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In Reply Refer To:
FWS/CDFG-IMP-11B0326-11F0519

Cedric Perry, Project Manager
El Centro Field Office
Bureau of Land Management
22835 Calle San Juan De Los Lagos
Moreno Valley, California 92553

Subject: Comments on the Draft Environmental Impact Statement/Environmental Impact Review (EIS/EIR) for the Ocotillo Express Wind Energy Facility, Imperial County, California (CACA 51552), State Clearinghouse No. 2010121055

Dear Mr. Perry:

The U.S. Fish and Wildlife Service (Service) and California Department of Fish and Game (Department), hereafter collectively referred to as the Wildlife Agencies, have reviewed the Draft Environmental Impact Statement/Environmental Impact Report (DEIS/EIR), dated June 2011, for the proposed Ocotillo Express Wind Energy Facility. The proposed project is located at the western border of Imperial County, California, near the town of Ocotillo. The Bureau of Land Management (BLM) proposes to issue a right-of-way (ROW) grant authorizing the construction, operation, and maintenance of the proposed 465 megawatt (MW) project.

The primary concern and mandate of the Service is the protection of public fish and wildlife resources and their habitats. The Service has legal responsibility for the welfare of migratory birds, anadromous fish, and endangered animals and plants occurring in the United States. The Service is also responsible for administering the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*). The Department is a trustee agency under the California Environmental Quality Act (CEQA) and is responsible for ensuring appropriate conservation of fish and wildlife resources including rare, threatened, and endangered plant and animal species, pursuant to the California Endangered Species Act. The Department also acts as a Responsible Agency regarding any discretionary actions (CEQA Guidelines Section 15381), such as the issuance of a Lake or Streambed Alteration Agreement (Fish and Game Code Sections 1600 *et seq.*) and/or a Permit for Incidental Take of Endangered, Threatened, and/or Candidate species (Fish and Game Code Sections 2080 and 2080.1).

Based on our review of the DEIS/EIR, we offer comments on five categories of concern: 1) impacts to the federally endangered Peninsular bighorn sheep (*Ovis canadensis nelsoni*); 2) impacts to streambeds, federally and State-protected waters, and associated sensitive vegetation

communities; 3) potential project impacts to Flat tailed horned lizard (*Phryosoma mcallii*) and other sensitive species; 4) potential project impacts on Golden Eagle (*Aquila chrysaetos*) and migratory birds; and 5) general comments on proposed project actions and potential impacts. Our specific comments, concerns, and recommendations are identified in the attached table.

Based on conversations as part of consultation under Section 7 of the Endangered Species Act (16 U.S.C. 1531 *et seq.*), permit issuance in accordance with the Clean Water Act 404 (33 U.S.C. 1344), and planning compensation efforts, the Wildlife Agencies are aware that the applicant has committed to resolve many of the issues described in our comments. However, we wish to ensure that the resolution of these issues is clearly incorporated into the final EIS/EIR.

Thank you for the opportunity to comment on the proposed project. For further information or questions, please contact Nisa Marks (Service) of the Palm Springs Fish and Wildlife Office at 760-322-2070 x208 or Magdalena Rodriguez (Department) of the Inland Deserts Region at 909-945-3294.

Sincerely,

Kennon A. Corey
Assistant Field Supervisor
U.S. Fish and Wildlife Service

for David Elms
Environmental Program Manager
California Department of Fish and Game

Enclosure

cc:
State Clearing House (via fax)
Angelina Havens, Imperial County Planning Department

Standard Review Form
Draft EIS/EIR, Ocotillo Wind Energy Facility

Reviewer's Name: Nisa Marks
Magdalena Rodriguez

Reviewer's Organization: U.S. Fish and Wildlife Service, Region 8
CA Department of Fish and Game, Region 6

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Primary Disciplinary Area (e.g., ecology, land use planning, regulatory oversight): Biology, endangered species, regulatory oversight (ESA, Bald and Golden Eagle Act, Migratory Bird Treaty Act)

Section or Chapter Number and Date of Reviewed Document: July 2011 Public Draft

EIS Section	Page/Line	Comment/Suggested Revision	Action *(for use by ANL)*
2.1.3.1	2-8	Importing material to the project site for road construction may introduce invasive/nonnative plant species to the area. The weed management plan should address where imported soil materials would come from and how imported materials would be screened to minimize the presence of weed seeds. Imported soil borrow should be obtained only from authorized and permitted sites. Should aggregate and/or geosynthetic material be used to reinforce soils, adequate plans need to be in place to account for their removal during road decommissioning. Further, a plan should be in place to minimize potential dispersion of such artificial material in the event of a flood event while the material is exposed (i.e. not paved). The plan should also describe how materials would be gathered if dispersion occurs.	
2.1.3.1	2-8	Please provide additional information on how disturbed areas outside the width of the final roadway would be stabilized. Planting native vegetation would both aid in soil stabilization and jumpstart restoration of project impacted areas.	
2.1.3.1	1-8	Please provide additional information on how topsoil from crane pad excavation would be stored between the time of construction and restoration. Soil storage should follow best management practices to minimize erosion, dust, and soil sterilization (the loss of viability of any native seeds in the soil bank).	

2.1.3.1	2-8	The draft EIS is inconsistent in its treatment of project site fencing. Section 4.21.3.1, Direct and Indirect Impacts to Wildlife Resources of Alternative 1, makes no mention of any fencing being used during construction and explicitly states that the OWEF site would not be fenced during facility operation and maintenance. However, the project description portion of the EIS, Section 2.1.3.1, describes a permanent fence being installed around the substation/utility switchyard, the O&M building, and meteorological towers. Further, it mentions the possibility of temporary security fencing and/or protective fencing around construction areas. The design of any permanent or temporary security fences installed should be decided in coordination with the Wildlife Agencies to ensure the type and height of fencing installed does not harm Peninsular bighorn sheep. Wire fences or even a single strand of wire may kill or harm bighorn sheep. Bighorn rams may easily become entangled, when wire becomes trapped within the curl of their horns. If this happens, the animals frequently panic, fight the strange object, and eventually strangle themselves. Additionally, bighorn sheep have been killed while attempting to crawl under wire fences. Bighorns have crawled through amazingly small gaps along the bottom of wire fences constructed in the Rancho Mirage area of the Coachella Valley of California. Following correct fence specifications should minimize the chances that accidents or entrapments would occur.	
2.1.3.1	2-9	Please clarify the methods that would be used to delineate work areas, including protective fencing. If fencing is used instead of stakes to delineate disturbance boundaries during construction, fencing should be designed in coordination with the Wildlife Agencies to ensure it does not pose a mortality threat to Peninsular bighorn sheep or FTHL. For any protective fencing installed, monitoring to ensure that the fence remains intact and disturbance does not occur outside the fence should be included in the responsibilities of the Biological Monitor(s). Further, monitoring of fenced boundaries to determine impacts on FTHL (e.g. increased predation) should be included as a responsibility of the Biological Monitor(s) in 4.21.10 Mitigation Measure Wild-1d (for construction) and Wild-1u (for ground-disturbing O&M activities).	
2.1.3.1	2-9	Refer to comment above on 2.1.3.1, 2-9. In addition, the extent of invasive/nonnative plant presence at gravel pit sites should be evaluated by a qualified biologist and taken into consideration when selecting a source for gravel fill materials. Gravel should be washed or otherwise controlled for invasive species presence.	

2.1.3.1	2-9	To avoid and minimize impacts to listed and sensitive species, all water associated with the concrete batch plant should be in enclosed containers to prevent the accumulation of free standing water that may attract wildlife, including predator populations, Peninsular bighorn sheep, or protected migratory bird species, that then face increased risk of mortality from project infrastructure or activities.	
2.1.3.1	2-10	All construction-related waste should be kept in closed containers and disposed of properly. Workers should be informed of the importance of containing all trash. Waste could attract predators, whose increased populations can then have a detrimental impact on sensitive species in the area.	
2.1.3.2	2-14	The Wildlife Agencies recommend burying the entirety of the transmission line, including the line connecting the utility switchyard to the new 500-kV transmission line. Alternatively, if burying of lines is not feasible, the Wildlife Agencies recommend the use of tubular (monopole) towers to reduce the ability of migratory birds and raptors, including golden eagles, to perch and/or nest on tower structures.	
2.1.3.2	2-15	Minimizing disturbance areas and preserving the root zones of existing vegetation are critical construction best management practices to minimize construction impacts and facilitate restoration. However, these actions would occur during the construction phase, not after. Consequently, they should not be the "core feature" of the stabilization and restoration plan. Instead, this plan should include actions that can be completed after construction to return the site to ecological function.	
2.1.3.3	2-15	The statement that all internal access roads built and used during construction would be maintained throughout commercial operations is inconsistent with the statement in 2.1.3.2.11 that all soils disturbed by temporary access roads would be reclaimed. Temporary roads are referred to throughout the EIS, and should be defined. This section should make clear which roads are temporary and which will be maintained and used throughout the project's lifespan.	
2.1.3.4	2-16	The decommissioning of the Operations and Maintenance (O&M) Facility is included in the bullet list enumerating what would be in the decommissioning plan. Consequently, the sentence that starts "Reclamation includes bonding for the life of the project …" should be modified to include the O&M facility.	
2.1.3.4	2-16	The mobilization of cranes to each wind turbine site during restoration would result in additional impacts comparable to those associated with crane use during construction. These impacts should be quantified and addressed in the EIS.	
2.1.3.4	2-16	Impacts to the vegetation community from the presence of an excavator during	

		decommissioning should be addressed. Issues relating to soil compaction from the use of heavy equipment should also be addressed.	
2.1.3.5	2-19	See comment above for 2.1.3.1, 2-10. The project's Waste Management Plan should address refuse other than construction materials in addition to construction waste.	
2.1.3.5	2-19	Please clarify what is meant by the second bulleted Resource Conservation Measure. Please clarify what surveys would be conducted. Appropriate protocols for wildlife and vegetation resources should be determined in coordination with the Wildlife Agencies.	
2.1.3.5	2-19	The Restoration Plan should reflect the lengthy recovery time of desert ecosystems. Because recovery of vegetation in the desert can take decades or longer, we consider all ground-disturbing impacts associated with the proposed project to be permanent. Vasek *et al.* (1975) found that in the Mojave Desert transmission line construction and O&M activities resulted in a permanently de-vegetated maintenance road, enhanced vegetation along the road edge and between tower sites (often dominated by non-native species), and reduced vegetation cover under the towers, which recovered significantly but not completely in about 33 years. Webb (2002) determined that absent active restoration following extensive disturbance and compaction in the Mojave Desert, soils in this environment could take between 92 and 124 years to recover. Other studies have shown that recovery of plant cover and biomass in the Mojave Desert could require 50 to 300 years in the absence of restoration efforts (Lovich and Bainbridge 1999). Based on a quantitative review of studies evaluating post-disturbance plant recovery and success in the Mojave and Sonoran deserts, Abella (2010) found that reestablishment of perennial shrub cover (to amounts found on undisturbed areas) generally occurs within 100 years but no fewer than 40 years in some situations. He also found that a number of variables likely affect vegetation recovery times, including but not limited, to climate (e.g., precipitation and temperatures), invasion by non-native plant species, and the magnitude and extent of ongoing disturbance. The Restoration Plan should clearly define the difference between temporary and permanent impacts, and clarify how each would be treated during restoration. Permanent impacts should be restored or reclaimed during decommissioning. Literature cited: Abella, S.R. 2010. Disturbance and Plant Succession in the Mojave and Sonoran Deserts of the American Southwest. *International Journal of Environmental Research and Public Health* 7:1248-1284.	

		Lovich J.E. and D. Bainbridge. 1999. Anthropogenic Degradation of the Southern California Desert Ecosystem and Prospects for Natural Recovery and Restoration. *Environmental Management* 24(3):309-326. Vasek, F. C., H. B. Johnson, and D. H. Eslinger. 1975. Effects of pipeline construction on creosote bush scrub vegetation of the Mojave Desert. *Madroño* 23:1-13. Webb, R.H. 2002. Recovery of severely compacted soils in the Mojave Desert, California, USA. *Arid Land Research and Management* 16: 291-305.	
2.1.3.5	2-19	Whenever possible, the top 10 inches of topsoil should be stockpiled in windrows at the tops of excavation slopes and at the toes of embankment slopes of associated roads. After being placed in windrows, the soil should not be moved again until moved to its final location during restoration. This will allow some plants to regrow, as well as maximize the conservation of soil microflora that aides plant establishment and growth. Soil should be stored for the minimum time possible, to minimize heat kill and associated problems of stockpiling.	
2.1.3.5	2-20	Noxious weeds and invasive species can be transported to the project site due to construction vehicles used off-site, in imported gravel or soil, or other vectors. The first sentence of the bullet point beginning "Develop a plan for control of noxious weeds and invasive species" should be revised to reflect this. A revised sentence could read "Develop a plan for control of noxious weeks and invasive species, which could occur as a result of new surface disturbance activities at the site, the presence of construction vehicles from off-site, the importation of gravel, soil, or other substrate, or from other construction-related activities."	
2.1.3.5	2-20	All trucks and construction equipment should be inspected for the presence of seeds of invasive weeds, not just those arriving from locations with known invasive vegetation problems. Vehicles are one of the primary vectors for the transit of invasive species. Given that invasive species are one of the most significant forms of habitat modification today, controlling their spread is a critical conservation concern. The Weed Management Plan should also describe how seeds collected off construction vehicles or trucks would be disposed. Cleaning should be conducted in such a way that seeds do not migrate into water supply or soil.	
3.23.1.1	3.23-11	The Service disagrees that the current distribution of FTHL within the study area is from Shell Canyon Road to the east. No protocol exists to determine unoccupied habitat. Further, given the low detectability of FTHL, especially in areas of gravel substrate, it is not	

		reasonable to assume areas of suitable habitat that are adjacent to occupied habitat are not occupied. We consider the FTHL distribution described in the Rangewide Management Plan and illustrated in Figure 2 of that Plan to be the best available description of current FTHL distribution.	
3.23.1.1	3.23-22	The Department disagrees with the statement that the site is unoccupied. Based on the applicant's surveys PBS have not been documented within the project site footprint. However, absence of sheep sign does not equate to the site being unoccupied. As stated in the third paragraph current collared sheep data for the area represent less than 10% of the population and data of PBS use in the area is continuing to evolve.	
4.2.10	4.2-21	Please ensure that impacts, such as soil compaction and disturbance, to areas other than access roads or graded areas that would be accessed by water tenders or other heavy equipment, are identified and analyzed.	
4.14.10	4.14-17	As a best management practice for soil, in the sentence "Disturbed soils should be reclaimed as quickly as possible or protective covers should be applied," "or" should be replaced by "and".	
4.17.3.1	4.17-7	The Department requests the FEIS/FEIR include the details of the mitigation measures (acreage of mitigation proposed, how/where that mitigation will be accomplished, etc.) to offset the permanent and temporary impacts to jurisdictional waters and riparian vegetation. Simply referring to obtaining a streambed agreement or submitting a future jurisdictional mitigation plan to the Department is not sufficient.	
4.17.10	4.17-24, Veg-1a	Flagging or staking should be used to delineate areas of vehicular use. Doing so will further minimize unnecessary impacts to vegetation and soil communities.	
4.17.10	4.17-24, Veg-1a	See comment above for 2.1.3.1, 2-9.	
4.17.10	4.17-24, Veg-1a	While drive and crush is preferable, implementing only vegetation clearing, and not grubbing or grading, is an additional, intermediate possibility to minimize construction impacts and promote vegetation recovery. This alternative method should be added to Mitigation Measure Veg-1a.	
4.17.10	4.17-25, Veg-1b	In addition to compliance inspections during on-going construction, the Designated Biologist should be responsible for conducting compliance inspections *during* clearing, grubbing, and grading. Doing so will ensure the containment of disturbance within delineated boundaries. This responsibility should be added to Mitigation Measure Veg-1b.	
4.17.10	4.17-25,	Mitigation Measure Veg-1c should be revised to ensure any container stock plants or native	

	Veg-1c	seed used during revegetation originates from sites as close as possible to the project site in geographic distance or ecological similarity. Doing so will help preserve the genetic integrity of area populations and facilitate maximum survivorship of plants used for revegetation.	
4.17.10	4.17-25, Veg-2a	Given the time period required for restoration in the desert and its tenuous success, species of concern, such as Peninsular bighorn sheep, experience a temporal net loss of habitat for decades during the time between construction and post-decommissioning restoration. While the applicant would implement restoration activities (e.g., decompacting soils, seeding, and non-native species control) following decommissioning, current habitat would be permanently lost or ecologically unsuitable for decades to come. When and if successful restoration of these areas would render the habitat suitable for Peninsular bighorn sheep or other species of concern cannot be determined at this time. Consequently, the Agencies disagree that restoration alone is likely to be appropriate to offset permanent adverse effects to suitable habitat for these species. Mitigation Measure Veg-2a should be revised to reflect a mitigation strategy that includes acquisition of lands supporting suitable, undisturbed habitat coupled with targeted restoration efforts to adequately offset adverse impacts to listed and other wildlife and plant species.	
4.17.10	4.17-25, Veg-2b	Mitigation Measure Veg-2b should be revised to include soil decompaction as part of restoration. Doing so will also make this sentence compatible with the sentence on page 4.17-26 that lists typical restoration measures for desert environments.	
4.17.10	4.17-26, Veg-2b	Delete "generally" from the sentence beginning "Restoration measures in desert environments…" in Mitigation Measure Veg-2b to make this sentence compatible with the third sentence of the same mitigation measure.	
4.21.2	4.21-1	The 2003 FTHL Rangewide Management Strategy "provide[s] guidance for the conservation and management of sufficient habitat to maintain extant populations of FTHLs in each of five Management Areas in perpetuity." The BLM is a signatory to the Conservation Agreement for implementation of the Rangewide Management Strategy. As such, the Wildlife Agencies consider the Rangewide Management Strategy an "approved local, regional, or state habitat conservation plan" under Indicator Wild-4. Therefore, compliance with the FTHL Rangewide Management Strategy should be addressed in the analysis of project impacts.	
4.21.3.1	4.21-2	Figure 4.21-2 should be revised to illustrate a 2 mile buffer around each FTHL sighting in order to determine the extent of FTHL occupied habitat and if impacts to FTHL have been	

		adequately determined. In accordance with the FTHL Rangewide Management Strategy, all contiguous habitat within two miles of a FTHL sighting is considered occupied by FTHL.	
4.21.3.1	4.21-5	The applicant should note that they will need to prepare a burrowing owl mitigation and monitoring plan that specifies how they will mitigate any direct impacts to burrows on site (e.g. 2:1 artificial burrow replacement, onsite monitoring) and that the plan will be approved by the Wildlife Agencies prior to ground disturbance.	
4.21.3.1	4.21-6	The Wildlife Agencies disagree with the statement that "The temporary impacts to approximately 483.1 acres of vegetation would be considered a short-term impact because those areas would be revegetated following construction." Given the time period required for restoration in the desert and its tenuous success, there will be an unknown amount of temporal change of foraging habitat quality for the Golden Eagle. The project proponent did not identify the possible direct effect of an eagle being killed by a turbine during operation. There are 2 active eagle territories near the project site and site surveys detected 22 eagles within the project area. The Department is pleased that Mitigation Measure Wild-1o is being developed to minimize and mitigate potential impacts to the eagle; however the Merlin Avian Radar System is a new and experimental technology. Therefore, eagle mortality may still occur and as stated previously in section 3.23 the eagle is a state fully protected species (Fish and Game Code 3511) and no take is permitted.	
4.21.3.1	4.21-7	The possible positive effect of night lighting during construction on bat populations may be negated if bats are at higher densities in the area when the turbines begin operation because of having been attracted to the temporary pulse in prey density.	
4.21.3.1	4.21-8	Loss of essential habitat should be added as a direct effect of the proposed action on Peninsular bighorn sheep.	
4.21.3.1	4.21-10	The list of existing human presence under bullet (4), intermountain movement, should be revised to include use of the area by immigrants and drug traffickers.	
4.21.3.1	4.21-10	The Wildlife Agencies disagree with the statement that "The Proposed Action would not result in additional habitat fragmentation of suitable PBS habitat because the proposed OWEF site is not currently occupied." Fragmentation and occupancy are distinct ecological concepts. Currently unoccupied habitat does not equate to unsuitable habitat. For species such as Peninsular bighorn sheep that demonstrate metapopulation dynamics, suitable but unoccupied habitats are necessary for maintaining population and genetic connectivity. Population persistence requires a balance between local colonization and extirpation events	

		across the landscape. All patches of habitat have a non-zero probability of extinction, meaning that over time suitable habitat will fluctuate between occupied and unoccupied. Therefore, conservation of currently unoccupied but suitable habitat is essential for species persistence. The elimination of all unoccupied patches of suitable habitat will likely lead to regional extinction. Occupancy is thus the result of probabilistic occurrence of individuals across the landscape due to both population dynamics and availability of suitable habitat. Fragmentation, on the other hand, describes changes in the quality and distribution of a species habitat across the landscape. Fragmentation refers to discontinuity in the spatial distribution of a species' habitat, in an area or at a given scale that affects the occupancy, reproduction, or survival of the focal species. Fragmentation can occur when previously continuous areas that support resources needed by a given species become divided into discrete, separated areas, each one of which may or may not continue to be suitable for species occupancy. Fragmentation can occur at a variety of scales, from a range-wide scale (when the entire range of a species is divided into two or more subranges, or when populations are separated from one another), a population scale (when movement of individuals within a population is impeded), or within one individual's home range (when the area used by one individual is fractured). Fragmentation often, though not always, occurs simultaneously with habitat loss. Sheep sign was documented throughout the proposed project site; consequently, any habitat loss resulting from the proposed action could fragment Peninsular bighorn sheep populations, if the loss severs connectivity between suitable and occupied areas.	
4.21.3.1	4.21-12	O&M activities that may cause impacts to burrowing owls should be included in the burrowing owl mitigation and monitoring plan.	
4.21.3.1	4.21-19	Please clarify what O&M actions are referred to as possibly resulting in disturbance beyond the approved permanent footprint. To accurately assess the impact of all O&M activities, it is necessary to include a description of the existing habitat conditions, where all O&M activities would occur, how frequently they would occur, how wide the disturbance areas would be, what equipment would be used, and the timing of these activities. Any action should be within the proposed BLM ROW.	
4.21.3.1	4.21-19	As collision with construction equipment is listed as a possible direct impact to Peninsular bighorn sheep during O&M, please clarify under what circumstances construction equipment would be used during O&M. In addition, note that the Peninsular bighorn sheep is a state	

		fully protected species (Fish and Game Code 4700) and no take is permitted. Implementation of measure Wild-1gg should prevent any direct take of sheep due to collision with vehicles or equipment.	
4.21.3.1	4.21-19	This section states that the OWEF site would not be fenced. Please reconcile this with statements in 2.1.3.1 that at least the O&M facility, utility switchyard/substation, and meteorological towers will be permanently fenced, and other areas possibly temporarily fenced for security. Any fencing that is constructed should be designed in coordination with the Wildlife Agencies to ensure impacts to Peninsular bighorn sheep are minimized. Please see comments on 2.1.3.1 that pertain to fencing.	
4.21.3.1	4.21-19	It is premature to conclude that lack of fencing is the only prerequisite for maintaining foraging areas. The site may or may not continue to serve as foraging area, depending on levels of disturbance, extent of project footprint impacts, what vegetation is undisturbed, rates of recovery of disturbed vegetation, and other factors.	
4.21.3.1	4.21-20	Please see comments above on 4.21.3.1, page 4.21-10, on habitat fragmentation.	
4.21.3.1	4.21-21	The discussion of Peninsular bighorn sheep habitat fragmentation addresses only impacts associated with human activity levels. As previously stated, fragmentation could also result from habitat loss. As some habitat loss would occur, it is inappropriate to conclude that no additional habitat fragmentation for this species would occur due to the proposed action.	
4.21.3.2	4.21-25	The proposed action would also have a significant impact to Peninsular bighorn sheep through loss of habitat. Habitat loss could occur in several ways: in areas defined as undergoing permanent impacts; in "temporary" impact areas in which revegetation and restoration are incomplete, and therefore still unsuitable; and if areas of otherwise suitable habitat are unused due to project-related impacts on sheep behavior.	
4.21.10	4.21-42	Please clarify how the number of Biological Monitors will be determined.	
4.21.10	4.21-43, Wild-1d	Please provide additional information on soil storage procedures. Best management practices would include minimization of the amount of time soil is stored, to ensure maximum retention of seed viability and soil properties. Please elaborate on how disturbance from stockpiling would be minimized.	
4.21.10	4.21-43, Wild-1f	In the first sentence of Wild-1f, ground-disturbing activities other than grading should also be included.	
4.21.10	4.21-43, Wild-1f	The active season of FTHL should be defined as March 15 – November 15, not March 1 – September 30. Few FTHL are typically observed above ground prior to March 15. Adult FTHL are often observed later than September 30, although interannual variation exists	

		depending on environmental conditions. Most adults are dormant by November 15.	
4.21.10	4.21-44, Wild-1f	A Designated Biologist or Biological Monitor should be present during any grading that occurs outside of the FTHL active period, as well as during the removal of FTHL from harm's way, in order to ensure no FTHL mortality results. A sentence to this effect should be added to Wild-1f.	
4.21.10	4.21-44, Wild-1g	Under the supervision of a qualified Designated Biologist or Biological Monitor, FTHL found on access or maintenance roads should also be removed to areas outside the project boundary where suitable burrowing habitat exists. A sentence to this effect should be added to Wild-1g.	
4.21.10	4.21-44, Wild-1i	Several other methods for minimizing night lighting should be employed on site. For instance, use of night lighting should be restricted to periods when necessary for worker safety. If used for security, night lighting should be motion or heat activated. Instituting such practices would minimize electricity use and lighting impacts on surrounding natural areas and wildlife.	
4.21.10	4.21-44, Wild-1g	The applicant should consider installing exclusionary fencing for flat-tailed horned lizard (FTHL) near the most heavily trafficked roads during construction.	
4.21.10	4.21-45, Wild-1k	If any barefoot banded geckos are found on-site during construction, project activities must be halted until a 2081 permit for incidental take can be obtained from the California Department of Fish and Game.	
4.21.10	4.21-45, Wild-1q	See comments above for 4.17.10, 4.17-10.	
4.21.10	4.21-46, Wild-1r	The threats to Peninsular bighorn sheep vary throughout its range. Northern populations in the Coachella Valley, for instance, face greater threats from urban development than do their southern counterparts. Consequently, compensation for project impacts would best occur if lands within Essential Habitat acquired or restored for mitigation are located as close as possible to the project site. Proximate location would ensure that mitigation benefits the I-8 Island/Carrizo Canyon/Coyote Mountains sheep populations, which would likely be affected by the proposed action.	
4.21.10	4.21-46, Wild-1r	All lands acquired or restored as compensation for project impacts to Peninsular bighorn sheep should support suitable bighorn sheep habitat. Most lands within the USFWS Essential Habitat boundaries are likely to be suitable habitat. If lands proposed for acquisition or restoration are outside Essential Habitat, a qualified Peninsular bighorn sheep biologist should first verify that such lands constitute suitable habitat.	

4.21.10	4.21-46, Wild-1t	The Wildlife Agencies recommends that multiple methods be employed by the Bighorn Sheep Monitor to detect Peninsular bighorn sheep individuals or recent sign. Methods can include regular site walks, use of binoculars, the observation tower, and cautious use of radar data, among others.	
4.21.10	4.21-46, Wild-1t	Please clarify what type of construction activities would be unlikely to adversely affect or disrupt normal Peninsular bighorn sheep behavior and therefore could occur within 1,000 feet of an individual. Also include what criteria the Bighorn Sheep Monitor would use to evaluate likelihood of behavioral disruption to sheep because of the construction activity.	
4.21.10	4.21-47, Wild-2b	In the first sentence of Wild-2b, construction activities other than clearing should also be included.	
4.21.10	4.21-47, Wild-1u	Whenever feasible, all ground-disturbing activities should occur *during* the FTHL active period, when the probability of detection is higher. The third bullet point of Wild-1u should thus be modified in two ways. First, "outside" should be replaced with "during". Second, the FTHL active period should be explicitly defined as March 15 – November 15. These changes would also reconcile Wild-1u (activities during O&M) and Wild-1f (activities during construction). See also the comment for Wild-1f.	
4.21.10	4.21-47, Wild-1u	See comment above for 4.21.3.1, 4.21-19.	
4.21.10	4.21-49, Wild-1gg	See comment above for 4.21.10, 4.21-46.	
4.21.10	4.21-49, Wild-1gg	If Peninsular bighorn sheep were detected during the night on the vision video system, the Bighorn Sheep Monitor should be responsible for verifying sheep are no longer present on site in the morning before any O&M actions proceed. Please add a sentence to Wild-1gg reflecting this responsibility.	