earth-system model simulations to evaluate the global impacts of Sahara solar farms. Our results indicate a redistribution of precipitation causing Amazon droughts and forest degradation, and global surface temperature rise and sea-ice loss, particularly over the Arctic due to increased polarward heat transport, and northward expansion of deciduous forests in the Northern Hemisphere. We also identify reduced El Niño–Southern Oscillation and Atlantic Niño variability and enhanced tropical cyclone activity. Comparison to proxy inferences for a wetter and greener Sahara ~6,000 years ago appears to substantiate these results. Understanding these responses within the Earth system provides insights into the site selection concerning any massive deployment of solar energy in the world's deserts.

Plain Language Summary Solar energy can contribute to the attainment of global climate mitigation goals by reducing reliance on fossil fuel energy. It is proposed that massive solar farms in the Sahara desert (e.g., 20% coverage) can produce energy enough for the world's consumption, and at the same time more rainfall and the recovery of vegetation in the desert. However, by employing an advanced Earth-system model (coupled atmosphere, ocean, sea-ice, terrestrial ecosystem), we show the unintended remote effects of Sahara solar farms on global climate and vegetation cover through shifted atmospheric circulation. These effects include global temperature rise, particularly over the Arctic; the redistribution of precipitation (most notably droughts and forest degradation in the Amazon) and northward shift of the Intertropical Convergence Zone; the northward expansion of deciduous forests in the Northern Hemisphere; and the weakened El Niño–Southern Oscillation and Atlantic Niño variability and enhanced tropical cyclone activity. All these remote effects are in line with the global impacts of the Sahara land-cover transition ~6,000 years ago when Sahara desert was wetter and greener. The improved understanding of the forcing mechanisms of massive Sahara solar farms can be helpful for the future site selection of large-scale desert solar energy facilities.

1. Introduction

Despite the rapid depletion of global reserves (Shafiee & Topal, 2009) and harmful effects on global climate (IPCC, 2018), fossil fuel burning continues to dominate energy systems worldwide (Johansson et al., 2012). Solar farms offer an attractive solution for the transition to clean and sustainable energy use: solar power is the most abundant available renewable energy source (Johansson et al., 2012; Sieminski, 2013) and helps to mitigate climate change through reduced emissions (Creutzig et al., 2017; Kannan & Vakeesan, 2016). Harvesting the globally available solar energy (or even just that over the Sahara) could theoretically meet all humanity's energy needs today (Hu et al., 2016; Li et al., 2018). Large-scale deployment of solar facilities over the world's deserts has been advanced as a feasible option (Komoto et al., 2015).

The climate and environmental impacts of solar farms have drawn increasing attention due to the rapid development of solar energy. Indeed, both on-site (e.g., Barron-Gafford et al., 2016; Grodsky & Hernandez, 2020; Y. Liu et al., 2019) and satellite (e.g., Zhang & Xu, 2020) observations have shown complex and

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location-dependent changes to microclimates and shifts in local ecosystems after the construction of desert solar farms across the world. Competing responses in surface temperature warming and cooling, and ecosystem recovery and degradation, were reported in prior work. These effects remain highly uncertain and motivate modeling studies to assess the potential regional and global impacts of the proposed large-scale application of solar energy in the desert based on a range of future energy use scenarios (Hu et al., 2016). The primary mechanism for local impacts can be largely simplified to a land–atmosphere feedback due to the albedo change in the desert, which is also the mechanism through which overgrazing has been implicated to, at least partly, cause Sahel droughts (Charney, 1975). Similar land use/land-cover changes have been found to trigger this feedback and induce local climate and ecosystem responses, particularly over arid/semiarid regions (Huang et al., 2017). Interestingly, a recent modeling study (Li et al., 2018)—the first to link this land–atmosphere feedback to solar farms—reported that large-scale solar farms in the Sahara desert would increase local rainfall and vegetation, benefiting both the regional environment and sustainable development while generating electricity in excess of current global consumption. In simulations with a global atmosphere model with a dynamic land surface, the darker land surface (lower albedo of photovoltaic [PV] panels) compared to the desert surfaces they mask induces higher surface air temperatures and convergent flow. This, in turn, leads to more rainfall and promotes vegetation growth. The expansion of vegetation cover further lowers the surface albedo, amplifying the initial warmer and wetter conditions through this positive feedback. However, these local responses would also be expected to induce remote impacts through atmospheric teleconnections and ocean dynamics. These effects, which could significantly alter the assessment of the mitigation potential of solar farms, could not be fully captured by the model employed in Li et al. (2018), due to the assumption of unchanging ocean temperatures and heat transport.

2. Materials and Methods

2.1. The Earth-System Model EC-Earth

We employ a fully coupled Earth-system model (ESM), EC-Earth to study the global climate and environmental responses to large-scale solar farms in the Sahara. EC-Earth (version 3.3.1) is a European community ESM which integrates several component models (atmosphere, ocean, sea-ice, and dynamic vegetation) and thus is capable of simulating complex interactions between the atmosphere, the ocean, and the land biosphere. In addition to incorporating a full set of interacting components affecting large-scale climate, EC-Earth employs a relatively high atmospheric spatial resolution that can more accurately represent synoptic precipitation (Raj et al., 2019) and boundary layer conditions (e.g., better resolved topography) (Zheng & Eltahir, 1998), important for capturing key dynamic features of the Sahara regional climate system such as the Western African Monsoon (WAM) strength (Hourdin et al., 2010; Sylla et al., 2010; Xue et al., 2010). Past studies (Hazeleger et al., 2010, 2012; Kageyama et al., 2017) provide an overview of the general performance of an earlier version of this model. In particular, the model demonstrates skill in emulating a number of key physical processes relevant to this study, such as the atmospheric general circulation and monsoon system (Bernzell et al., 2018; Pausata et al., 2016) and the tropical climate variability and atmospheric teleconnections (Pausata et al., 2017a). A recent study shows that simulated 100-year trends and interdecadal variability of EC-Earth (EC-Earth3-Veg configuration, also used in this study) fall within the range of the CMIP6 (the latest ESM Intercomparison project) piControl ensemble (Parsons et al., 2020).

EC-Earth is part of a new generation of global ESMs that incorporates a second-generation dynamic vegetation–ecosystem scheme (the LPJ-GUESS vegetation–ecosystem model) based on an individual-based and patch-based representation of land ecosystem structure and dynamics (Smith et al., 2001, 2014). It takes into account vegetation structure, competition, and disturbances which are key to accurately modeling responses of dry land and mixed forest ecosystems (Smith et al., 2014; Whitley et al., 2017). This functionality has been demonstrated to be critical for capturing tree mortality and recovery following drought in savannas and forest ecosystems (Haverd et al., 2013; Purves & Pacala, 2008; Wolf et al., 2011). Associated interactions with climate are key to characterizing the impacts and feedbacks of land use and land-cover changes in regions sensitive to altered albedo, such as the Sahara desert. The model shows improved performance in arid land like North Africa, for example, for the precipitation–grass cover relationship (Lu et al., 2018).

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2.2. Solar Farm Simulations

We conduct three baseline simulations (CTRL, S20, and S50) using the fully coupled EC-Earth model 3.3.1 with active atmosphere, ocean, sea-ice, and dynamic vegetation components. The horizontal resolution of atmosphere/land/vegetation is T159 ($\sim 1.125^\circ$), with 62 vertical levels in the atmosphere, while the ocean/sea-ice model has a horizontal resolution of $\sim 1^\circ$ and 46 vertical levels. Each simulation is initialized from a state of 1990 climate and vegetation cover (representing a present-day state for this model which is constrained by observation) and runs for 150 years during spin-up. The model reaches a quasi-equilibrium climate (indicated by the stable global mean surface air temperature and Sea Surface Temperature [SST], figure not shown) after spin-up, and we use the next 60 years of model output for analysis. We fix the greenhouse gas levels, aerosol forcing, and other land use and land-cover properties (cropland, pasture, and managed forest) at their 1990 values.

The S20 and S50 (“solar panels”) represent the “Sahara solar farm” scenarios in which 20% and 50% of all the grid points in the North African region ($15\text{--}30^\circ\text{N}$, $20^\circ\text{W}\text{--}45^\circ\text{E}$; Figure 3, black circles; Figure S1) are prescribed reduced bare soil albedo. The installment of PV panels decreases surface albedo from the highly reflective desert soils (Figure S1). The albedo of the entire prescribed grid point approximates the *effective albedo* (0.235) of PV solar panels (Li et al., 2018) (Text S1). The *effective albedo* of PV panels takes account of the lateral export of electric energy captured by the panels outside the deployment region (Text S1). For simplicity, vegetation is allowed to grow in solar panel grid cells and change their cover fraction, but the influence of this unrealistic assumption is expected to be limited in terms of albedo effects (Text S1). Note that this method (lowering surface albedo) has been commonly used in climate models and ESMs to study large-scale PV solar farm impacts (e.g., Hu et al., 2016; Li et al., 2018). The S20 and S50 scenario simulations are compared with a 1990 control simulation (CTRL).

The low-end scenario S20 is expected to be able to meet the global demand after various efficiency losses, and its justification in terms of electricity production can be found in Text S2. S20 is also ideal for an inter-model comparison with Li et al. (2018). The high-end scenario S50 is a more theoretical scenario to focus on the forcing mechanisms from larger signals in land use changes (Text S2). Another regional consumption scenario (S05) in which solar panels cover 5% of North Africa and supply the energy needs of Europe, Africa, and the Middle East ($\sim 24.6\%$ of the world’s consumption; BP, 2019) is also considered, the results of which are discussed in Text S3.

We also conduct two additional simulations driven by the mean SST seasonal cycle calculated from the reanalysis data for the period 1960–1989 (Hurrell et al., 2008) (CTRL_{SST} and S20_{SST}). This ensures that in these simulations only changes to the atmosphere and vegetation are simulated and allow us to disentangle the effects of interactive ocean dynamics. In S20_{SST}, we use the same configuration of solar panels as in S20. These fixed SST simulations are similar to those studied in Li et al. (2018). By comparing the response of climate and vegetation in S20_{SST} and CTRL_{SST} (a 30-year interval of output) to that in the fully coupled simulations S20 and CTRL, we can assess the role of ocean dynamics (and resulting ocean–atmosphere interactions) and land-induced changes in atmospheric dynamics in propagating the local influences of Sahara solar farms to a global scale.

3. Results

3.1. Local Response to the Sahara Solar Farms

The EC-Earth solar farm simulations depict prominent warming anomalies over the Sahara (Figures 1a–c). The local mean surface air temperature is increased by $\sim 1.5^\circ\text{C}$ in S20 and is further increased by $\sim 1^\circ\text{C}$ in S50. This corresponds to $\sim 1^\circ\text{C}$ of warming per 4.4% reduction of the surface albedo (Figure S4, taking vegetation cover into account), consistent with a previous study (Laguë et al. 2019). To the south of the local warming signal is a slight cooling, where latent heat cooling (because of more precipitation) and enhanced vegetation evapotranspiration dominates, especially during boreal summer (Figure S3a–c). The precipitation response (Figures 1d–f) is closely associated with temperature anomalies. The increased annual mean precipitation is driven by surface heating and moisture convergence (Figure S5), mainly in summer (Figure S3d–f). The precipitation increase averaged over the Sahara desert is 0.1 and 0.4 mm/day in S20 and S50,

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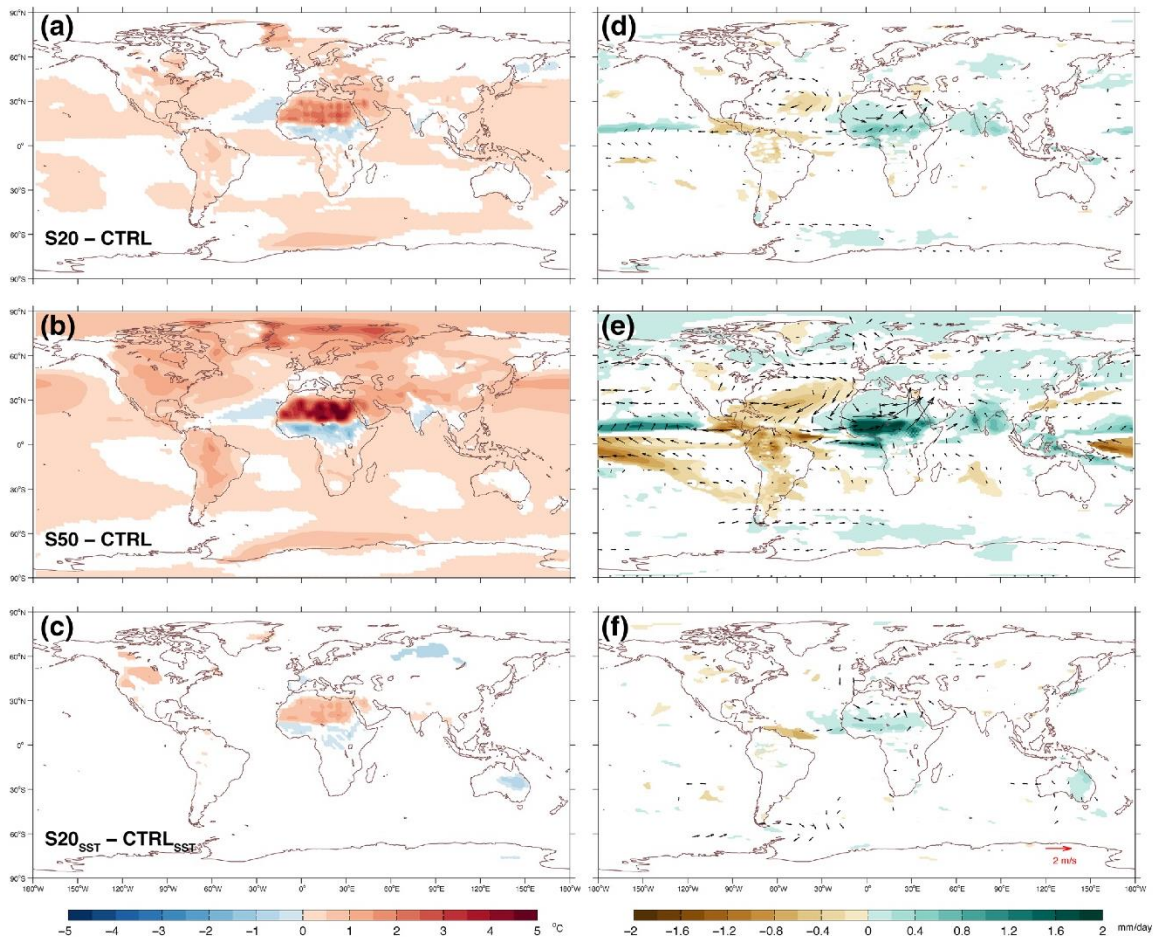


Figure 1. Mean climate response. Modeled annual mean (a–c) surface air temperature response, and (d–f) precipitation and 925 hPa wind response. From top to bottom, the results are for S20–CTRL, S50–CTRL, and S20_{SST}–CTRL_{SST}. All anomalies shown exceed 95% significance level based on two-sample *t* test.

respectively, with larger increases at the southern edge of the area (Figures 1d–f; Figure S4). Circulation shifts are a key to these rainfall changes, mainly driven by an enhanced WAM (Figure S3d–f). The spatial pattern and magnitude of the local temperature and precipitation anomalies of S20 and S20_{SST} are consistent with Li et al. (2018).

More rainfall over North Africa induced by large-scale solar farms leads to vegetation expansion (Figures 2a–2c). In S20, the vegetation extent shifts northward only slightly, whereas in S50 about half of the Sahara becomes colonized by savannah and grassland. By comparing vegetation coverage (Figures 2d–2g), we identify that the Sahara vegetation change mainly consists of expansion of tall grass with scattered high vegetation including closed rainforest as far north as ~30°N in the S50 scenario. In the desert, vegetation growth enabled by rainfall enhancement further reduces albedo, increases evapotranspiration, and decreases sensible heat flux; this reinforces the initial precipitation increase and leads to a larger vegetation response (Li et al., 2018). As a result, the simulated vegetation expansion, which in the Sahara mostly consists of grass replacing bare ground, induces positive land (vegetation)–atmosphere feedbacks (Lu et al., 2018; Pausata et al., 2016). This local positive albedo–precipitation–vegetation feedback is also known as the classic Charney mechanism (Charney, 1975).

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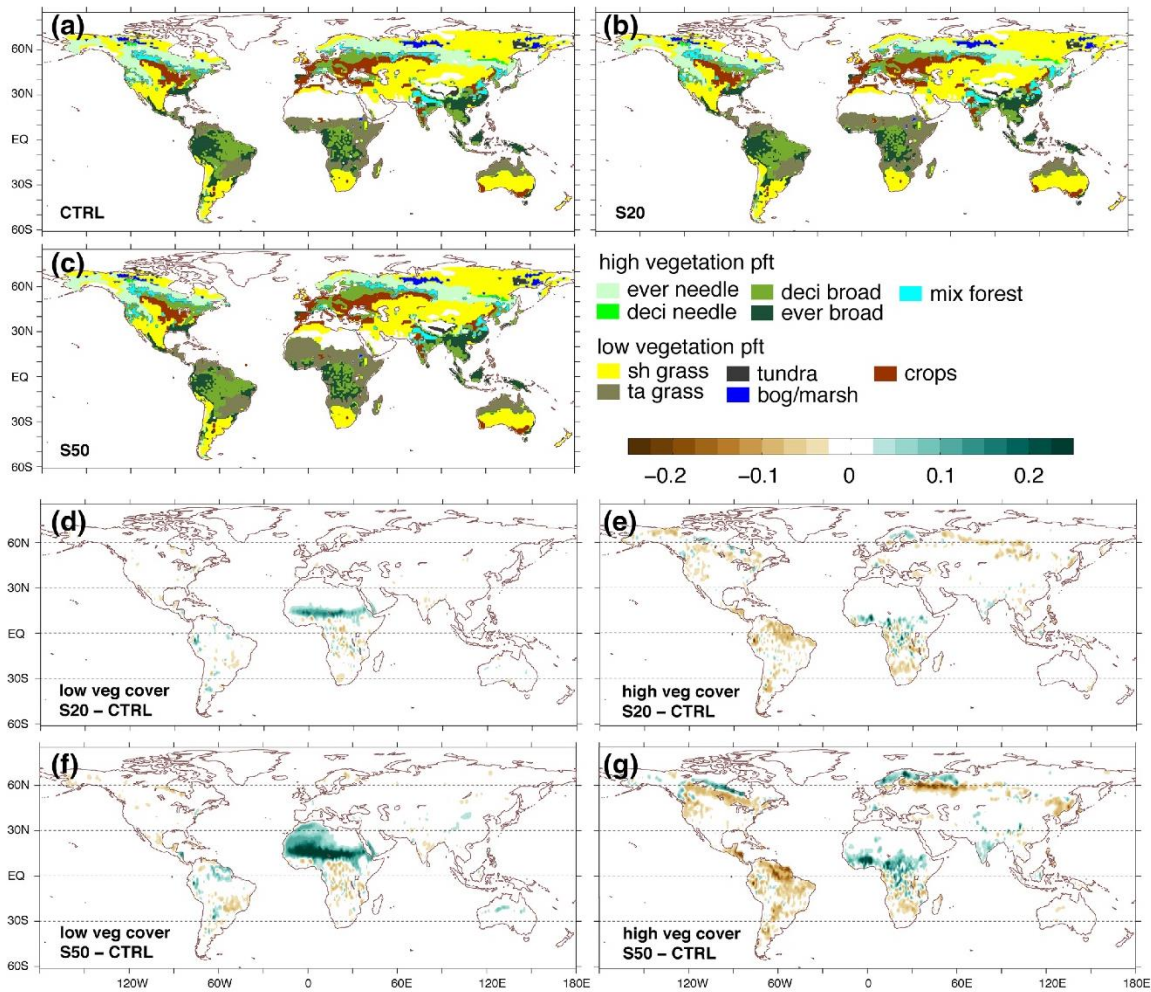


Figure 2. Vegetation response. Modeled vegetation pattern of (a) CTRL, (b) S20, and (c) S50. The simulated plant functional type (PFT) is shown where the vegetation cover is larger than 15%. Modeled annual mean vegetation cover (fraction) differences for (d, f) low vegetation and (e, g) high vegetation.

3.2. Remote Response to the Sahara Solar Farms

Our simulations reveal that the climate response to a massive deployment of solar farms is not limited to the local scale but is characterized by extensive teleconnections. Both the S20 and S50 scenarios lead to a pronounced signal of surface warming across the globe (Figure 1a and 1b), and in the case of S50 it can be seen more clearly that the warming is stronger in the Northern Hemisphere high latitudes. In contrast, the temperature response outside the North African region is largely suppressed when SST is prescribed in the simulations (Figure 1c). The mechanism behind the remote response is as follows: the local response of warming in North Africa leads to a stronger meridional temperature gradient between the subtropics and high latitudes, thus intensifying the mid-latitude to high-latitude eddy activity and oceanic Atlantic meridional overturning circulation (Figure S6a). This also results in larger northward atmospheric and oceanic heat transport (Figure S6b,c) (Muschiello et al., 2015). The Arctic climate shift in S50 also indicates the presence of a persistent positive Arctic Oscillation pattern, with lower sea level pressure over the Arctic (Figure S7, shading), stronger winds circulating around the North Pole (Figure S7, vectors), and more cold air confined to the polar regions. However, this Arctic amplification is not very clear in S20.

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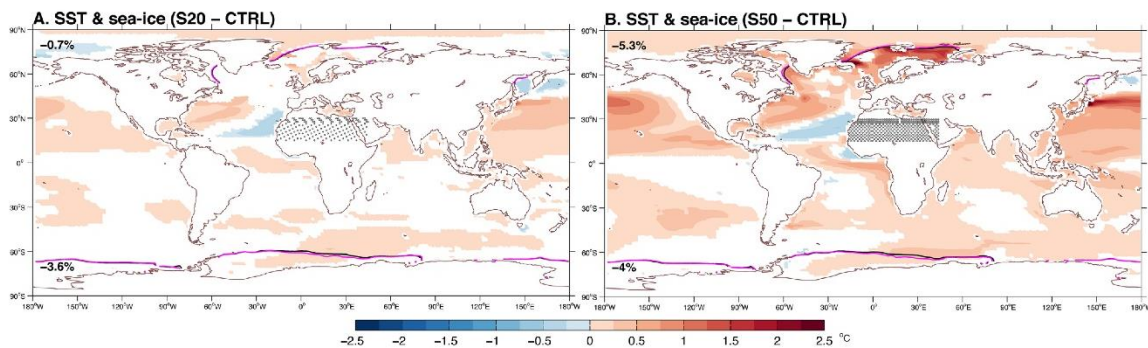


Figure 3. Ocean mean state response. Modeled annual mean SST response (shading color) and sea-ice extent (>50% sea-ice concentration) in CTRL (black curve) and solar farm simulations (purple curves) for (a) S20–CTRL and (b) S50–CTRL. The hemispheric sea-ice extent changes are also shown in the corner of the map. Black dots depict the locations of solar panels for S20 and S50 (“checkerboard”). All anomalies shown exceed 95% significance level based on two-sample *t* test.

The most striking feature of the mean SST response is the warming of the Arctic Ocean, North Pacific, and North Atlantic (Figure 3a and 3b, shading), while the warming effect on the Southern Ocean is smaller. This North-South asymmetric warming is more robust in S50, reaching +2°C in the oceans in the North Hemisphere. Accompanied by the warming anomalies, the Arctic and Antarctica sea-ice decline is noticeable in the solar farm simulations (Figure 3a and 3b, black and purple contours, numbers) but generally weaker in S20. The SST cools slightly in the equatorial Atlantic (likely due to increased wind-driven coastal upwelling off Northwest Africa) and causes a larger east-west temperature gradient, related to the intensification of the WAM (Pausata et al., 2016).

Solar farms induce a northward shift in the Intertropical Convergence Zone (ITCZ) in the tropical Pacific (as seen from the precipitation anomalies; Figure 1d and 1e), driven by warming in the Northern Hemisphere and the enhanced meridional heat transport (Figure 1a and 1b; Figure S6) (Chiang & Friedman, 2012). The precipitation response includes a significant reduction (by ~–10% in S20 and ~–30% in S50) over vast regions of Central America, northern South America, and the tropical western Atlantic, in about half of a magnitude of precipitation increase seen in the Sahel and Sahara (Figure 1d and 1e). Moisture supply to those regions declines (Figure S5a,b, vectors), perturbed by the large-scale atmospheric circulation changes (Durán-Quesada et al., 2017). The moisture source in the Atlantic instead transports more to the Sahel and that in the Pacific transports more to the northward shifted Pacific ITCZ. The reduction in moisture flow and precipitation over the Amazon can be further exacerbated by the remote effects from vegetation expansion over Africa (Kooperman et al., 2018). By examining the large-scale remote responses induced by Sahara solar farms in S20_{SST}, we find that the precipitation and wind anomalies seen in S20 are significantly dampened when the ocean response to local changes and associated ocean–atmosphere interactions are limited (Figure 1f; Figure S3f).

The solar farm simulations show a consistent decline in El Niño–Southern Oscillation (ENSO) variability (Text S4), from –3% in S20% to –17% in S50 (averaged over Niño 3.4 box) (Figures 4a–4c). The Atlantic Niño variability is also reduced in S20 and considerably weakened in S50. The early onset of the WAM (not shown) and the northward shift of ITCZ in late spring and summer decrease the equatorial western Atlantic surface wind variability, as the maximum wind variance moves away from the equator. This in turn weakens the equatorial eastern Atlantic SST variability (which usually peaks a few months later) (Pausata et al., 2017a). The Atlantic Niño response further increases the strength of the Walker circulation (Figure S8a,b) and drives the wind anomalies over the equatorial Pacific westwards during summer (Figure S3d,e). This leads to increased mean westward ocean currents and a deepened thermocline in the equatorial Pacific (Figure S8c). The former can dampen the eastward-propagating warm surface anomalies that characterize extreme El Niño events (Cai et al., 2015), and the latter can weaken the Bjerknes positive feedbacks (Liu et al., 2014) by reducing ocean vertical stratification which is crucial for ENSO development (Ding et al., 2012).

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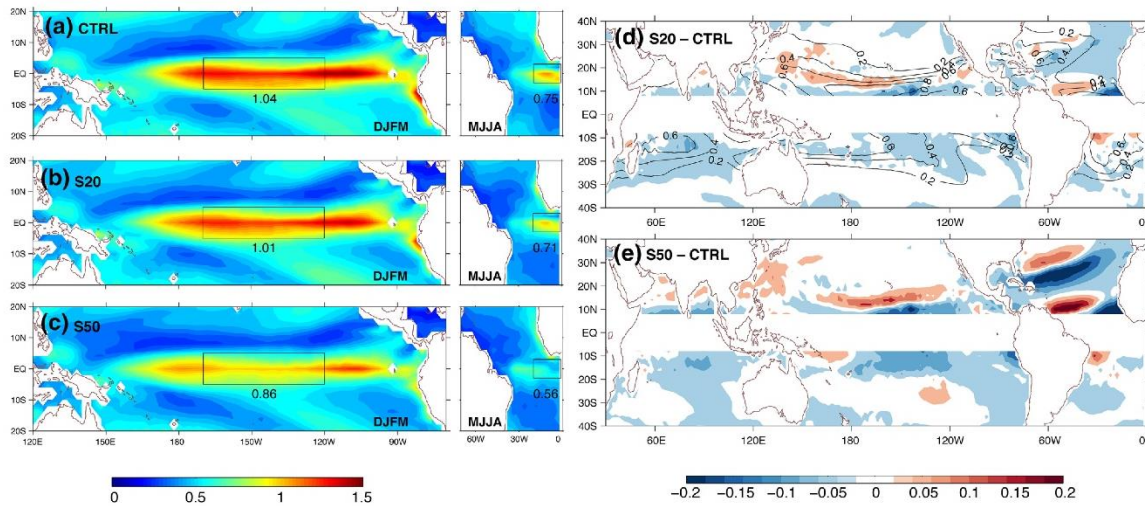


Figure 4. El Niño, Atlantic Niño, and tropical cyclone response. (a–c) Modeled SST interannual variability for the Pacific basin (DJFM) and Atlantic basin (MJJA) (Text S4). Black boxes are Niño3.4 and Atlantic3 regions with the region averaged value shown below. (d, e) Modeled CGI index (Text S5) change (shading color) with mean CGI index of CTRL shown in (d) as black contour. The CGI is set to zero between 5°S and 5°N due to zero Coriolis vorticity at the equator. CGI, Cyclone Genesis Index.

Solar farms tend to promote more favorable conditions for tropical cyclone development. By examining a Cyclone Genesis Index (CGI) (Text S5) (Bruyère et al., 2012), we estimate how the climate state, in particular the kinematic (wind shear) and thermodynamic (potential intensity) factors, affects the tropical cyclogenesis in our simulations. The changes to CGI in S20 and S50 indicate that tropical cyclone activity is likely to be amplified in the Northern Hemisphere in these scenarios, especially off the East Asian coast and North America (Figure 4d and 4e). The North Atlantic tropical cyclone formation area (Figure 4d, contour) is shifted to the western North Atlantic margin, leading to the dipole pattern in the CGI anomalies. This potential intensification of tropical cyclone genesis in the coastal regions is mainly attributed to increased potential intensity and weakened vertical wind shear in these regions (Figure S9), linked to the northward expansion of the ITCZ (Pausata et al., 2017a; Van Hengstum et al., 2016).

4. Discussion and Conclusion

Our ESM simulation results support the hypothesis that theoretical large-scale solar farms in the Sahara desert can bring more rainfall and vegetation to this region, and at the same time meet the energy demand of the global population (Text S2) (Li et al., 2018), currently at 18.4 TW and steadily increasing (BP, 2019). However, the remote effects of these solar farms on global climate and ecosystems as conveyed through atmospheric teleconnections and reinforced by ocean dynamics appear to be robust. The analogous local rainfall increase and global climate changes during the “Green Sahara” wet period ~6,000 years ago (Clausen et al., 2017)—supported by various proxy data and modeling studies (Text S6)—rationalize our model sensitivity to landscape changes (albedo) in North Africa. These results suggest that careful spatial planning and improved solar panel efficiency will be needed to minimize the unintended consequences of massive desert solar farms in North Africa.

It should be noted that the potential risks in remote regions associated with the deployment of Sahara solar farms can be scale dependent and model dependent. In our model, for instance, if the solar farms do not cover a large enough fraction of the Sahara desert (20% coverage or more), then the responses are quite muted (e.g., the S05 scenario, Text S3). A more comprehensive assessment of such risks would also require a systematic study using more ESM simulations with different model sensitivities to land use changes. Moreover, in future studies, the global impacts of large-scale solar farms should be evaluated alongside the

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effect of reduced CO₂ emissions from fossil fuels brought on by the deployment of such solar farms. In fact, the warming from anthropogenic emissions of CO₂ from fossil fuels would likely exceed the global surface temperature rise of 0.16 and 0.39°C caused by solar farms in S20 and S50.

The implementation of solar panels as decreased bare soil albedo in our simulations can be seen as oversimplified, and some unique solar panel properties may need to be considered with their effects quantified in future studies. The interface between air and soil is different from that between air and impervious solar panels. In the solar farm simulations, the additional absorbed solar radiation is dissipated through the surface energy balance (the model scheme is described in Verhoef & Vidale, 2012) and manifests as surface flux and temperature changes through thermal and water-holding properties of soil, compared to those through albedo and heat capacity of solar panels. Furthermore, the desert solar panels are usually placed above the ground, and they may also lead to changes in wind speed, turbulence, and mixing in the near-surface boundary layer (Armstrong et al., 2014). Vegetation grows over the soil (prescribed solar panels in the simulations) which is not likely in a well-managed solar farm, while it can overestimate the increase in evapotranspiration.

There are other essential aspects of the global response to desert solar farms that are currently missing in our simulations but can be assumed as important side effects. They partly justify the design of more stylized scenario S50 so that we are able to fully capture potential global impacts compared to S20 that is more closely related to the world's projected energy use. For example, the vegetation recovery over the desert zone can cause a drop in dust loadings (also reducing albedo) which can directly contribute to the local atmosphere–land(albedo)–vegetation feedback and cause additional local and remote atmosphere, ocean, and land surface responses (Pausata et al., 2016). The reduced dust emission from North Africa can further affect the fertilization of the Amazon forest (Yu et al., 2015) and the Atlantic Ocean phytoplankton (Conway & John, 2014) through long-range transport, triggering amplified ecosystem shifts. All these potential coupled responses underscore the importance of a holistic, Earth-system analysis when examining the benefits and risks of the expansive establishment of solar farms in the world's deserts.

Data Availability Statement

All data analyzed in the paper for the main figures are accessible in the Harvard Dataverse repository at <https://doi.org/10.7910/DVN/TEZ3N>.

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Comment Set B5 – Basin & Range Watch / Western Watersheds Project (cont.)



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Comment Set B5 – Basin & Range Watch / Western Watersheds Project (cont.)



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Comment Set B6 – Audubon



September 27, 2021

Mr. Logan Raub
 CEQA Project Manager
 Colorado River Basin RWQCB
 73-720 Fred Waring Drive, Suite 100
 Palm Desert, CA 92260
 Email: Logan.Raub@waterboards.ca.gov

Re: DEIR FOR IP Oberon Renewable Energy Project
 (SCH No. 2021030426)

Dear Mr. Raub:

Audubon protects birds and the places birds need, today and tomorrow. Audubon works throughout the Americas using science, advocacy, education, and on-the-ground conservation. State programs, nature centers, chapters, and partners give Audubon an unparalleled wingspan that reaches millions of people each year to inform, inspire, and unite diverse communities in conservation action. A nonprofit conservation organization since 1905, Audubon believes in a world in which people and wildlife thrive.

Our 2019 climate science available at <https://climate.audubon.org> reveals that unless we can keep warming below 3° Celsius 389 species of birds in North America will probably go extinct from loss of climate suitability in their wintering or breeding ranges. 100% clean energy and net zero emissions by 2050 is our goal to protect our birds by keeping warming to 1.5°Celsius.

For birds and many other wildlife species, however, climate change planning must do more; it must both preserve both key resources and habitats needed in coming decades as warming increases as well as protect climate strongholds resilient to climate change that will provide a safe haven for many decades to come. These issues are especially true in the desert southwest, where increasing needed renewables development while protecting habitats and species is most challenging.

Audubon's long-standing policy is to support clean energy projects that are well-sited and operated to avoid, minimize, and mitigate effectively for the impacts on birds and the places birds need, especially to adapt to climate change. Our concerns about this project are centered on the value of irreplaceable Microphyll Woodlands habitat and the precedent involved

B6-1

Comment Set B6 – Audubon (cont.)

B6-1
cont.

in granting exceptions for the first project ever be permitted under the vast, pioneering, long-term collaborative effort of the Desert Renewable Energy Conservation Plan, an eight-year stakeholder planning collaboration between the U.S. Department of the Interior, U.S. Fish & Wildlife Service, California Energy Commission and California Department of Fish & Wildlife, among others.

The Project

IP Oberon, LLC (Applicant), a subsidiary of Intersect Power, proposes to construct, operate, and decommission the Oberon Renewable Energy Project (project), a utility-scale solar photovoltaic (PV) electrical generation and storage facility and associated infrastructure that would generate and deliver renewable electricity to the statewide electric transmission grid.

The proposed project site is approximately 5,000 acres of Bureau of Land Management (BLM) administered land located immediately north of Interstate 10 (I-10) near Desert Center, California. Project facilities would occupy approximately 2,700 acres of the 5,000-acre site (see Figure ES-1, Project Vicinity). Renewable electric power generated by the project would be delivered to the State's power grid by way of a new 500 kilovolt (kV) generation tie (gen-tie) line interconnecting to Southern California Edison's (SCE) existing 500 kV Red Bluff Substation, located approximately 500 feet south of I-10. Project construction would occur over approximately 15 to 20 months, concluding in or before the fourth quarter of 2023. The project would operate for a minimum of 35 years and up to 50 or more years. At the end of its useful life, the project would be decommissioned, and the land returned to its pre-project condition to the extent feasible. The project site and surrounding region are within the California Desert Conservation Area (CDCA) Planning Area. The land is within a Development Focus Area (DFA), which was designated pursuant to the Desert Renewable Energy Conservation Plan Land Use Plan Amendment (DRECP LUPA) and associated Record of Decision (ROD).

Although located on federal land and under review by the BLM, the project is subject to review and approval by the Colorado River Basin Regional Water Quality Control Board (RWQCB) under the California Environmental Quality Act (CEQA). Based on its review of IP Oberon, LLC's Waste Discharge Requirements application, additional information requested of the Applicant, and the information contained in this Environmental Impact Report (EIR), the RWQCB will determine whether to issue the required permit. The BLM's separate review under the National Environmental Policy Act (NEPA) will assist that agency in determining whether it will approve the project and issue required right of-way (ROW) grant

We have commented on the Draft Environmental Assessment issued by BLM and incorporate those comments here and attach them.

Audubon takes a special interest in BLM and the California Department of Fish & Wildlife's management of microphyll woodlands. As noted by Mark Dimmitt in *A Natural History of the Sonoran Desert*, "these woodlands occupy less than 5% of this subsection of the Sonoran Desert but support 90% of its bird life" (Dimmitt 2000).

Comment Set B6 – Audubon (cont.)

The importance of this desert habitat type is substantiated across biological disciplines and was supported throughout the DRECP stakeholder process by our organization and many others, who prioritized conservation and protections of this important vegetation assemblage and the CMA that protects it.

B6-1
cont.

The DRECP FEIS Glossary offers these definitions:¹

B6-2

microphyll woodlands. Consist of drought-deciduous, small-leaved (microphyllus), mostly leguminous trees. Occurs in bajadas and washes where water availability is somewhat higher than the plains occupied by creosote bush and has been called the “riparian phase” of desert scrub (Webster and Bahre 2001). Composed of the following alliances: desert willow, mesquite, smoke tree, and the blue palo verde-ironwood

minor incursion. Small-scale allowable impacts to sensitive resources, as per specific CMAs, that do not individually or cumulatively compromise the conservation objectives of that resource or rise to a level of significance that warrants development and application of more rigorous CMAs or a LUPA amendment. Minor incursions may be allowed to prevent or minimize greater resource impacts from an alternative approach to the activity. Not all minor incursions are considered unavoidable impacts.

setback. A defined distance, usually expressed in feet or miles, from a resource feature (such as the edge of a natural community or an occupied nest) within which construction and operations of Covered Activities (such as extension of a transmission line) would not occur; otherwise often referred to as a buffer. The purpose of the setback is to maintain the function and value of the biological resource features identified in the CMAs. See Section II.3.1.2.5 for a summary of setbacks incorporated in the CMAs.

unavoidable impacts to resources. Small-scale impacts to sensitive resources, as allowed per specific CMAs, that may occur even after such impacts have been avoided to the maximum extent practicable (see definition). Unavoidable impacts are limited to minor incursions (see definition), such as a necessary road or pipeline extension across a sensitive resource required to serve an activity.

The CMA associated with microphyll woodlands is as follows

CMA LUPA-BIO-RIPWET-1 (Riparian and Wetland Vegetation Type CMA). The riparian and wetland vegetation types and other features listed in Table 17 will be avoided to the maximum

¹

https://eplanning.blm.gov/public_projects/lup/66459/20012412/250016959/00e_DRECP_LUP_A_and_Final_EIS_Glossary.pdf

Comment Set B6 – Audubon (cont.)

B6-2
cont.

extent practicable except for allowable minor incursions (see Glossary of Terms for “avoidance to the maximum extent practicable” and “minor incursion”) with the specified setbacks.

Riparian and Wetland Vegetation Types or Features	Setback ¹
<i>Riparian Vegetation Types¹</i>	
Madrean Warm Semi-Desert Wash Woodland/Scrub	200 feet
Mojavean Semi-Desert Wash Scrub	200 feet
Sonoran-Coloradan Semi-Desert Wash Woodland/Scrub	200 feet
Southwestern North American Riparian Evergreen and Deciduous	0.25 miles
Southwestern North American Riparian/Wash Scrub	0.25 miles
<i>Wetland Vegetation Types²</i>	
Arid west freshwater emergent marsh	0.25 miles
Californian Warm Temperate Marsh/Seep	0.25 miles
<i>Other Riparian and Wetland Related Features</i>	
Managed Wetlands ²	0.25 miles
Mojave River ³	0.25 miles
Undifferentiated Riparian land cover ⁴	200 feet

¹ Setbacks are measured from the edge of the mapped riparian or wetland vegetation or water feature per LUPA-BIO-3.

² Setback is from managed wetlands including USFWS Refuges, state managed wetlands, and duck clubs in Imperial Valley. See specifications for the Salton Sea below.

³ Setback is measured from the edge of mapped riparian or edge of Federal Emergency Management Agency (FEMA) 100-year floodplain of the Mojave River, whichever is further from the center line of the Mojave River channel.

⁴ Undifferentiated “Riparian” land cover includes portions of major river courses (Mojave River and Colorado River) within the main channels where riparian vegetation groups were not mapped.

For minor incursion (see “minor incursion” in the Glossary of Terms) to the DRECP riparian vegetation types, wetland vegetation types, or encroachments on the setbacks listed in Table 17, the hydrologic function of the avoided riparian or wetland communities will be maintained.²

The DEIR proposes three alternatives: 1) the No Project Alternative; 2) Land Use Compliant Alternative; and 3) Resource Avoidance Alternative with Prehistoric Resources/TCR Option.

Our comments follow:

1. The FEIR selects the Proposed Project as the preferred alternative stating

Because the Land Use Plan Compliant Alternative with Prehistoric Resources/TCR Option would achieve the project objectives, which include the provision of environmental benefits,

B6-3

² [DRECP Proposed LUPA and final EIS, Chapter II.3. Preferred Alternative](#), Table II.3-22, p. II.3-175

Comment Set B6 – Audubon (cont.)

to a lesser extent compared with the proposed project (see Section 4.3.2), the proposed project is considered preferred.³

B6-3
cont.

Audubon’s geospatial analysis (Audubon analysis, attached) used data presented in the BLM Draft Environmental Analysis (DEA), specifically shape files of the project footprint along with the vegetation classification layer produced by the Applicant’s consultant Ironwood. We found an additional impact of approximately 324 acres where project infrastructure could incur into the buffer zone of 200’ from the microphyll woodland edge. This impact on microphyll woodlands of the Proposed Project Alternative has not been analyzed fully in the EA nor in the DEIR regarding impacts of the incursions on the buffer zone protecting microphyll woodlands nor the significance of that impact of the Proposed Project in terms of loss of hydrologic function, benefits to wildlife that use the woodlands for nesting, shade, corridors or foraging, loss of carbon sequestration or other quantifiable environmental benefits of the vegetation.

The DEIR concludes that the Proposed Project is more beneficial than the CMA without providing substantial scientific evidence.

B6-4

2. The FEIR should incorporate the terms and conditions of a Streambed Alteration Agreement for the Project by California Department of Fish & Wildlife (CDFW) before analyzing the impacts on hydrology or wildlife of the project. This Agreement may alter the project and is foreseeable and California Water Resources Board as a California agency must consult with CDFW before issuing the FEIR.
3. the FEIR should incorporate or report on a consultation with indigenous people of the Colorado River area of California and the impacts on the project on their use of microphyll woodlands. The plants, seeds, beans, and fruits of the ironwood, scrub mesquite, paloverde, and other plants in the desert dry washes may be important for collecting for cultural purposes, and if so, these values should be incorporated in the EA.
4. The FEIR must correct the conclusion of Impact LU-1. As presented above, the Project may cause a “significant environmental due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

B6-5

B6-6

If the Project does not comply to the DRECP Land Use Plan and its CMAs regarding microphyll woodlands, that non-compliance may have a significant impact on the CMA proscribing a buffer zone for microphyll woodlands.

5. A revised DEIR that includes an Alternative of a Project that prepares a Land Use Plan Amendment in order not to comply with the DRECP needs to be prepared.

B6-7

The Project proponent and BLM are considering the preparation of a Land Use Plan Amendment under the California Desert Conservation Area plan in order to approve the

³ Draft EIR, ES-17

Comment Set B6 – Audubon (cont.)

project without compliance with the CMAs regarding microphyll woodlands in the DRECP. The DEA released by BLM analyzes this alternative and its potentially significant impacts on the resources, especially microphyll woodlands. The DEIR does not and should.

B6-7
cont.

Thank you for the opportunity to comment.

Garry George
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AUDUBON
4700 Griffin Ave
Los Angeles, CA 90031
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Comment Set B6 – Audubon (cont.)



September 14, 2021

Oberon Solar Project
Attn: Brandon G. Anderson
Bureau of Land Management
1201 Bird Center Drive
Palm Springs, CA 92262
via email: [BLM CA PS OberonSolar@blm.gov](mailto:BLM_CA_PS_OberonSolar@blm.gov)

Dear Brandon:

The National Audubon Society protects birds and the places they need, today and tomorrow. Audubon works throughout the Americas using science, advocacy, education, and on-the-ground conservation. State programs, nature centers, chapters, and partners give Audubon an unparalleled wingspan that reaches millions of people each year to inform, inspire, and unite diverse communities in conservation action. A nonprofit conservation organization since 1905, Audubon believes in a world in which people and wildlife thrive.

The Natural Resources Defense Council (NRDC) is a non-profit environmental organization that uses law, science and the support of its members and activists to protect the planet's wildlife and wild places and to ensure a safe and healthy environment for all living things. NRDC has worked for many years to protect wildlands and natural values on public and private lands and to promote cost-effective energy efficiency measures and sustainable energy development. NRDC has been a long-time advocate for many of the "smart from the start" planning hallmarks of the DRECP, including landscape-level conservation planning, guided low-conflict development, and strategic regional mitigation that produces enduring protection for sensitive areas. NRDC has 2.4 members and activists in the U.S., including more than 380,000 in California.

The Wilderness Society (TWS) is a national nonprofit organization with more than 1 million members and supporters nationwide whose mission is to unite people to protect America's wild places. Since its founding in 1935, TWS has worked to provide scientific, legal, and policy guidance to land managers, communities, local groups, state and federal decision-makers, and diverse interests who care about our American public lands. TWS was highly engaged in the DRECP and deeply interested in the application of the management actions being implemented as intended by the DRECP.

Comment Set B6 – Audubon (cont.)

Audubon’s climate science at <https://climate.audubon.org> reveals that 389 species of North American birds may go extinct if warming reaches 3° Celsius above pre-industrial levels. Audubon is committed to 100% clean energy, net zero greenhouse gas emissions, and the Biden Administration’s goal of siting and permitting 25 GW of renewable energy on federal lands by 2025.

For birds and many other wildlife species, however, climate change planning must do more; it must also preserve both key resources and habitats needed in coming decades as warming increases as well as protect climate strongholds resilient to climate change that will provide a safe haven for many decades to come. These issues are especially true in the desert southwest, where increasing needed renewables development while protecting habitats and species is most challenging.

Audubon’s long-standing policy is to support clean energy projects that are well-sited and operated to avoid, minimize, and mitigate effectively for the impacts on birds and the places birds need, especially to adapt to climate change. Our concerns about this project are centered on the value of nearly irreplaceable Microphyll Woodlands habitat and the precedent involved in granting exceptions for the first project that would ever be permitted under the vast, pioneering, long-term collaborative effort of the Desert Renewable Energy Conservation Plan.

The Project

The Bureau of Land Management (BLM) has prepared this Environmental Assessment (EA) and draft Land Use Plan Amendment (LUPA) pursuant to the National Environmental Policy Act of 1969 (NEPA, 42 U.S.C. Section 4321), Council on Environmental Quality (CEQ) regulations (40 Code of Federal Regulations [CFR] Parts 1500–1508)¹, Department of the Interior NEPA Regulations (43 CFR Part 46), and BLM NEPA Handbook H-1790-1, for the Oberon Renewable Energy Project proposed by IP Oberon, LLC (the Applicant), a subsidiary of Intersect Power, LLC. BLM would need to consider a project-specific LUPA to the California Desert Conservation Area (CDCA) Plan, as amended, because the Oberon Renewable Energy Project may not comply with all of the Conservation and Management Actions (CMAs) to the CDCA Plan, as amended by the Desert Renewable Energy Conservation Plan (DRECP) LUPA (see Section 1.6, Conformance with Land Use Plans, Laws, Regulations, and Policies).

Audubon takes a special interest in BLM’s management of microphyll woodlands. As noted by Mark Dimmitt in *A Natural History of the Sonoran Desert*, “these woodlands occupy less than 5% of this subsection of the Sonoran Desert but support 90% of its bird life” (Dimmitt 2000). The importance of this desert habitat type is substantiated across biological disciplines and was supported throughout the DRECP stakeholder process by our organization and many others, who prioritized conservation and protections of this important vegetation assemblage and the CMA that protects it.

We focus our comments on the EA’s treatment of microphyll woodlands in 2 alternatives: Alternative 2: Proposed Action; and Alternative 3: Land Use Plan Compliant Alternative. The Proposed Action Alternative suggests that a LUPA to the California Desert Conservation Area

B6-8

Comment Set B6 – Audubon (cont.)

Plan may be required to revise two CMAs of the DRECP. The EA reports that compliance with those CMAs would “limit developable land based on DRECP CMAs that protect desert dry wash woodland and establish a 200-foot buffer where no construction could occur.”

B6-8
cont.

BLM’s decision on the Oberon project will set an important precedent for all future projects in the DRECP Plan Area. Choosing the Proposed Action of adopting a LUPA to the CDCA and revising CMA LUPA-BIO-RIPWET-1 and CMA LUPA-BIO-SVF-6 to remove protections for microphyll woodlands through allowing a 50’ buffer rather than a 200’ foot buffer as provided in the DRECP LUPA and Record of Decision (ROD) is setting a precedent that would encourage any Applicant to propose a LUPA to alter any CMA that may limit their development. This is a damaging precedent.

Audubon’s geospatial analysis (Audubon analysis, attached) used data presented in the EA, specifically shape files of the project footprint along with the vegetation classification layer produced by the Applicant’s consultant Ironwood. We found an additional impact of approximately 324 acres where project infrastructure could incur into the buffer zone of 200’ from the microphyll woodland edge. This impact on microphyll woodlands of the Proposed Project Alternative has not been analyzed in the EA.

B6-9

Should BLM adopt a LUPA to approve the project, it would allow an impact which has not been analyzed in the EA, potentially misuse a land use plan decision,¹ undermine the state and federal conservation partnership achieved through the DRECP², re-write the buffer zone from 200’ to 50’ with no scientific evidence, possibly force a recalculation of the amount of potential energy development in the Riverside East Development Focus Area (DFA)³ and undermine the scientific integrity of the DRECP.

The EA underestimates the amount of microphyll woodlands present while at the same time overstating the minimization of impacts to microphyll woodlands from the Proposed Action.

B6-10

¹ “Land use plan decisions for public lands fall into two categories: desired outcomes (goals and objectives) and allowable uses (including restricted or prohibited) and actions anticipated to achieve desired outcomes (BLM 2005). In the DRECP LUPA, CMAs represent those management actions and allowable uses.”

(DRECP BLM Land Use Plan Amendment, September 2016, p. 27)

² “The Interagency Conservation Strategy also included biological Conservation Management Actions (CMAs). Those CMAs have been incorporated into the LUPA as Goals and Objectives.” (DRECP Land Use Plan Amendment, p. 27)

³ The CMAs would require avoidance with setback of all riparian vegetation types, specific wetland vegetation types, and managed wetlands in Imperial Valley. Therefore, these resources were assumed not to be impacted by renewable energy and transmission development. Unavoidable impacts to these resources may be permitted as described by the CMAs; however, the CMAs and existing regulations would require compensation for any unavoidable impacts such that no net loss of these resources would occur. (DRECP FEIS, p. IV.7-4)

Comment Set B6 – Audubon (cont.)

The EA states:

The project would have a long-term impact to approximately 60 acres of microphyll woodland that would be developed with solar panels. If this disturbance is considered to be minor incursion by BLM, the project would comply with this CMA, because otherwise the solar panels, substation, and BESS have been designed to avoid desert dry wash woodland. If BLM determines that the impact does not qualify as minor incursion, then a LUPA would be required. (EA, p.7)

B6-10
cont.

We submit that that this may not be the decision before the BLM. The BLM decision whether to adopt a LUPA or not does not depend on whether the 60 acres are “minor incursions”.

The proponent has proposed mitigation for the “unavoidable impacts” to 80+ acres (including the 60 acres) of microphyll woodlands. These are direct impacts and microphyll woodlands will be removed or covered with solar panels. We support this mitigation effort and BLM’s finding that these are “unavoidable impacts” as the Applicant is proposing acres of higher quality microphyll woodlands than the woodlands of the unavoidable impacts, and the mitigation ratio is as required in the CMA of 5:1. Therefore we submit that the 80+ acres are not “minor incursions” as defined in the DRECP LUPA glossary.⁴ BLM does not have to decide if these mitigated direct impacts are “minor incursions” which are well defined and not the characteristics of the mitigated direct impacts or “unavoidable impacts”. However, BLM does have to measure, describe, and analyze the impacts to the buffer zone adopted in the DRECP LUPA of the Proposed Project. Again, BLM has failed to do this.

BLM must also determine whether these 324 additional acres of impact are “unavoidable impacts” which may be mitigated at 5:1, “minor incursions” as defined in the Glossary of the DRECP ROD, whether they are permanent such as fencing or panels or temporary such as construction activities, or not allowable at all under the CMA or some combination of these, and include this decision in the EA in choosing Alternative 3, the Compliance with the DRECP alternative.

B6-11

The EA must provide credible scientific evidence and citations for the statements and rationale in the section titled Sensitive Vegetation Communities beginning on page 100 of the DEA. In this section it is unclear whether BLM is providing rationale or reciting an alternative proposal for conformance to the CMA by the Applicant. Although the process from the DRECP ROD for

B6-12

⁴ “Small-scale allowable impacts to sensitive resources, as per specific CMAs, that do not individually or cumulatively compromise the conservation objectives of that resource or rise to a level of significance that warrants development and application of more rigorous CMAs or a DRECP LUPA amendment. Minor incursions may be allowed to prevent or minimize greater resource impacts from an alternative approach to the activity. Not all minor incursions are considered unavoidable impacts.” (DRECP LUPA, p. xviii)

Comment Set B6 – Audubon (cont.)

the State Director to accept an alternative proposal from an Applicant is clearly described,⁵ it's not clear whose rationale is being presented, in fact there are no scientific citations or evidence that any of the rationale has any merit whatsoever. The DRECP had a panel of Scientific Advisors and extensive input from a broad group of biologists, botanists and scientists from state and federal agencies; the rationale presented in the EA has none. Specifically, as per our organization, the identification and mapping of microphyll woodlands is the guiding science here rather than whether the project is in an Audubon Important Bird Area or not. The Audubon Important Bird Area program identifies areas with specific criteria, such as special status species which have been recorded or large congregations of birds or other data to define the boundaries for areas of high value for bird conservation. In general, all microphyll woodlands are important for birds even if special status species have not been recorded as present in a particular stand or string of microphyll woodland, as is the case with the project area.

B6-12
cont.

BLM must correct this Sensitive Vegetation Communities section of the EA.

Additionally and finally, the EA fails to incorporate or report on a consultation with indigenous people of the Colorado River area of California and the impacts on the project on their use of microphyll woodlands. The plants, seeds, beans, and fruits of the ironwood, scrub mesquite, paloverde, and other plants in the desert dry washes may be important for collecting for cultural purposes, and if so, these values should be incorporated in the EA.

B6-13

The Energy Act of 2020 (P.L. 116-260) requires DOI to permit 25 gigawatts of solar, wind, and geothermal production on public lands no later than 2025 and we support this goal. We also support the President's EO14008 which contained a goal of conserving 30% of America's lands and waters by 2030 and required federal agencies to compile the America the Beautiful report⁶ and Governor Newsome's Executive Order N-82-20⁷ directing conservation of 30% of our lands and water by 2030 to combat the climate crisis, conserve biodiversity and boost climate resilience.

B6-14

BLM should incorporate these values and directives in their decision-making process as well as meeting clean energy goals to achieve the balance that our President, Governor, Department of the Interior and current leadership strives for.

⁵ "As part of subsequent project-specific NEPA analyses, a project proponent may be able to propose alternative methods for compliance with a particular CMA. The BLM California State Director will review such requests, in collaboration with USFWS, CEC, and CDFW, and may analyze, as appropriate, whether any proposed alternative approach or design feature to avoid, minimize, or mitigate impacts: (i) meets the goals and objectives for which the CMA was established, (ii) and provides for a similar or lesser environmental impacts. Such alternate methods would be addressed as part of any subsequent project-specific approvals. [DRECP LUPA page 228. See also page 63 of the DRECP ROD for similar language.]"

⁶ <https://www.doi.gov/sites/doi.gov/files/report-conserving-and-restoring-america-the-beautiful-2021.pdf>

⁷ <https://www.gov.ca.gov/2020/10/07/governor-newsom-launches-innovative-strategies-to-use-california-land-to-fight-climate-change-conserve-biodiversity-and-boost-climate-resilience/>

Comment Set B6 – Audubon (cont.)

BLM should re-issue a supplemental EA or DEIS to correct these errors and omissions while working with the Applicant to design a project that conforms to the DRECP but may not provide 500 MW of development. The Proposed Action must be rejected if it can only be enacted through a Land Use Plan Amendment.

Thank you for the opportunity to comment.

Respectfully submitted,

Garry George
Director, Clean Energy Initiative
AUDUBON
garry.george@audubon.org

Jon Belak
Field Manager, Clean Energy Initiative
AUDUBON
jon.belak@audubon.org

Helen O’Shea
Director, Western Renewable Energy Project
Natural Resources Defense Council
hoshea@nrdc.org

Phil Hanceford
Conservation Director
The Wilderness Society
phil_hanceford@twc.org

cc: Commissioner Karen Douglas, CEC
Director Check Bonham, California Department of Fish & Wildlife
Anthony Archuletta, Desert District Manager, BLM
Karen Mouritsen, State Director for California, BLM
Nada Culver, Interim Deputy Director, BLM

Comments Received from
Private Citizens

Comment Set C1 – Form Letter 1

Email: Oberon Renewable Energy Project

From: [REDACTED]
Sent: [REDACTED]
Subject: Oberon Renewable Energy Project Draft EIR Comments

Dear Logan Raub,

I am writing out of concern over the design of the Oberon Solar Project. While I support the development of renewable energy on our public lands to tackle the urgent climate crisis, doing so in a way that jeopardizes the important ecological functions of our desert landscapes will set us back not only on our climate goals but also in our efforts to ensure our these landscapes are preserved for biodiversity health and future generations.

C1-1

While the Oberon project has appropriately applied to build in a Development Focus Area (DFA), it proposes to encroach upon sensitive desert microphyll woodlands and a designated wildlife corridor. Other recent projects in this DFA have complied with DRECP's Conservation Management Actions , which were carefully negotiated over many years by a range of stakeholders — environmentalists, the renewable energy industry, local and state governments, and more across the ten million acres of DRECP public lands — to ensure solar projects can get successfully built without unduly destroying sensitive habitats, migration corridors and cultural sites. I ask that you consider the following:

The BLM must require the Oberon project to be redesigned to meet the requirements of the DRECP. One way to make this work is through the development of a smaller project that would not encroach on microphyll woodlands, such as Alternatives 3 and 4 which comply with DRECP. Another option is to utilize the 1500 acre parcel to the north that was part of Oberon's original application, rather than relinquishing it for a separate project by the same developer..

C1-2

Oberon's developer does not need to squeeze out another 600 acres for Oberon when it has two other projects plus many thousands more acres available in this DFA to choose from that would not encroach on sensitive microphyll woodland.

Oberon is benefitting from the clear and streamlined process of the DRECP and as such should not be allowed to undermine — and subsequently jeopardize — the DRECP's carefully crafted framework. Desert communities count on the DRECP to facilitate solar development in the lowest conflict places, while still protecting sensitive and irreplaceable resources. Allowing the Oberon project to break the rules would create a dangerous precedent for future development, which could set us back on our goals to rapidly develop solar.

C1-3

Renewable development on public lands is one of many methods needed to meet carbon reduction goals, including energy conservation, efficiency, and ramping up renewable energy and storage at load centers. BLM has an obligation to protect our public lands from undue degradation by ensuring renewable development facilitated by DRECP respects its conservation framework.

C1-4

Comment Set C2 – Thomas Budlong**Email: Oberon Renewable Energy Project**

From: Thomas Budlong (tsbudlong@gmail.com) Sent You a Personal Message
<automail@knowwho.com>

Sent: Saturday, September 11, 2021 8:43 AM

To: Raub, Logan@Waterboards <Logan.Raub@waterboards.ca.gov>

Subject: Oberon Renewable Energy Project Draft EIR Comments

Dear Logan Raub,

Microphyll woodlands are unique, small mini-islands of biological diversity. They are a small percentage of our deserts and can be reserved with minimal impact on the energy production goals. Taking them is reminds of a scorched earth policy - take everything regardless.

Regards,

Tom Budlong

C2-1

I am writing out of concern over the design of the Oberon Solar Project. While I support the development of renewable energy on our public lands to tackle the urgent climate crisis, doing so in a way that jeopardizes the important ecological functions of our desert landscapes will set us back not only on our climate goals but also in our efforts to ensure our these landscapes are preserved for biodiversity health and future generations.

C2-2

While the Oberon project has appropriately applied to build in a Development Focus Area (DFA), it proposes to encroach upon sensitive desert microphyll woodlands and a designated wildlife corridor. Other recent projects in this DFA have complied with DRECP's Conservation Management Actions , which were carefully negotiated over many years by a range of stakeholders — environmentalists, the renewable energy industry, local and state governments, and more across the ten million acres of DRECP public lands — to ensure solar projects can get successfully built without unduly destroying sensitive habitats, migration corridors and cultural sites. I ask that you consider the following:

The BLM must require the Oberon project to be redesigned to meet the requirements of the DRECP. One way to make this work is through the development of a smaller project that would not encroach on microphyll woodlands, such as Alternatives 3 and 4 which comply with DRECP. Another option is to utilize the 1500 acre parcel to the north that was part of Oberon's original application, rather than relinquishing it for a separate project by the same developer..

Comment Set C2 – Thomas Budlong (cont.)C2-2
cont.

Oberon's developer does not need to squeeze out another 600 acres for Oberon when it has two other projects plus many thousands more acres available in this DFA to choose from that would not encroach on sensitive microphyll woodland. Oberon is benefitting from the clear and streamlined process of the DRECP and as such should not be allowed to undermine -- and subsequently jeopardize -- the DRECP's carefully crafted framework. Desert communities count on the DRECP to facilitate solar development in the lowest conflict places, while still protecting sensitive and irreplaceable resources. Allowing the Oberon project to break the rules would create a dangerous precedent for future development, which could set us back on our goals to rapidly develop solar.

Renewable development on public lands is one of many methods needed to meet carbon reduction goals, including energy conservation, efficiency, and ramping up renewable energy and storage at load centers. BLM has an obligation to protect our public lands from undue degradation by ensuring renewable development facilitated by DRECP respects its conservation framework.

Sincerely,

Thomas Budlong
3216 Mandeville Canyon Road
Los Angeles, CA 90049
tsbudlong@gmail.com
(310) 963-1731

Comment Set C3 – Katie Quint

Email: Oberon Renewable Energy Project

From: Katie Quint (kquint@wildlife-research.org) Sent You a Personal Message <automail@knowwho.com>

Sent: Sunday, September 12, 2021 10:27 AM

To: Raub, Logan@Waterboards <Logan.Raub@waterboards.ca.gov>

Subject: Oberon Renewable Energy Project Draft EIR Comments

Dear Logan Raub,

BLM has a responsibility to the wildlife and resources that rely on our public lands under your care and management.

C3-1

I am writing out of concern over the design of the Oberon Solar Project. While I support the development of renewable energy on our public lands to tackle the urgent climate crisis, doing so in a way that jeopardizes the important ecological functions of our desert landscapes will set us back not only on our climate goals but also in our efforts to ensure our these landscapes are preserved for biodiversity health and future generations.

C3-2

While the Oberon project has appropriately applied to build in a Development Focus Area (DFA), it proposes to encroach upon sensitive desert microphyll woodlands and a designated wildlife corridor. Other recent projects in this DFA have complied with DRECP's Conservation Management Actions, which were carefully negotiated over many years by a range of stakeholders — environmentalists, the renewable energy industry, local and state governments, and more across the ten million acres of DRECP public lands — to ensure solar projects can get successfully built without unduly destroying sensitive habitats, migration corridors and cultural sites. I ask that you consider the following:

The BLM must require the Oberon project to be redesigned to meet the requirements of the DRECP. One way to make this work is through the development of a smaller project that would not encroach on microphyll woodlands, such as Alternatives 3 and 4 which comply with DRECP. Another option is to utilize the 1500 acre parcel to the north that was part of Oberon's original application, rather than relinquishing it for a separate project by the same developer..

Oberon's developer does not need to squeeze out another 600 acres for Oberon when it has two other projects plus many thousands more acres available in this

Comment Set C3 – Katie Quint (cont.)

DFA to choose from that would not encroach on sensitive microphyll woodland. Oberon is benefitting from the clear and streamlined process of the DRECP and as such should not be allowed to undermine -- and subsequently jeopardize -- the DRECP's carefully crafted framework. Desert communities count on the DRECP to facilitate solar development in the lowest conflict places, while still protecting sensitive and irreplaceable resources. Allowing the Oberon project to break the rules would create a dangerous precedent for future development, which could set us back on our goals to rapidly develop solar.

Renewable development on public lands is one of many methods needed to meet carbon reduction goals, including energy conservation, efficiency, and ramping up renewable energy and storage at load centers. BLM has an obligation to protect our public lands from undue degradation by ensuring renewable development facilitated by DRECP respects its conservation framework.

Sincerely,

Katie Quint
4537 Highway 78
Santa Ysabel, CA 92070
kquint@wildlife-research.org
(703) 994-3128

\$

Comment Set C4 – Steve Bardwell
Email: Oberon Renewable Energy Project

From: Steve Bardwell (steve@infinityranch.net) Sent You a Personal Message
 <automail@knowwho.com>
Sent: Sunday, September 12, 2021 6:39 PM
To: Raub, Logan@Waterboards <Logan.Raub@waterboards.ca.gov>
Subject: Oberon Renewable Energy Project Draft EIR Comments

Dear Logan Raub,

All possibilities for the use of renewable energy must be considered at this critical point in the planet's history - however NOT at the expense of the the many unique and threatened species within the Microphyll woodland ecosystem. The placement of renewable energy resources must be encouraged within the built environment to avoid transmission loss over long distances and to provide resiliency in the face of climate change and sure-to-occur natural disasters.

C4-1

To: BLM project manager Brandon G. Anderson
 Re: DOI-BLM-CA-D060-2020-0040-EA, Oberon Solar Project
 To: Colorado River Basin RWQCB c/o Logan Raub
 Re: Oberon Renewable Energy Project Draft EIR Comments

I am writing out of concern over the design of the Oberon Solar Project. While I support the development of renewable energy on our public lands to tackle the urgent climate crisis, doing so in a way that jeopardizes the important ecological functions of our desert landscapes will set us back not only on our climate goals but also in our efforts to ensure our these landscapes are preserved for biodiversity health and future generations.

C4-2

While the Oberon project has appropriately applied to build in a Development Focus Area (DFA), it proposes to encroach upon sensitive desert microphyll woodlands and a designated wildlife corridor. Other recent projects in this DFA have complied with DRECP's Conservation Management Actions , which were carefully negotiated over many years by a range of stakeholders — environmentalists, the renewable energy industry, local and state governments, and more across the ten million acres of DRECP public lands — to ensure solar projects can get successfully built without unduly destroying sensitive habitats, migration corridors and cultural sites. I ask that you consider the following:

The BLM must require the Oberon project to be redesigned to meet the

Comment Set C4 – Steve Bardwell (cont.)

requirements of the DRECP. One way to make this work is through the development of a smaller project that would not encroach on microphyll woodlands, such as Alternatives 3 and 4 which comply with DRECP. Another option is to utilize the 1500 acre parcel to the north that was part of Oberon's original application, rather than relinquishing it for a separate project by the same developer..

Oberon's developer does not need to squeeze out another 600 acres for Oberon when it has two other projects plus many thousands more acres available in this DFA to choose from that would not encroach on sensitive microphyll woodland. Oberon is benefitting from the clear and streamlined process of the DRECP and as such should not be allowed to undermine -- and subsequently jeopardize -- the DRECP's carefully crafted framework. Desert communities count on the DRECP to facilitate solar development in the lowest conflict places, while still protecting sensitive and irreplaceable resources. Allowing the Oberon project to break the rules would create a dangerous precedent for future development, which could set us back on our goals to rapidly develop solar.

Renewable development on public lands is one of many methods needed to meet carbon reduction goals, including energy conservation, efficiency, and ramping up renewable energy and storage at load centers. BLM has an obligation to protect our public lands from undue degradation by ensuring renewable development facilitated by DRECP respects its conservation framework.

Sincerely,

Steve Bardwell
52015 Gamma Gulch Road, PO Box 644
Pioneertown, CA 92268
steve@infinityranch.net
(818) 516-1437

Comment Set C5 – Robert Taylor

Email: Oberon Renewable Energy Project

From: Robert Taylor (junipertree@mac.com) Sent You a Personal Message <automail@knowwho.com>

Sent: Tuesday, September 14, 2021 12:33 PM

To: Raub, Logan@Waterboards <Logan.Raub@waterboards.ca.gov>

Subject: Oberon Renewable Energy Project Draft EIR Comments

Dear Logan Raub,

Keep the DRECP rules intact for the Oberon project. If you start bending the rules for this project, we'll have no rules. Every other project will want the same dispensation. DRECP was years in the making. Don't make it meaningless.

C5-1

I am writing out of concern over the design of the Oberon Solar Project. While I support the development of renewable energy on our public lands to tackle the urgent climate crisis, doing so in a way that jeopardizes the important ecological functions of our desert landscapes will set us back not only on our climate goals but also in our efforts to ensure our these landscapes are preserved for biodiversity health and future generations.

C5-2

While the Oberon project has appropriately applied to build in a Development Focus Area (DFA), it proposes to encroach upon sensitive desert microphyll woodlands and a designated wildlife corridor. Other recent projects in this DFA have complied with DRECP's Conservation Management Actions , which were carefully negotiated over many years by a range of stakeholders — environmentalists, the renewable energy industry, local and state governments, and more across the ten million acres of DRECP public lands — to ensure solar projects can get successfully built without unduly destroying sensitive habitats, migration corridors and cultural sites. I ask that you consider the following:

The BLM must require the Oberon project to be redesigned to meet the requirements of the DRECP. One way to make this work is through the development of a smaller project that would not encroach on microphyll woodlands, such as Alternatives 3 and 4 which comply with DRECP. Another option is to utilize the 1500 acre parcel to the north that was part of Oberon's original application, rather than relinquishing it for a separate project by the same developer..

Comment Set C5 – Robert Taylor (cont.)C5-2
cont.

Oberon's developer does not need to squeeze out another 600 acres for Oberon when it has two other projects plus many thousands more acres available in this DFA to choose from that would not encroach on sensitive microphyll woodland.

Oberon is benefitting from the clear and streamlined process of the DRECP and as such should not be allowed to undermine -- and subsequently jeopardize -- the DRECP's carefully crafted framework. Desert communities count on the DRECP to facilitate solar development in the lowest conflict places, while still protecting sensitive and irreplaceable resources. Allowing the Oberon project to break the rules would create a dangerous precedent for future development, which could set us back on our goals to rapidly develop solar.

Renewable development on public lands is one of many methods needed to meet carbon reduction goals, including energy conservation, efficiency, and ramping up renewable energy and storage at load centers. BLM has an obligation to protect our public lands from undue degradation by ensuring renewable development facilitated by DRECP respects its conservation framework.

Sincerely,

Robert Taylor
1850 Smoke Tree Lane
Palm Springs, CA 92264
junipertree@mac.com
(760) 902-5330

Comment Set C6 – Robin Kobaly

Email: Oberon Renewable Energy Project

From: Robin Kobaly (robin@summertree.org) Sent You a Personal Message
<automail@knowwho.com>

Sent: Tuesday, September 14, 2021 2:46 PM

To: Raub, Logan@Waterboards <Logan.Raub@waterboards.ca.gov>

Subject: Oberon Renewable Energy Project Draft EIR Comments

Dear Logan Raub,

Destroying microphyll woodlands in the desert is especially damaging because of the extremely deep-rooted, very long-lived trees in that habitat. Dr. Michael Allen (UC Riverside) and his team have found that these trees are getting their moisture from groundwater, and that mycorrhizal relationships that sequester carbon are present along those roots down to groundwater — and therefore carbon sequestration is happening at depths even down to groundwater.

C6-1

The ironic thing is that the removal of microphyll woodlands for utility-scale solar will result in a great release of carbon and stop any future carbon sequestration from the entire disturbed area. Trees such as Desert Ironwood in these woodlands can live up to 1,500 years old each, sequestering carbon every day for many centuries. These valuable sensitive habitats should be protected at all costs for their continuing benefits to the greater ecosystem. Granting an exception to current rules that would destroy this habitat is reckless.

I am writing out of concern over the design of the Oberon Solar Project. While I support the development of renewable energy on our public lands to tackle the urgent climate crisis, doing so in a way that jeopardizes the important ecological functions of our desert landscapes will set us back not only on our climate goals but also in our efforts to ensure our these landscapes are preserved for biodiversity health and future generations.

C6-2

While the Oberon project has appropriately applied to build in a Development Focus Area (DFA), it proposes to encroach upon sensitive desert microphyll woodlands and a designated wildlife corridor. Other recent projects in this DFA have complied with DRECP's Conservation Management Actions , which were carefully negotiated over many years by a range of stakeholders — environmentalists, the renewable energy industry, local and state governments, and more across the ten million acres of DRECP public lands — to ensure solar

Comment Set C6 – Robin Kobaly (cont.)

projects can get successfully built without unduly destroying sensitive habitats, migration corridors and cultural sites. I ask that you consider the following:

The BLM must require the Oberon project to be redesigned to meet the requirements of the DRECP. One way to make this work is through the development of a smaller project that would not encroach on microphyll woodlands, such as Alternatives 3 and 4 which comply with DRECP. Another option is to utilize the 1500 acre parcel to the north that was part of Oberon's original application, rather than relinquishing it for a separate project by the same developer..

Oberon's developer does not need to squeeze out another 600 acres for Oberon when it has two other projects plus many thousands more acres available in this DFA to choose from that would not encroach on sensitive microphyll woodland.

Oberon is benefitting from the clear and streamlined process of the DRECP and as such should not be allowed to undermine -- and subsequently jeopardize -- the DRECP's carefully crafted framework. Desert communities count on the DRECP to facilitate solar development in the lowest conflict places, while still protecting sensitive and irreplaceable resources. Allowing the Oberon project to break the rules would create a dangerous precedent for future development, which could set us back on our goals to rapidly develop solar.

Renewable development on public lands is one of many methods needed to meet carbon reduction goals, including energy conservation, efficiency, and ramping up renewable energy and storage at load centers. BLM has an obligation to protect our public lands from undue degradation by ensuring renewable development facilitated by DRECP respects its conservation framework.

Sincerely,

Robin Kobaly
49041 Tamarisk Drive
Morongo Valley, CA 92256
robin@summertree.org
(760) 363-7229

Comments Received from
Tribal Governments

Comment Set D1 – Colorado River Indian Tribes



COLORADO RIVER INDIAN TRIBES

Colorado River Indian Reservation

26600 MOHAVE ROAD
 PARKER, ARIZONA 85344
 TELEPHONE (928) 669-9211
 FAX (928) 669-1216

September 24, 2021

Via Email and U.S. Mail

Logan Raub
 Colorado River Basin Regional Water Quality Control Board
 c/o Aspen Environmental Group
 235 Montgomery Street, Suite 640
 San Francisco, CA 94104-2920
 Email: logan.raub@waterboards.ca.gov

RE: Oberon Renewable Energy Project Draft EIR Comments

Dear Mr. Raub:

On behalf of the Colorado River Indian Tribes (CRIT or the Tribes), I write to provide comments on the Draft Environmental Impact Report (DEIR) for the Oberon Renewable Energy Project (Project). After carefully reviewing the DEIR, the Tribes have concluded that it fails in many respects to meet the requirements of the California Environmental Quality Act (CEQA), and other federal, state, and local laws.

As a preliminary matter, the Colorado River Indian Tribes are a federally recognized Indian tribe comprised of over 4,440 members belonging to the Mohave, Chemehuevi, Hopi and Navajo Tribes. The almost 300,000-acre Colorado River Indian Reservation sits astride the Colorado River between Blythe, California and Parker, Arizona. The ancestral homelands of the Tribes' members, however, extend far beyond the Reservation boundaries. Significant portions of public and private lands in California, Arizona, and Nevada were occupied by the ancestors of the Tribes' Mohave and Chemehuevi members since time immemorial. These landscapes remain imbued with substantial cultural, spiritual, and religious significance for the Tribes' current members and future generations. For this reason, we have a strong interest in ensuring that potential cultural resource and other environmental impacts associated with the Project are adequately considered and mitigated.

In particular, the Tribes are concerned about the potential removal of cultural belongings from this area and the corresponding destruction of the Tribes' footprint on this landscape. For this reason, the Tribes request that all prehistoric cultural resources, including both known and yet-to-be-discovered sites, be avoided if feasible. The Tribes likewise urge the Colorado River

D1-1

Comment Set D1 – Colorado River Indian Tribes (cont.)

Basin Regional Water Quality Control Board (RWQCB) to complete ethnographic studies and archaeological surveys of the site and adjacent areas to protect prehistoric resources. CRIT tribal monitors should be used to complete this work.

D1-1
cont.

The DEIR Is Inadequate under CEQA.

D1-2

The EIR is “the heart of CEQA.” *Laurel Heights Improvement Ass’n v. Regents of University of California*, 47 Cal.3d 376, 392 (1988) (citations omitted). It is “an environmental ‘alarm bell’ whose purpose it is to alert the public and its responsible officials to environmental changes before they have reached ecological points of no return. The EIR is also intended ‘to demonstrate to an apprehensive citizenry that the agency has, in fact, analyzed and considered the ecological implications of its action.’ Because the EIR must be certified or rejected by public officials, it is a document of accountability.” *Id.* (citations omitted).

Beyond merely disclosing potential environmental impacts, the environmental review statutes require agencies to develop tactics to address them. Specifically, CEQA not only requires RWQCB to identify a project’s significant effects, but also requires the agency to adopt measures to avoid or minimize them. Pub. Res. Code § 21002.1. An EIR may not defer evaluation of mitigation to a later date. CEQA Guidelines¹ § 15126.4(a)(1)(B). Where, as here, the environmental review document fails to fully and accurately inform decisionmakers and the public of the environmental consequences of proposed actions, or identify ways to mitigate or avoid those impacts, it does not satisfy CEQA’s basic goals. *See* Pub. Res. Code § 21061 (“The purpose of an environmental impact report is to provide public agencies and the public in general with detailed information about the effect that a proposed project is likely to have on the environment; to list ways in which the significant effects of such a project might be minimized; and to indicate alternatives to such a project.”). As a result of the DEIR’s numerous and serious inadequacies, there can be no meaningful review of the Project by either the public or the agencies’ decisionmakers.

I. The DEIR Fails to Adequately Analyze or Mitigate the Project’s Impacts on Cultural Resources.

D1-3

The proposed Project analyzed in the DEIR is a 500-megawatt solar PV electricity generating station, battery energy storage facility, electrical substation, 4.5-mile-long 500 kV gen-tie line connecting the Project to the Southern California Edison Red Bluff Substation, and associated access roads. (DEIR at ES-7). CRIT is traditionally and culturally affiliated with the Project area and the ancestors of CRIT’s Mohave and Chemehuevi members have lived and traveled in the Project area since time immemorial.

There are seven Areas of Critical Environmental Concern (ACECs) in the vicinity of the Project. (DEIR 3.16-3, 3.16-5). The DEIR also identifies numerous prehistoric resources in both the CEQA Area of Direct Impacts and Area of Indirect Impacts. (DEIR at 3.5-15, 3.5-19). Among others, these identified stone circles, trails, and petroglyphs play an integral role in

¹ The CEQA Guidelines can be found at Cal. Code Regs., tit. 14, § 15000 et seq.

Comment Set D1 – Colorado River Indian Tribes (cont.)

Mohave cultural and spiritual beliefs, in addition to the plants and animals of the area. The landscape is identified in Mohave songs and stories. The DEIR acknowledges that the Project's impacts on historical resources and Tribal Cultural Resources are significant and unavoidable. (DEIR at 3.5-23, 3.5-27 to 3.5-28).

D1-3
cont.

CRIT must once again voice its opposition to the development of the Project in any form on this sensitive landscape. As this letter describes further below, the Tribes are seriously troubled by the Project's potential to remove, damage, or destroy cultural resources and artifacts. These resources are sacred and finite, and together make up the cultural footprint of the Tribes' ancestors. According to the belief system of CRIT's Mohave members, the disturbance of any cultural resources affiliated with their ancestors is taboo, and thus considered a severe cultural harm. CRIT therefore cannot support any project that will likely result in the disturbance or destruction of cultural resources and artifacts.

Moreover, despite the DEIR's attempt to downplay the possibility of unanticipated cultural resource discoveries, CRIT has every reason to fear that cultural resource impacts will be worse than the analysis predicts. As the DEIR acknowledges, the Project is located in a region of significant prehistoric human activity. (DEIR at 3.5-3 to 3.5-4 ["The proposed project area's location suggests multiple groups were present in the region at various times because it is near the boundary of the Colorado and Mojave deserts and it is located along a known prehistoric and historic travel corridor"]). This is a high stakes location for cultural resource discoveries. Significant cultural harm will occur if resources are indeed discovered and disturbed. CRIT has seen that pattern play out all too often with projects like the nearby Genesis Solar Project, in which almost 3,000 cultural belongings were collected from the site during development. To add insult to injury, these belongings are now permanently stored in a museum hundreds of miles away, where CRIT's members are not allowed to view them.

D1-4

Moreover, much of the traditional value of these cultural resources to the Tribes comes from maintaining the connectivity between cultural resource sites stretching south from Spirit Mountain in Nevada. The Chuckwalla Valley plays a key role in maintaining this connectivity within Tribal members' ancestral landscape. To the extent that this proposed Project and its impacts prevent access to the Chuckwalla Valley and other ACECs for traditional practitioners or destroy the landscape connectivity necessary to traditional cultural practices—thereby presenting a substantial burden on tribal members' religious free exercise—the federal government violates the Religious Freedom Restoration Act. *See Burwell v. Hobby Lobby Stores, Inc.* (2014) 573 U.S. 682. While the Tribes acknowledge that the RWCQB is not bound by the Religious Freedom Restoration Act, CRIT requests its assistance in ensuring BLM engages in lawful and thorough consultation to fully understand these important issues before moving forward with any approvals.

A. The DEIR incorrectly determines that all impacted cultural resources are valuable for data recovery only, if at all.

D1-5

At the beginning of its cultural and tribal cultural resources analysis, the DEIR notes that “[c]ultural resources can reflect the history, diversity, and culture of the region, as well as the people who created them. Cultural resources are unique in that they are often the only remaining

Comment Set D1 – Colorado River Indian Tribes (cont.)

evidence of human activity that occurred in the past.” (DEIR 3.5-1). However, this acknowledgment rings hollow given that the following analysis fails to fully account for the Project’s impact on many of the cultural resources in the area.

D1-5
cont.

The DEIR’s methodology for its impact analysis fails to adequately incorporate tribal perspectives and input.² Here, the focus on Western scientific “value” artificially constrains its consideration of “cultural resources,” and thereby undermines the accuracy and quality of any subsequent analysis and the DEIR’s compliance with AB 52 and CEQA. The DEIR ignores the tremendous cultural and spiritual significance that these cultural resources have for Tribal members—and their appropriate classification as Tribal Cultural Resources under CEQA—regardless of California Register of Historical Resources (CRHR) eligibility. The Mohave People believe that their ancestors—who lived, traveled, prayed, fought, and died on this landscape since time immemorial—left their possessions and belongings in the land to forever memorialize their connection to it. These possessions and belongings—which may include tools, pottery, habitation sites, intaglios, petroglyphs, rock circles, sleeping circles, and trails—form a “footprint” that serves as tangible proof of the Mohave People’s ongoing connection to their ancestral territory. The disturbance of these belongings is strictly taboo in the Mohave belief system. The DEIR’s sole focus on archaeological and data-driven characterizations of cultural resources ignores the fact that removal and/or destruction of any cultural resources—including those characterized as “isolates”—has a significant and devastating impact on the Tribes. It also violates CEQA, which acknowledges that Tribal Cultural Resources are an independent category of resources that must be thoroughly studied, analyzed, and mitigated.

1. The Project will significantly impact prehistoric cultural landscapes.

Both state and federal law recognize that cultural resources include cultural landscapes. *See* National Register Bulletin, “Guidelines for Evaluating and Documenting Traditional Cultural Properties” (“A culturally significant natural landscape may be classified as a site” eligible for the National Register); Pub. Res. Code § 21074(a) (tribal cultural resources include “cultural landscapes”). Indeed, evaluation and protection of such landscapes is necessary to ensure adequate protection of both individual resources and their historic context. The California Office of Historic Preservation has explicitly recognized the need for cultural resource professionals working on renewable energy projects to shift focus from a site level to the landscape level of assessment.³ While the DEIR recognizes that cultural landscapes may be protected under state law, the DEIR does not identify or define any cultural landscapes in the vicinity of the Project. This omission is contrary to law, and not supported by the significant evidence available to the agencies.

D1-6

² As described below, the RWQCB’s outreach to affected tribes, including the Colorado River Indian Tribes, has been insufficient.

³ *See* Sustainable Preservation: California’s Statewide Historic Preservation Plan, 2013-2017 (at page 16), available at: http://ohp.parks.ca.gov/pages/1069/files/SustainablePreservation_CaliforniaStatePlan_2013to2017.pdf.

Comment Set D1 – Colorado River Indian Tribes (cont.)

The DEIR's cultural resource section reveals abundant evidence to support a cultural landscape eligibility determination. As the DEIR notes,

D1-7

“[The Project] is located along a known prehistoric and historic travel corridor. Groups in the region originated from portions of the Mojave Desert, the interior Colorado Desert, and the Colorado River as well as more distant locations...Therefore, the area's archeological record also may reflect affinities with any of these regions...

There is archaeological evidence that ancestors of the Yuman-speaking groups have been in the Chuckwalla Valley and the CEQA Area of Direct and Indirect Impacts for some time. However these were not the only people who would have used this area. Ethnographic information indicates that several other Native American groups, such as the Cahuilla and Chemehuevi, at least traversed the Chuckwalla Valley...Thus, the Chuckwalla Valley formed a geographical link between these groups and formed a major travel corridor for communication between them.” (DEIR at 3.5-3).

Other agencies have identified cultural landscapes in this region based on much the same trail systems. *See* Palen Solar Electric Generating System Revised Presiding Member's Proposed Decision (PMPD) at 6.3-34 to -51 (identifying the Prehistoric Trails Network Cultural Landscape (PTNCL) and the larger Pacific to Rio Grande Trails Landscape (PRGTL); “Staff identifies the Chuckwalla Valley portion of the PRGTL as a cultural landscape and historical resource under CEQA that has both archaeological and ethnographic contributing elements...The Chuckwalla Valley portion of the PRGTL is ultimately the result of the dynamic interaction between the natural elements of the landscape and the movement of different Native American cultures that lived and passed through the region”). The cultural landscape is the Tribes' way of life. The trails, which pass through the site, link the petroglyphs and rock shelters found on each surrounding mountain. The ancestors who created the petroglyphs in the boulders each had ties to the area and reasons for doing so and the entire landscape remains important to each tribal member individually and the Tribes collectively.

Project by project, the Tribes' cultural footprint is being erased and this Project is no exception. The DEIR's omission of any discussion of cultural landscapes violates CEQA as well as NEPA. The analysis must be revised to properly account for and mitigate these impacts.

2. As the prehistoric sites destroyed by the project contribute to cultural landscapes, their removal constitutes a significant impact.

D1-8

The California Environmental Quality Act (“CEQA”) requires lead agencies to identify significant impacts to “historic resources” and mitigate these impacts. *See, e.g.*, CEQA Guidelines § 15064.5. Moreover, CEQA requires lead agencies to use preservation in place for archaeological resources if feasible, unless other mitigation would be more protective. CEQA

Comment Set D1 – Colorado River Indian Tribes (cont.)

Guidelines § 15126.4(b); *Madera Oversight Coal. v. County of Madera*, 199 Cal.App.4th 48, 82-87 (2011).

D1-8
cont.

The DEIR explains that there are 426 cultural resources in the CEQA Area of Direct impacts, including 171 archaeological sites, 11 built-environment resources, and 244 isolates. (DEIR at 3.5-12). The non-isolate prehistoric archaeological resources include 15 rock rings/cleared circles, 32 artifact scatters, and one habitation site. (DEIR at 3.5-12). All of the 244 isolates are not considered eligible for the CRHR or NRHP—despite the fact that the RWQCB has done no consultation with the Tribes to understand the importance of these sites, their connection to the broader landscape, and their qualification as Tribal Cultural Resources—thus the DEIR did not consider them any further. (DEIR. at 3.5-12).

The DEIR’s focus only on “eligible” resources misconstrues state and federal law. The DEIR must avoid conflating eligibility for the CRHR with significant impacts analysis under CEQA. Impacts to archaeological resources considered non-eligible for listing on the CRHR—perhaps because of their lack of integrity—may nevertheless be significant for CEQA purposes.

D1-9

Similarly, the RWQCB must not equate significant cultural resources with only those buildings, sites, structures, objects, and districts eligible for inclusions on the NRHP. The DEIR’s focus on Western scientific “value” artificially constrains its consideration of “cultural resources,” and thereby undermines the accuracy and quality of any subsequent analysis. In doing so, the EIR ignores the tremendous cultural and spiritual significance that these cultural resources have for Tribal members, regardless of NRHP eligibility. The Mohave People believe that their ancestors—who lived, traveled, prayed, fought, and died on this landscape since time immemorial—left their possessions and belongings in the land to forever memorialize their connection to it. These possessions and belongings—which may include tools, pottery, habitation sites, intaglios, petroglyphs, rock circles, sleeping circles, and trails—form a “footprint” that serves as tangible proof of the Mohave People’s ongoing connection to their ancestral territory. The disturbance of these belongings is strictly taboo in the Mohave belief system. The DEIR’s sole focus on archaeological and data-driven characterizations of cultural resources ignores the fact that removal and/or destruction of any cultural resources—including those characterized as “isolates”—has a significant and devastating impact on the Tribes.

Additionally, the DEIR’s analysis inappropriately silos these archaeological resources. Under its logic, if an individual resource is not *independently* significant, it does not merit protection. In ignoring the connective and cumulative value of these resources, the DEIR fails to evaluate whether any of these non-eligible prehistoric archaeological sites or isolates contribute to the cultural landscapes discussed in the prior section. Even if these resources are not significant on their own—a characterization that the Tribes do not support—the DEIR must be revised to evaluate whether these resources are significant because of their contribution to a broader cultural landscape.

D1-10

Comment Set D1 – Colorado River Indian Tribes (cont.)

3. The Project will significantly impact Areas of Critical Environmental Concern

D1-11

The DEIR notes that seven ACECs are located near the Project site: Palen-Ford Playa Dunes, Chuckwalla Desert Wildlife Management Area, Palen Dry Lake, Chuckwalla Valley Dune Thicket, Corn Springs, Alligator Rock, and Desert Lily Preserve. (DEIR at 3.16-3). However, the DEIR does not analyze the Project's impacts on any of the ACECs. Additionally, the gen-tie line crosses into the Chuckwalla ACEC, south of I-10. (DEIR at 3.11-2, 3.11-8). The DEIR primarily considers the Project's impact on the ACECs as recreational areas, despite the fact that many of these ACECs were designated *because of their cultural resource importance*. See, e.g., Alligator Rock, Chuckwalla Valley Dune Thicket, Corn Springs, Palen Dry Lake, and Palen-Ford Playa Dunes. However, the DEIR does not analyze the Project's impacts on the cultural significance of the ACECs and any resources located within the ACECs. Given that part of the Project is sited within the Chuckwalla ACEC, the Project is certain to impact the site and any cultural resources located in that area. As demonstrated above, these cultural resources include areas sacred to area tribes, linked to cultural practices, and grounded in the undisturbed cultural landscape. The addition of a massive, industrial system to this area has the real potential to adversely impact these values. The RWQCB must consider these impacts in a revised DEIR.

4. The DEIR fails to adequately analyze cultural resource impacts from increased erosion.

D1-12

The DEIR notes that the soils underlying the site present erosion hazards. (DEIR at 3.7-2). Erosion can exacerbate exposure of cultural resources. For example, at the Genesis Solar Energy Project, annual monsoon rains overwhelmed the project's stormwater drainage plans, resulting in significant erosion and exposure of cultural resources. BLM brought in tribes for consultation, asking what should be done to the resources that were exposed. Overwhelmingly, the response was that BLM should have better reviewed the designs of the project in the first place, to ensure that the project did not exacerbate runoff and erosion.

However, the DEIR does not discuss this issue. The analysis must be revised to specifically address whether the Project will result in increased erosion and deposition, including in a manner that would adversely impact cultural resources.

B. The DEIR's analysis of cumulative adverse effects on cultural resources is inadequate.

D1-13

Cultural resources represent a direct linkage between present-day tribal members and their ancestors. Removal of these resources from the landscape is removal of the Tribes' footprint. Once such resources are gone, it will be difficult, if not impossible, for the Tribes to prove that these lands are part of their ancestral homeland, and that their ancestors lived and worked on these lands since time immemorial.

The DEIR lists 14 past and present projects or programs and 11 probable future projects in the vicinity of the Project. (DEIR at 3.1-9 to 3.1-15). These projects include 14 large-scale renewable energy projects, 2 electrical substations, and 5 transmission line projects (DEIR at 3.1-9 to 3.1-15). However, the DEIR provides an inaccurate picture of cultural resource impacts. In

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particular, the DEIR fails to accurately describe the cumulative impacts of the listed projects in the vicinity. The DEIR should provide information as to how many cultural resources were actually discovered and/or disturbed when those projects were constructed. As the RWQCB is aware, it is impossible to predict the location of buried cultural resources and, therefore, actual cultural resource impacts can only be known once project construction has concluded. For the vast majority of the projects the DEIR lists in its cumulative analysis, those final impact numbers are readily available. Yet, the DEIR fails to provide the cultural resource information from each respective project, effectively guaranteeing that cumulative impacts are understated.

D1-13
cont.

Further, the DEIR analysis focuses solely on NRHP- and/or CRHR-eligible resources and ignores non-eligible and isolate discoveries. The DEIR's discussion of only eligible resources ignores the broader cumulative impact of these projects for CRIT's members. The disturbance, destruction, and/or removal of any cultural resource—including isolates and non-eligible artifacts—contributes to the steady erosion of Tribal members' cultural footprint from their ancestral landscape. This issue is especially pressing given BLM's practice of allowing isolates and noneligible resources to be destroyed on site during construction. The DEIR's methodology fails to acknowledge this devastating impact and provides the public with an inaccurate cumulative picture.

D1-14

Although the DEIR concludes that the Project “would result in a cumulatively considerable contribution to a significant cumulative impact” (DEIR at 3.5-29), the DEIR must be revised to fully analyze the cumulative impacts of past projects and non-eligible resources that would be impacts. *Sierra Club v. County of Fresno* (2018) 6 Cal.5th 502, 514 (“An EIR’s designation of a particular environmental effect as ‘significant’ does not excuse the EIR’s failure to reasonably describe the nature and magnitude of the adverse effect”) (internal quotations omitted).

C. The DEIR fails to adequately mitigate for the Project’s significant cultural resource impacts.

D1-15

The DEIR relies on numerous mitigation measures to purportedly reduce the Project’s significant cultural resource impacts (DEIR at 3.5-29 to 3.5-36), yet the proposed mitigation is inadequate and needs a number of revisions to more appropriately incorporate tribal input and respond to these harms. The Tribes further note that the only true mitigation for cultural resource harms is avoidance—something that none of the mitigation measures fully embrace. Moreover, the DEIR’s emphasis on protecting only CRHR-eligible resources ensures that even avoidance may do nothing to prevent the wholesale destruction and/or removal of countless cultural resources on the Project site. These isolates and non-eligible resources make up the cultural footprint of many Tribal members’ ancestors. Unless the definition of protected resources extends to these cultural resources as well, it is very likely that destruction of cultural resources will continue. CRIT urges the RWQCB to make the following revisions:

- Revise MM CUL-1 to state that the Cultural Resources Specialist will consult with culturally affiliated tribal groups before making any recommendation regarding the eligibility for listing in the NRHP and CRHR of any cultural resources that are newly discovered or that may be affected in an unanticipated manner.

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- Revise MM CUL-1 to state that no ground disturbing activities will take place without the presence of a tribal monitor. Written notice identifying the proposed schedule of each project phase shall be provided to the Tribe supplying the tribal monitors at least one week in advance. Weekly, until ground disturbance is completed, the project construction manager shall provide to the tribal monitors' manager a schedule of project activities for the following week, including the identification of area(s) where ground disturbance will occur during that week. The Project Owner shall notify the Tribe providing tribal monitors of any changes to the scheduling of the construction phases.

D1-16
- Revise MM CUL-2 to make clear that the Cultural Resources Specialist (CRS) shall consult extensively with culturally affiliated tribes in developing the Plan for Archaeological Monitoring, Tribal Participation, Post-Review Discovery and Unanticipated Effects Plan. This Plan must include a robust tribal monitoring component that allows affected Tribes—like CRIT—to provide tribal monitors for all ground disturbing activities.

D1-17
- Revise MM CUL-2 to make clear that tribal monitors shall have authority to temporarily halt ground disturbance during construction if a cultural resource over 50 years of age is found, or impacts to such a resource can be anticipated. The Colorado River Indian Tribes shall be consulted regarding the proper treatment of the resource in question.

D1-18
- Revise MM CUL-2 to remove any discussion of cultural resource removal, which causes significant harm to the Tribes, and instead add language emphasizing cultural resource reburial according to traditional cultural practices known only to the Tribe. Please see Exhibit A for more information on CRIT's reburial policy.

D1-19
- Revise MM CUL-3 to state that the Project owner shall seek tribal input and participation in compiling its Worker Environmental Awareness Program training to better incorporate tribal knowledge and perspectives.

D1-20
- Revise MM CUL-4 to state that the archaeological monitor shall consult with the on-site tribal monitor. The RWQCB shall also consult with any culturally affiliated tribes, including CRIT, should any cultural resources be discovered during ground disturbing activities.

D1-21
- Revise MM CUL-4 to prohibit the CRS from decreasing the tribal monitoring effort.

D1-22
- Revise MM CUL-5 to state that a tribal monitor shall be present during *all* ground disturbing activities, including grading, disc and roll, and pile or stake driving, mechanical excavation, drilling, digging, trenching, blasting, or using high pressure water to cut into the ground. A mitigation measure that fails to use tribal monitors for *all* ground disturbing activities will result in significant impacts, and the DEIR cannot conclude that partial monitoring will reduce impacts to the extent feasible. To reduce impacts to the extent feasible, tribal monitors must be present for all the activities described above and whenever machines are active.

D1-23
- Revise MM CUL-5 to clearly define the term "Native American Monitor."

D1-24

Comment Set D1 – Colorado River Indian Tribes (cont.)

- Revise MM CUL-5 to state that the tribal monitor will have the authority to temporarily halt construction, at least until there can be the opportunity for review by the CRS, alternate CRS, or other field staff. Without this power, the tribal monitors will be unable to minimize the potential impacts of the proposed project. The mitigation measure shall also clarify the relationship between the tribal monitor and the archaeological monitor(s).

D1-25
- Revise MM CUL-5 to state that the RWQCB and BLM shall make cultural resource treatment decisions in consultation with CRIT and other affected tribes. Ground disturbance shall not resume in the area of the discovery until this consultation is completed. MM CUL-5 must also be clarified to provide that Tribes must receive notice of newly discovered prehistoric resources within 24 hours of the notification to BLM and the RWQCB.

D1-26
- Revise MM CUL-6 to state that CRIT and other culturally affiliated tribes will be contacted in the event of any unanticipated discovery and will have the opportunity to consult with the project owner, the RWQCB, and qualified personal regarding the treatment of said resource.

D1-27
- Revise MM CUL-7 to state that any reports prepared shall also be provided to CRIT and other culturally affiliated tribes.

D1-28
- Revise MM CUL-8 to clarify how CRIT and other culturally affiliated tribes will be notified of the opportunity to be involved in the planning process.

D1-29
- Revise MM CUL-8 to state that collaboration on the Long-Term Management Plan will be conducted in compliance with any of the participating Tribes' government-to-government policies.

D1-30
- Revise MM CUL-10 to state that the CRS, alternate CRS, or field staff shall consult with a tribal monitor to re-establish the boundary of each site.

D1-31
- Revise MM CUL-10 to specify, in paragraph 2, which monitor is tasked with enforcing avoidance of flagged areas.

D1-32
- Revise MM CUL-10 to provide tribal monitors with the authority to temporarily halt construction, at least until there can be the opportunity for review by CRS, alternate CRS, or other field staff.

D1-33
- Revise MM CUL-11 to state that CRIT has the authority to make the final decision regarding reburial. BLM shall also consult with CRIT and other culturally affiliated tribes regarding any decisions related to reburial.

D1-34
- Revise MM TCR-1 to state that all culturally affiliated tribes, including CRIT, will be involved in developing the workshops or provide another opportunity for other tribes to develop and host a separate workshop.

D1-35

Comment Set D1 – Colorado River Indian Tribes (cont.)

II. The DEIR's Analysis of Impacts to Aesthetic and Visual Resources Is Inadequate.

D1-36

A. The aesthetic impacts analysis ignores the resources' cultural significance.

The Aesthetics section of the DEIR does not address the cultural implications of the Project's disruption of the visual landscape. While the DEIR considers impacts to general "viewer groups," it fails to consider the Project's visual impact on Tribal members. (DEIR at 3.2-2). Chuckwalla Valley and the surrounding slopes and ridgelines are more than a recreational resource for the Tribes; they have longstanding cultural and spiritual significance as ancestral lands. Any large-scale visual alteration to this space disturbs the sanctity of the outdoor environment, degrades cultural values, and constitutes a significant impact. Despite this special significance, the DEIR does not mention the visual impact on CRIT members in the Aesthetics section, and the Tribes were not consulted for this section. The RWQCB must consult with the Tribes to determine the full significance of the visual landscape of the Chuckwalla Valley and surrounding slopes and ridgelines as cultural resources, and to explore possible additional or alternative mitigation that would best minimize visual impacts as a whole.

Furthermore, the DEIR's failure to analyze the cultural impacts of the Project's aesthetic impacts violates applicable local regulations. The Riverside County General Plan's Land Use element includes Policy LU 9.1, which "[p]rovide[s] for permanent preservation of open space lands that contain important...cultural resources." (DEIR at 3.4-16). However, the Project will span 5,000 acres with a solar facility that, by itself, occupies 2,700 acres. (DEIR at 2-1). Located in the Tribes' ancestral homelands, the Project will directly impact the land and any cultural resources it is sited on. Moreover, the Project's "area of potential visual effect...is extensive and encompasses much of the Chuckwalla Valley and the project site-facing slopes and ridgelines of the surrounding mountains." (DEIR at 3.2-4). The DEIR claims that the Project is nonetheless consistent with Policy LU 9.1 because it is "not within an area with important scenic values." (DEIR at 3.2-25). In describing the Project's visual impacts as measured from Key Observation Points (KOP), the DEIR states that "[t]he landscape of the project site is rather non-descript and generally lacking in visual variety." (DEIR 3.2-6 to 3.2-9). However, this conclusion ignores the landscape's cultural significance and thus wrongly claims that the Project is consistent with Policy LU 9.1. By focusing on the "scenic" value of the landscape the analysis artificially constrains its consideration of aesthetic impacts. The Project is inconsistent with Policy LU 9.1 because it has a clear effect on the area's cultural resources, disrupting both physical and visual access to the Tribes' ancestral lands.

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Because the aesthetics analysis does not consider the cultural significance of the Project's aesthetic impacts, the proposed mitigation measures are inadequate. None of the measures address concerns tied to the landscape's cultural significance. The DEIR must be revised to consider and analyze the cultural significant of the area's landscape.

B. The Project's cumulative impacts on visual resources are significant.

D1-38

As the DEIR acknowledges, the cumulative impacts of another large-scale solar project in the area are significant and unavoidable. (DEIR at 31). Twenty-four past, present, and potential

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future projects are sited in the area, and this Project will contribute to the adverse cumulative effects of disrupting “the grand scale of the open desert panoramas...[and] relatively unimpaired, isolated desert landscape.” (DEIR 3.2-32). The DEIR recognizes that “[i]f all the projects were implemented, they would substantially degrade the visual character and generic scenic appeal of the existing landscape, ... [converting] a relatively undeveloped desert landscape.” (DEIR 3.2-14). Even when confronting such severe impacts, the DEIR nonetheless ignores lower footprint alternatives and continues to recommend the proposed project.

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cont.

III. The Biological Resources Analysis Is Inadequate.

D1-39

A. The DEIR fails to fully describe applicable consultation requirements.

The California Department of Fish and Wildlife (“CDFW”) has the authority to regulate projects that may impact species protected by the California Endangered Species Act. Under CEQA case law, the EIS should have discussed CDFW’s permitting process and any potential mitigation or project modifications that may be required by the agency. Specifically, the EIR project description must include a list of consultation requirements and “to the fullest extent possible, the lead agency should integrate CEQA review with these related environmental review and consultation requirements.” Guidelines, § 15124(d)(1)(C); see *Banning Ranch Conservancy v. City of Newport Beach*, 2 Cal. 5th 918, 936-942 (2017). In *Banning Ranch*, the city ignored its “obligation to integrate CEQA review with the requirements of the Coastal Act” (specifically the Coastal Act’s habitat designation requirements). *Id.* at 936. The Court invalidated the City’s CEQA analysis because the “omission resulted in inadequate evaluation of project alternatives and mitigation measures. Information highly relevant to the Coastal Commission’s permitting function was suppressed. The public was deprived of a full understanding of the environmental issues raised by the Banning Ranch project proposal.” *Id.* at 942.

The DEIR describes CDFW as the agency with authority over the “Lake and Streambed Alteration Agreement” and “Incidental Take Permits.” (DEIR at ES-4). It also notes that CDFW has a role in enforcing various state laws. (DEIR at 3.4-14 to 3.4-16). However, the DEIR does not provide any explanation of the consultation and agency approval process, or where current compliance and consultation stands. This failure is particularly salient given that the Biological Resources discussion identifies multiple protected species impacted by the Project and “likely to be regulated by CDFW.” Such species include desert dry wash woodland and the desert tortoise. (DEIR at 3.4-3, 3.4-7, 3.4-50, 3.4-51 to 3.4-53). For example, as in *Banning Ranch*, where there was “ample evidence” that sensitive coastal habitat was present, the DEIR here explicitly states that the southern portion of the project is located within critical habitat for the desert tortoise (DEIR at 3.4-7) and the project site encompasses desert dry wash woodlands (DEIR at 3.2-5). Vague references to future permitting and CDFW involvement is not enough. The DEIR must discuss the consultation with CDFW and compliance with its requirements, as well as those of any other local, state, or federal agency with jurisdiction over the Project.

B. The DEIR does not adequately explain, analyze, or mitigate the Project’s violation of setback requirements.

D1-40

The DRECP specifies a 200-foot setback from microphyll woodlands, however the Project will only establish a minimum setback of 50 feet from the desert dry wash woodland that

Comment Set D1 – Colorado River Indian Tribes (cont.)

the Project area encompasses. (DEIR at 2-3, 3.11-7). In order to eliminate nearly 75% of the existing setback requirement, the DEIR mentions that BLM may consider a Land Use Plan Amendment to allow for this gross deviation. (DEIR at 3.11-7). To justify eliminating these required protections for microphyll woodlands, the DEIR summarily states that “a 200-foot setback along all ribbons of microphyll woodland habitat may needlessly prevent the development of lands that are otherwise suitable for solar development and near transmission infrastructure.” (DEIR at 3.11-7). The DRECP represents years of agency investment in determining the appropriate balance between the need for renewable energy and biological, cultural, and other impacts associated with public lands. However, the DEIR summarily classifies the DRECP’s setback requirement as “needless,” without any further explanation. As even the DEIR admits, the Project “would impact approximately 81.2 acres of desert dry wash woodland habitat.” (DEIR at 3.4-30). In fact, it appears that the significantly reduced 50-foot setback would have significant environmental impacts if it would require a Land Use Plan Amendment.

D1-40
cont.

Nor do the proposed mitigation measures adequately address these impacts. The DEIR claims that measures MM BIO-1 through MM BIO-6 adequately minimize impacts to desert dry wash woodland. In particular, the DEIR relies on MM BIO-6a, which “compensates” for the Project’s impacts by offsetting the woodland loss with acquisition and protection of woodland elsewhere. (DEIR at 3.4-30 to 3.4-31, 3.4-45 to 3.4-46). This measure does not mitigate the Project’s impact on the woodlands in the Project site. Rather, it explicitly admits that the Applicant will not make any attempt to protect this microphyll. In exchange for destruction of 81.2 acres of protected woodlands, the Applicant will “commit” to preparing a future Compensation Plan subject to BLM approval, which may allow the Applicant to simply protect lands elsewhere, resulting in a net loss of habitat. (DEIR at 3.4-45 to 3.4-46; *see also King & Gardiner Farms, LLC v. County of Kern* (2020) 45 Cal.App.5th 814, 875-76 (preservation of offsite agricultural land results in net loss and is thus inadequate)). Furthermore, the measure does not describe any tangible criteria for these future compensatory acquisitions. The DEIR only provides a vague list of topics that should be considered. (DEIR at 3.4-45). Plainly, the mitigation measures are inadequate.

D1-41

C. The DEIR ignores the cultural significance of impacted desert species.

The DEIR also fails to acknowledge the cultural significance of these desert species to local tribes—either in the cultural resources analysis or the biological impacts discussion. A number of the animals at greatest risk from the proposed project (Mojave desert tortoise, golden eagles, Western burrowing owls, American badgers, desert kit foxes, and other various birds) are important to tribal culture because they hold power and spiritual value in Native American belief systems and oral traditions. The CEQA Guidelines explain that a historic resource need not be eligible for the CRHR to be a “historic resource” under Public Resources Code sections 5020.1(j) or 5024.1; “historic resources” thus require a more expansive analysis than the one required under the CRHR criteria. CEQA Guidelines § 15064.5(a)(4). Such resources necessarily include viewsheds and landscapes, plants and animals used in and/or central to cultural and religious practices and creation stories, and religious and customary practices (e.g., hunting and gathering, religious ceremonies, and trailwalking). The DEIR must be revised to apply the correct definition of cultural resources for this Project and properly analyze these impacts.

D1-42

Comment Set D1 – Colorado River Indian Tribes (cont.)

A number of the plants at the project site also hold cultural value for CRIT. For example, the DEIR explains that “[t]he majority of vegetation on the project site is creosote bush scrub.” (DEIR at 3.4-2). Creosote has topical and internal medicinal purposes for tribal members, and was traditionally used by Mohave and Chemehuevi craftspeople for a number of utilitarian purposes, including waterproofing of baskets, cordage objects, and pottery. Once these and other desert sensitive plants have been destroyed through surface disturbing activities, this loss of traditional cultural lifeways cannot be readily mitigated.

D1-42
cont.

D. The cumulative impacts on biological resources is not adequately analyzed.

D1-43

Moreover, CRIT has serious concerns that the piecemeal mitigation measures proposed in the DEIR will adequately alleviate the tremendous stress that these large-scale renewable energy projects place on sensitive desert species. Much of the DEIR’s analysis of potential biological impacts relies on surveys to determine what species are present in the Project area, yet this methodology does not necessarily capture the extent to which other solar projects in the vicinity have already destroyed habitat and impacted the future viability of these desert species. The DEIR analysis must be revised to consider these devastating cumulative and compounding impacts.

IV. The DEIR Fails to Recognize or Analyze the Environmental Justice Impacts of the Project.

D1-44

California law requires that local agencies consider issues of fairness and environmental justice in the planning context. *See* Cal. Gov. Code, § 11135. “Environmental justice” is defined in the Government Code as “the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies.” Cal. Gov. Code, § 65040.12(e). Likewise, CEQA and its implementing Guidelines require lead agencies to consider the public health burdens of a project as they relate to environmental justice for certain communities. A 2012 report from the California Attorney General discussing environmental justice concerns under CEQA explained that, “where a local agency has determined that a project may cause significant impacts to a particular community or sensitive subgroup, the alternative and mitigation analyses should address ways to reduce or eliminate the project’s impacts to that community or subgroup.” “Environmental Justice at the Local and Regional Level: Legal Background,” State of CA DOJ, at 4. There is a similar requirement for BLM under NEPA. *See, e.g.,* EPA’s 1998 Environmental Justice Guidance; Executive Order 12898. These analyses are required for an adequate consideration of environmental justice impacts.

Although the DEIR identifies Environmental Justice as a concern raised during the scoping process (DEIR at ES-5, 1-5), it fails to include any analysis or mitigation related to the Project’s environmental justice impacts. One of the most substantial environmental costs of the proposed Project is the destruction of tangible cultural resources and the wholesale transformation of the ancestral homelands of Indian tribes, including CRIT. This cost is borne exclusively by tribal members. The power produced at the proposed Project, however, is unlikely to serve residents of the Colorado River Indian Reservation, and the climate change benefits will be spread across the globe. The massive profits, moreover, will benefit a small number of private companies. This imbalanced allocation of costs and benefits, which disproportionately

Comment Set D1 – Colorado River Indian Tribes (cont.)

disadvantages a minority population while providing them little or no benefit from the program, satisfies any recognized definition of environmental justice.

D1-44
cont.

To begin to right this imbalance, CRIT urges the RWQCB to consider and analyze the Project's environmental justice impacts. Furthermore, CRIT urges the RWQCB and BLM to adopt a mitigation measure to give employment preferences to Indians, as well as access to any necessary job training programs to ensure performance and experience requirements can be met. The agencies should also adopt mitigation measures that ensure that the project developer sources construction materials from tribal enterprises. CRIT has serious questions as to whether the proposed Project will bring much needed construction and permanent jobs to an area close to the Reservation. At a minimum, please provide additional information about the nature of the jobs related to the Project to ensure that Tribal members may be available for hire. Tribal members must have access to these jobs to ensure that at least some of the benefits of the proposed Project flow back to the disadvantaged minority community on the Reservation.

V. The Alternatives Section Is Inadequate.

D1-45

A. The Project's narrow purpose impedes an adequate alternatives analysis.

CEQA requires an EIR to include analysis of alternative locations. CEQA Guidelines, § 15126.6(f)(2). The EIR must ask if "any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location." CEQA Guidelines, § 15126.6(f)(2). Only if the lead agency concludes that there are no feasible alternatives, may the agency avoid reviewing at least one alternative site. CEQA Guidelines, § 15126.6(f)(2); see *Laurel Heights Improvement Ass'n v. The Regents of the University of California*, 47 Cal. 3d 376, 399-407 (1988) (finding that the EIR should have explored the potential to locate the project somewhere other than the Laurel Heights property; fact that the University owned the Laurel Heights property did not exempt it from analyzing use of other sites). And, if the agency concludes that no feasible alternative locations exist, it must disclose the reasons for this conclusion in the EIR. CEQA Guidelines, § 15126.6(f)(2).

The DEIR does not disclose that no feasible alternative locations exist, nor does it give any reasons for its failure to consider a feasible off-site alternative. Instead, the DEIR only lists alternative locations that the RWQCB found to be infeasible. (DEIR at 4-22 to 4-23). This flatly contradicts the CEQA Guidelines and case law.

B. The RWQCB must adopt the environmentally superior alternative, unless infeasible.

D1-46

To begin, the DEIR fails to fully describe the applicable law. It neglects to mention that under CEQA, a lead agency is *required* to adopt an environmentally superior alternative if it is feasible to do so. Pub. Resources Code § 21002.1 (public agency shall avoid the significant effects on the environment of projects that it carries out or approves whenever it is feasible to do so).

Here, the DEIR concludes that the No Project Alternative is the environmentally superior alternative. (DEIR at 4-21). In accordance with CEQA Guidelines § 15126.6, the DEIR also

Comment Set D1 – Colorado River Indian Tribes (cont.)

analyzes the Land Use Plan Compliant Alternative as an environmentally superior alternative. (DEIR at 4-21). Both alternatives have a smaller footprint and result in fewer impacts to biological and cultural resources than the proposed project. (DEIR at 4-21). However, the DEIR does not provide an adequate discussion, supported by substantial evidence, of the perceived infeasibility of adopting either alternative. For example, although the Land Use Plan Compliant Alternative would still generate 375 MW of renewable energy, the DEIR dismisses it by summarily stating that the alternative “would achieve the project objectives...to a lesser extent compared with the proposed project.” (DEIR at 4-21 to 4-22). Moreover, the relevant question under CEQA is whether the alternative at issue is feasible; the DEIR does not include any discussion or draw any conclusions about the alternatives’ feasibility.

D1-46
cont.

VI. Despite severe cumulative impacts, the agencies move forward with the proposed project, ignoring alternatives with fewer impacts.

D1-47

As CRIT articulated in its April 20, 2021 scoping comment letter to the RWQCB and again throughout this comment letter, the collective and continual destruction and removal of cultural resources from the Tribes’ ancestral lands due to energy projects has already caused tremendous spiritual harm to CRIT members. Energy projects, such as the Project here, are often sited in a way that severs the connectivity between cultural resource sites—a connectivity that is vital to the traditional value of these cultural resources. It is clear that sensitive values within the Project site—particularly cultural and visual resources—are significantly diminished by the proposed Project.

The DEIR lists 14 past and present projects or programs (DEIR at 3.1-9 to 3.1-12) as well as 11 probably future projects (DEIR at 3.1-12 to 3.1-15), all of which are sited in the project area. As this list demonstrates, a vast number of solar and other utility projects have been sited within CRIT’s ancestral lands. Through ground disturbance and physical intrusions on this land, each project further compounds the disastrous and permanent impacts on the area’s cultural resources. As noted above, the DEIR acknowledges that these cumulative impacts are significant and unavoidable. (DEIR at 3.5-28 to 3.5-29). Nonetheless, the DEIR pushes forward with the proposed project, the option with the most disastrous cultural and environmental impacts, despite having alternatives with smaller footprints and fewer impacts. (DEIR at 3.5-28 to 3.5-29).

D1-48

VII. The DEIR Improperly Narrows the Analysis of Growth-Inducing Impacts from the Project.

A draft EIR must discuss the ways in which the proposed project could foster growth-inducing impacts. Pub. Resources Code § 21100(b)(5); CEQA Guidelines §§ 15126(d), 15126.2(d). The DEIR limits its analysis of growth-inducing impacts to economic and population growth, housing capacity, infrastructure, and service capacity. (DEIR at 5-4 to 5-6). However, CEQA requires an agency to also “discuss the characteristic of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively.” CEQA Guidelines § 15126.2(d).

However, the DEIR fails to analyze the characteristic of this project to induce further solar development. Specifically, the construction of the gen-tie line may “encourage and

Comment Set D1 – Colorado River Indian Tribes (cont.)

facilitate other activities that could significantly affect the environment, either individually or cumulatively.” See CEQA Guidelines § 15126.2(d). The viability of the proposed project could also serve to attract new project applicants to the area or ease the way for approval of other nearby projects, similar to how this DEIR cites to surrounding solar facilities to artificially minimize this Project’s impacts. The analysis must consider future solar projects, which are constructed due to the growth-inducing effect of this Project, and their impacts to the environment.

D1-48
cont.

The RWQCB Has Not Adequately Consulted with the Tribes.

D1-49

The DEIR claims that the RWQCB complied with consultation requirements by sending certified letters in December 2020 to representatives of seventeen tribes; one of these letters was sent to CRIT. (DEIR at 3.5-20). However, as the DEIR admits, the RWQCB has only engaged in further communication with two of the seventeen tribes. (DEIR at 3.5-20). This description of the RWQCB’s contact with CRIT ignores the letters and repeated communications CRIT has sent to both the RWQCB and BLM without adequate response.

In May 2017, the Colorado River Indian Tribes adopted a government-to-government consultation policy to manage its relationship with federal agencies.⁴ The genesis of this policy was the ongoing failure of the federal government to live up to the requirements for consultation contained in federal statutes, regulations, policies, and executive orders. CRIT requested that each federal agency acknowledge the policy prior to conducting government-to-government consultation with its Tribal Council.

CRIT informed the RWQCB of this Policy in its April 2021 scoping comment letter, and asked the RWQCB to review and acknowledge the Policy. CRIT also previously informed BLM of the Policy in its October 2020 comments on the Project. To the Tribes’ knowledge, neither the RWQCB nor BLM has acknowledged CRIT’s Policy. For this reason, any communication between the RWQCB and the Tribes regarding this Project continues to be for informational purposes only. While CRIT is open to conducting in-person, government-to-government consultation with the RWQCB regarding this Project, any consultation meeting would need to include acknowledgment and discussion of the Tribes’ policy.

Additionally, CRIT again requests that the RWQCB promptly acknowledge the Tribes’ Consultation Policy and then engage with the Tribes on a meaningful, government-to-government level for this Project, consistent with the policies expressed in the Tribes’ Policy and Assembly Bill 52.

Conclusion

D1-50

Thank you for considering these comments. As required by state, federal, and tribal law, we look forward to receiving your response to these comments. Please copy the Tribes’ Attorney

⁴ The Policy was previously provided to BLM and the RWCQB, but may be found here: [https://www.crit-nsn.gov/crit_contents/ordinances/Government%20to%20Government%20Consultation%20Policy%20\(1\).pdf](https://www.crit-nsn.gov/crit_contents/ordinances/Government%20to%20Government%20Consultation%20Policy%20(1).pdf)

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General, Rebecca A. Loudbear, at rloudbear@critdoj.com, Deputy Attorney General Antoinette Flora, aflora@critdoj.com, and THPO Director Bryan Etsitty, at betsitty@crit-nsn.gov, on all correspondence to the Tribes.

D1-50
cont.

Respectfully,



Amelia Flores
Chairwoman, Colorado River Indian Tribes

Cc: Tribal Council of the Colorado River Indian Tribes
Bryan Etsitty, THPO Director, Colorado River Indian Tribes
Rebecca A. Loudbear, Attorney General, Colorado River Indian Tribes

Comment Set D1 – Colorado River Indian Tribes (cont.)**Exhibit A****REBURIAL POLICY FOR CULTURAL RESOURCES AND/OR ARCHAEOLOGICAL ARTIFACTS OF THE COLORADO RIVER INDIAN TRIBES**

D1-51

Introduction: It is the policy of the Colorado River Indian Tribes that avoidance of cultural resources must be required when feasible and that if cultural resources cannot be avoided, the Colorado River Indian Tribes desires the reburial of cultural resources in situ (left in place). For this reason and in acknowledgment of the reburial policy developed by the Mohave Elders Committee and Mohave Elders Spokesman David Harper, the Tribal Council of the Colorado River Indian Tribes adopts the following reburial procedures to be used in the event of discovery of cultural resources and/or archaeological artifacts. On land not located on the Colorado River Indian Reservation, this reburial policy shall be implemented to the extent it does not conflict with applicable federal and/or state laws, policies, and plans.

Definition of Cultural Resource: On the Colorado River Indian Reservation, cultural resource shall be defined as any site, district, structure, object, property, trail, landscape, viewshed or human remains significant to the prehistory, history, archaeology, culture, or religions of the Colorado River Indian Tribes and its members.

Off the Colorado River Indian Reservation, cultural resource shall be defined by applicable federal and/or state laws, policies, and plans.

Definition of Isolate: On the Colorado River Indian Reservation, isolates shall be defined as three or fewer artifacts found within five meters of each other.

Off the Colorado River Indian Reservation, isolate shall be defined by applicable federal and/or state laws, policies, and plans.

Reburial Procedures: Once an authorized individual(s) has determined that a cultural or archaeological artifact is prehistoric or associated with the Tribes or Native American culture and is susceptible to reburial (i.e., is a small physical item that can be reburied), the following procedures shall apply:

- (1) The Cultural Resource or Isolate shall be mapped in situ using a GPS unit and photographed. A numbering system shall also be developed and used to record discoveries.
- (2) The Cultural Resource or Isolate shall be recorded by briefly describing its nature, size, and location. A brief explanation of the use or original purpose of the Cultural Resource or Isolate shall also be included in the written report. The Tribal Historic Preservation Office shall maintain the written records and photographs taken in connection with the discovery of Cultural Resources or Isolates.
- (3) The Tribal Council of the Colorado River Indian Tribes designates individuals currently serving as staff on the Cemetery Committee, and any designated individuals chosen by staff of the Cemetery Committee, to rebury discovered Cultural Resource or Isolates. These persons are to be notified upon the discovery of an Cultural Resource or Isolate.

Comment Set D1 – Colorado River Indian Tribes (cont.)D1-51
cont.

(4) Authorized individual(s) shall rebury the Cultural Resource or Isolate within the approximate location of initial discovery, specifically, no more than ten (10) feet from the area of discovery, unless such proximity is infeasible. The Cultural Resource or Isolate shall be reburied at least one (1) foot below the area of ground disturbance exposing the Cultural Resource or Isolate, and far enough below the ultimate extent of ground-disturbing activities to ensure no damage to the Cultural Resource or Isolate will occur. In no event shall the Cultural Resource or Isolate be removed from the land upon which the Cultural Resource or Isolate was discovered. The reburial site shall be unmarked. Upon completion of the reburial process, a photograph shall be taken of the reburial site. These photograph(s) shall be maintained with the written records of the Cultural Resource or Isolate discovery.

(5) The reburial of Cultural Resources and Isolates shall take place in as private of a manner as possible.

(6) It is the policy of the Colorado River Indian Tribes to seek reimbursement of reburial fees, including time and expenses, from the parties responsible for disturbing the lands upon which Cultural Resources or Isolates are discovered.

(7) In the event there are changes to this policy, the proposed changes shall be reviewed and approved by the Mohave Elders Committee and the Tribal Council of the Colorado River Indian Tribes.