UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

MAR 09 2015

Lee Kirk
RMP Team Lead
BLM Southern Nevada District Office
4701 N. Torrey Pines Drive
Las Vegas, NV 89130

Subject: Las Vegas and Pahrump Field Offices Draft Resource Management Plan/Environmental Impact Statement, Nevada (CEQ# 20140300)

Dear Mr. Kirk:

The U.S. Environmental Protection Agency has reviewed the Draft Resource Management Plan/Environmental Impact Statement for the Las Vegas and Pahrump Field Offices pursuant to the National Environmental Policy Act, Council on Environmental Quality regulations (40 CFR Parts 1500-1508), and Section 309 of the Clean Air Act.

The Las Vegas and Pahrump Field Offices Draft RMP/EIS will establish resource goals, objectives, and management actions to achieve desired future conditions for 3.1 million acres of public lands and mineral estates managed by the Bureau of Land Management. The EPA supports the development of a comprehensive RMP to guide future management actions and commends the BLM for developing a broad range of alternatives for managing the planning area. The Draft RMP/EIS describes and analyzes four alternatives, with Alternative 3 designated as the preferred alternative.

Based on our review of the Draft RMP/EIS, we have rated the preferred alternative and the document as EC-2, Environmental Concerns – Insufficient Information (see enclosed EPA Rating Definitions). The Draft RMP/EIS identifies solar energy zones, solar avoidance (variance) areas, and solar exclusion areas that were established by the 2012 Solar Programmatic EIS and proposes changes to these areas – including new solar energy zones under Alternatives 3 and 4. While we support BLM in identifying those areas most appropriate for renewable energy development, we find that the Draft RMP/EIS lacks detailed information about the newly proposed SEZs and how they were selected. Moreover, we are concerned that Alternative 3 may not provide sufficient protection for various resources. In particular, the decision to open large areas of public land to fluid mineral leasing and, potentially, hydraulic fracturing could result in unprecedented development in areas with fragile ecosystems. Land disposal actions in over-appropriated basins, such as the Amargosa Valley, may result in adverse impacts to aquatic species and habitat nearby. Finally, the Draft RMP/EIS does not address potential air quality impacts associated with the various alternatives, deferring, instead, to the analyses presented in the 1998 RMP.

We recommend that the Final RMP/EIS provide additional information on the proposed SEZs and ensure that acreage estimates for exclusions areas, variance areas, and SEZs are consistent throughout the document. We also recommend that BLM consider changes to the preferred alternative to ensure

greater protection for sensitive resources. Our recommendations include the retention of restrictions on fluid mineral leasing and limitations on land disposals in order to protect groundwater resources, sensitive aquatic species and habitat. Additionally, we recommend that the BLM include an updated air quality analysis within the Final RMP/EIS. Our detailed comments are enclosed.

We appreciate the opportunity to review this Draft RMP/EIS, and are available to discuss our comments. When the Final RMP/EIS is released for public review, please send one hard copy and one CD-ROM to the address above (Mail Code: CED-2). If you have any questions, please contact me at 415-972-3521, or contact Ann McPherson, the lead reviewer for this project. Ann can be reached at 415-972-3545 or mcpherson.ann@epa.gov.

Sincerely,

Kathleen Martyn Goforth, Manager
Environmental Review Section

Enclosures: Summary of the EPA Rating System
EPA's Detailed Comments

SUMMARY OF EPA RATING DEFINITIONS*

This rating system was developed as a means to summarize the U.S. Environmental Protection Agency's (EPA) level of concern with a proposed action. The ratings are a combination of alphabetical categories for evaluation of the environmental impacts of the proposal and numerical categories for evaluation of the adequacy of the Environmental Impact Statement (EIS).

ENVIRONMENTAL IMPACT OF THE ACTION

"LO" (Lack of Objections)

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

"EC" (Environmental Concerns)

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

"EO" (Environmental Objections)

The EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

"EU" (Environmentally Unsatisfactory)

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potentially unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

ADEQUACY OF THE IMPACT STATEMENT

"Category 1" (Adequate)

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

"Category 2" (Insufficient Information)

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analysed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

"Category 3" (Inadequate)

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analysed in the draft EIS, which should be analysed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

*From EPA Manual 1640, Policy and Procedures for the Review of Federal Actions Impacting the Environment.

U.S. EPA DETAILED COMMENTS ON THE LAS VEGAS AND PAHRUMP FIELD OFFICES DRAFT RESOURCE MANAGEMENT PLAN AND ENVIRONMENTAL IMPACT STATEMENT, NEVADA, MARCH 9, 2015

New Proposed Solar Energy Zones

The Las Vegas and Pahrump Field Offices Draft Resource Management Plan/Environmental Impact Statement identifies nine areas for solar energy development (solar energy zones), including two areas (Dry Lake and Amargosa Valley) that were previously designated as SEZs in the 2012 Solar Programmatic EIS Record of Decision. Alternatives 1 and 2 incorporate these two SEZs, which encompass approximately 14,000 acres. Alternative 3 (preferred alternative) identifies eight areas (including the two previously designated SEZs), encompassing 39,113 acres; Alternative 4 identifies six areas (including the two previously identified SEZs), encompassing 168, 255 acres (pg. 173). Detailed information about the newly proposed SEZs, including how the areas were selected, is not presented in Draft RMP/EIS.

The Bureau of Land Management's Solar Energy Program designated a protocol for identifying new or expanded Solar Energy Zones. It is unclear whether the newly proposed areas for solar energy development were identified in accordance with that protocol and would be designated as SEZs, or are simply areas where BLM would prefer to steer future solar energy development within the planning area. Within the Solar PEIS, the BLM conducted a detailed environmental review of each of the SEZs designated in that document so that future projects located within the SEZs could tier to those analyses. The Draft RMP/EIS does not present any similar type of environmental review for the newly proposed SEZs. Without further detailed analyses, subsequent projects proposed in the new SEZs will not be able to tier as effectively as those projects proposed in SEZs evaluated in the Solar PEIS.

Recommendations:
Clarify whether the seven new solar energy development areas are, in fact, proposed SEZs. Discuss how these areas were selected and whether the selection process was in accordance with BLM's designated protocol for identifying new or expanded SEZs. Discuss which suitability and screening criteria were used to identify these locations.

Describe the process that will be used to present more detailed information on each of the SEZs identified in the Draft RMP/EIS. Discuss when such analyses can be expected.

Estimates for Acreages Associated with Exclusion Areas, Variance Lands, and SEZs

According to the Draft RMP/EIS, 2,129,838 acres are currently excluded from solar development within the planning area, while an additional 967,148 acres are subject to the variance process and 14,128 acres are included in two SEZs (pg. 172). For each alternative, the DEIS specifies changes to the acreage that would be included in each category. For example, the preferred alternative would increase the amount of acreage excluded from solar development to 2,654,966 acres, decrease the acreage subject to the variance process to 417,010 acres, and increase the acreage for solar development to 39,113 acres. We support the BLM in identifying the areas that are best suited for solar development. We note, however, that the numbers used to quantify the acreages, across all alternatives, are not consistent within the Draft RMP/EIS. For example, the numbers in Table 2.36 do not agree with numbers on pgs. 279, 472, or 1160-61.

Recommendation:
For each alternative, ensure that the numbers used to quantify acreages for exclusion areas, variance areas, and SEZs are used consistently throughout the Final RMP/EIS.

In some sections of the Draft RMP/EIS, the presentation of data on renewable energy development is confusing. For example, in Section 4.5.3.4.7, the document presents acreages available for solar and wind energy and then discusses how many fewer acres are available for renewable energy between alternatives (pg. 1329). Another more effective way to illustrate this type of information can be seen in Section 4.3.6.6.3.4.3 (pgs. 1205-07).

Recommendation:
Use consistent methods to account for acreages associated with renewable energy development across alternatives.

Estimates for Acreages Associated with Solar Energy Development

The Draft RMP/EIS presents a wide range of estimates for the amount of solar energy development that could occur within the planning area. For example, the discussion of the preferred alternative assumes that 75 percent of the SEZs could be developed, resulting in about 28,787 acres for solar energy development (pg. 472). In the discussion on soil resources, however, the Draft RMP/EIS states that, "Blading of large areas for solar energy facilities is estimated to potentially exceed 982,000 acres over the life of the plan (approximately one-third of the planning area)" (pg. 559). Or, as noted on page 597, "blading is estimated to potentially exceed 966,000 acres." Presumably, these conclusions stem from the amount of variance lands available for solar energy development. Other estimates are also seen in the discussion of vegetation, where the Draft RMP/EIS asserts that more than 270,000 acres could be developed if three large (3,000 acres) solar projects are authorized per year over the 30-year life of the RMP (pg. 630). These estimates appear to be based on ambitious use of the variance lands, as opposed to the SEZs, and on unrealistic development scenarios. The Solar PEIS estimated that 24,000 megawatts of solar energy would be developed on 214,000 acres of BLM-administered lands in six southwestern states in a 20-year period. For Nevada, BLM estimated that 1,701 MWs would be developed on 15,309 acres of BLM-administered lands. The Draft RMP/EIS provides no basis for its projections of substantially larger acreages.

Recommendations:
Revise acreage estimates for impacts associated with renewable energy development to more accurately reflect realistic development scenarios, or explain the basis for the acreages presented.

Ensure that estimates are consistent throughout the document.

Land Disposal in the Amargosa Valley

Water rights have been scrutinized for many years in the Amargosa Valley due to the proximity of environmentally sensitive areas at Devils Hole, Ash Meadows, and Death Valley. According to the Draft RMP/EIS, land disposals in the Amargosa Valley and the source groundwater watershed of Warm Springs and the Muddy River, Moapa, could lead to significant decline in the populations of up to 12 threatened and endangered species, depending on the alternative selected (pg. 594). The Draft RMP/EIS indicates that, under alternative 1, disposal of 27,639 acres in the Amargosa Valley would result in major impacts on water resources, including groundwater withdrawal of approximately 14,000 acre feet per annum, and declining water levels at Devil's Hole below the critical level mandated by the U.S.

District Court. Under alternative 2, no lands would be available for disposal. Under alternative 3, up to 25,863 acres could be disposed of with impacts as described under alternative 1. Nye County requested that BLM consider an option in which only 552 acres (mostly agriculture, some residential) would be disposed of, resulting in an additional groundwater withdrawal of approximately 3,050 afa. According to the Draft RMP/EIS, impacts would probably be minor to moderate under this scenario. Under alternative 4, a maximum of 27,741 acres would be disposed of, resulting in an additional groundwater withdrawal of approximately 10,500 afa. With the exception of alternative 2, all of the alternatives considered in the Draft RMP/EIS include land disposals in the Amargosa Valley that would likely adversely affect water levels at Devils Hole and spring discharges at Ash Meadows National Wildlife Refuge.

Recommendation:
EPA recommends not proceeding with additional land disposals in the Amargosa Valley, Mercury Valley, and the Moapa-Glendale area due to concerns about groundwater withdrawal and potential impacts on highly vulnerable species nearby.

Fluid Leasable Mineral Development

According to the Draft RMP/EIS, approximately 3 million acres of public lands are available for fluid leasable mineral (oil and gas) development (pg. 431). Currently, most of the lands in the planning area have been classified as "no surface occupancy" due to a provision in the 1998 RMP which identifies lands having "special status plant and animal habitat" as NSO. Lands designated as NSO prevent surface location of facilities or equipment, but NSO does not close the mineral resource that underlies the region of protection. Over the life of the RMP, there have been over 100 proposed lease parcels that have not been processed due to the NSO classification. The Draft RMP/EIS proposes to change this provision and allow oil and gas leasing without NSO constraints on up to 1.8 million acres of the planning area (pg. 278). Some portions of the planning area, such as the Muddy Mountains, have similar geologic settings to the oil and gas fields in Eastern Nevada and Utah, and are of interest to developers.

The EPA is concerned about opening vast acreages of public land in the planning area to fluid mineral leasing without NSO constraints. The potential use of conventional and unconventional oil and gas development, including hydraulic fracturing, may cause impacts to air quality, groundwater resources, and riparian ecosystems. Potential impacts on water resources include stress on existing surface water and groundwater supplies, as well as contamination of underground sources of drinking water. Potential air quality impacts include increased emissions of methane, volatile organic compounds, and hazardous air pollutants, which are well-documented in areas with active natural gas development.[1]

The Draft RMP/EIS does not demonstrate that sensitive resources that are currently protected by NSO designations would be sufficiently protected as to retain their ecological value under the preferred alternative. Alternative 3 (preferred alternative) would open 1.28 million acres of land to fluid leasable minerals, including areas in the vicinity of Ash Meadows, Devil's Hole, and Muddy River Springs (pg. 278; Map 2.6.2.3-3). Likewise, alternative 4 would open up 1.8 million acres of land (pg. 278). In contrast, Alternative 2 would open up 311,521 acres and provide greater resource protection because hydrographic groundwater basins within a regional flow system that support or are upstream of habitat for proposed, listed, threatened, or endangered aquatic species would be closed to fluid mineral development (pg. 587).

[1] See http://www2.epa.gov/hydraulicfracturing

Recommendations:
For fluid mineral leasing, consider adopting the option described in alternative 2, under which hydrographic groundwater basins within a regional flow system that support or are upstream of habitat for proposed, listed, threatened, or endangered aquatic species would be closed to fluid mineral development, in order to ensure greater protection for sensitive resources.

Explain how BLM would ensure that the ecological value of existing sensitive resources would not be compromised by fluid mineral development in the vicinity of such resources.

Close areas in the vicinity of Ash Meadows/Devils Hole and the Muddy River Springs to fluid mineral leasing, solid mineral leasing, and saleable mineral leasing to ensure greater protection for sensitive resources.

Update figures 3.2 and 3.3 to show recent changes in crude oil, gasoline and diesel prices and discuss the ramifications of these changes.

It is unclear whether NSO stipulations would also apply to desert tortoise habitat linkages.

Recommendation:
Ensure that desert tortoise habitat linkages are appropriately protected. Consider closing these areas to leasing or designating NSO stipulations in conjunction with fluid mineral leasing.

Air Quality

The Draft RMP/EIS discusses the regulatory framework for air resources management in the planning areas and presents some basic information on local air quality. The PM_{10} classification for the Las Vegas Valley remains as serious nonattainment until the state of Nevada meets the Clean Air Act requirements for re-designation to attainment (pg. 291). Although parts of Clark County were designated as nonattainment for ozone, currently there is no formal ozone nonattainment classification; however, the Clark County Department of Air Quality is preparing a maintenance plan. The Las Vegas Valley is currently designated as serious maintenance area for carbon monoxide (pg. 291). The Draft RMP/EIS concludes, "Air quality resources in the planning area would not be affected as the current analysis, RMP 1998-2018 management conditions, still apply" (pg. 534). No further information on the potential impacts associated with the various alternatives is provided.

Recommendation:
Provide updated estimates for emissions in and outside the Las Vegas Valley, since the 1998 RMP utilizes information from 1993.

The EPA is concerned about the direct, indirect and cumulative impacts of construction and fugitive dust emissions associated with the proposed development of renewable energy facilities. Ground-disturbing activities generate dust and create conditions conducive to wind erosion. Future construction-related emissions of nitrogen oxides, a precursor for ozone and secondary PM formation, and direct PM could exacerbate air quality conditions and contribute to adverse cumulative air quality impacts. Mitigation measures could reduce these construction emissions.

While we recognize that future project level analyses will be conducted, we recommend that the Final RMP/EIS provide more specific information and analysis of potential air quality impacts to ensure all

relevant issues and effects are appropriately considered at this programmatic decision-making stage. The RMP/EIS process presents an ideal opportunity to disclose and analyze the impacts from past resource development, along with the potential impacts of future resource development. Such analysis of cumulative impacts can help to identify areas that are better or less suited to certain types of development, and facilitate tiering of future project-specific NEPA documents to this EIS.

Recommendations:
Describe and estimate air emissions from all proposed covered activities, including potential construction and maintenance activities.

Include a low, medium and high emissions estimate for construction activities and operational activities in each SEZ, to further characterize the potential range of emissions expected.

Summarize the potential air quality impacts associated with each of the alternatives.

EPA supports incorporating mitigation strategies to minimize fugitive dust emissions, as well as emission controls for PM and ozone precursors for construction-related activity.

Recommendations:
Specify, in the Final RMP/EIS, the control strategies and mitigation measures that would be required to reduce air quality impacts from future actions associated with the implementation of the RMP. In addition to meeting all applicable local, state, and federal requirements, we recommend that the Final RMP/EIS include an appendix listing mitigation measures to be considered when designing specific construction projects. We recommend that this list include the following:

Fugitive Dust Source Controls:

- Stabilize heavily used unpaved construction roads with water, non-toxic soil stabilizer or soil weighting agent that will not result in loss of vegetation, or increase other environmental impacts.
- During grading, use water, as necessary, on disturbed areas in construction sites to control visible plumes.
- Vehicle Speed
  - Limit speeds to 25 miles per hour on stabilized unpaved roads as long as such speeds do not create visible dust emissions.
  - Limit speeds to 10 miles per hour or less on unpaved areas within construction sites on un-stabilized (and unpaved) roads.
  - Post visible speed limit signs at construction site entrances.
- Inspect and wash construction equipment vehicle tires, as necessary, so they are free of dirt before entering paved roadways, if applicable.
- Use sandbags or equivalent effective measures to prevent run-off to roadways in construction areas adjacent to paved roadways. Ensure consistency with the project's Storm Water Pollution Prevention Plan, if such a plan is required for the project.
- Stabilize disturbed soils (after active construction activities are completed) with water, a non-toxic soil stabilizer, soil weighting agent, or other approved soil stabilizing method.
- Cover or treat soil storage piles, as well as disturbed areas that remain inactive for longer than 10 days, with appropriate dust suppressant compounds. Provide vehicles (used to transport solid bulk material on public roadways) with covers.

- Use wind erosion control techniques (such as windbreaks, water, chemical dust suppressants, and/or vegetation) where soils are disturbed in construction, access and maintenance routes, and materials stock pile areas. Keep related windbreaks in place until the soil is stabilized or permanently covered with vegetation.

Mobile and Stationary Source Controls:

- If practicable, lease new, clean equipment meeting the most stringent of applicable Federal[2] or State Standards. In general, commit to the best available emissions control technology. Tier 4 engines should be used for project construction equipment to the maximum extent feasible.[3]
- Where Tier 4 engines are not available, use construction diesel engines with a rating of 50 horsepower (hp) or higher that meet, at a minimum, the Tier 3 California Emission Standards for Off-Road Compression-Ignition Engines,[4] unless such engines are not available.
- Where Tier 3 engine is not available for off-road equipment larger than 100 hp, use a Tier 2 engine, or an engine equipped with retrofit controls to reduce exhaust emissions of nitrogen oxides and diesel particulate matter to no more than Tier 2 levels.
- Consider using electric vehicles, natural gas, biodiesel, or other alternative fuels during construction, clean up and maintenance phases to reduce the project's criteria and greenhouse gas emissions.
- Plan construction scheduling to minimize vehicle trips.
- Limit idling of heavy equipment to less than 5 minutes and verify through unscheduled inspections.
- Maintain and tune engines per manufacturer's specifications to perform at California Air Resources Board and/or EPA certification levels; prevent tampering, and conduct unscheduled inspections to ensure these measures are followed.

Administrative controls:

- Develop a construction traffic and parking management plan that maintains traffic flow, and plan construction to minimize vehicle trips.
- Identify any sensitive receptors in the project area, such as children, elderly persons, and the infirm, and specify the means by which impacts to these populations will be minimized (e.g., locate construction equipment and staging zones away from sensitive receptors and building air intakes).
- Include provisions for monitoring fugitive dust in the fugitive dust control plan and initiate increased mitigation measures to abate any visible dust plumes.

Oil and Gas Development

Reasonably Foreseeable Development Scenario

The Draft RMP/EIS does not identify a reasonably foreseeable development scenario for oil and gas development. Instead, the document states that it is difficult to do so since the majority of the planning area has been classified as NSO previously (pg. 434). The Draft RMP/EIS also does not specify whether

---

[2] EPA's website for nonroad mobile sources is http://www.epa.gov/nonroad/.

[3] Diesel engines < 25 hp rated power started phasing in Tier 4 Model Years in 2008. Larger Tier 4 diesel engines will be phased in depending on the rated power (e.g., 25 hp - <75 hp: 2013; 75 hp - < 175 hp: 2012-2013; 175 hp - < 750 hp: 2011 - 2013; and ≥ 750 hp 2011- 2015).

[4] As specified in California Code of Regulations, Title 13, section 2423(b)(1)

hydraulic fracturing would be used, nor does it assess the number of wells that presently, or in the future, would utilize hydraulic fracturing. BLM's Manual H-1624-1, *Planning for Fluid Mineral Resources*, calls for the projection of an RFD scenario for fluid mineral resources.

Recommendations:
Include, in the Final RMP/EIS, an RFD scenario for the number of producing oil wells in the planning area. Consider including a range of numbers that accounts for traditional exploration well development, as well as unconventional development, such as hydraulic fracturing.

Include an assessment of potential direct, indirect, and cumulative impacts on air, water, and other resources associated with oil and gas development, based on the RFD.

Calculate emissions from existing active wells within the planning area, as well as those included in the RFD scenario.

Include a commitment that future project-level NEPA analyses for oil and gas development will contain a specific comprehensive monitoring plan and program to track groundwater quality impacts before (baseline conditions) and after drilling and production operations occur.

In addition, the BLM should require the developer to inventory and conduct water quality monitoring in existing wells adjacent to an oil and gas project area. (The BLM Pinedale Anticline project is an example of a project where such a monitoring program was established.)

Air Quality Memorandum of Understanding

On June 23, 2011, the EPA, U.S. Department of Interior and the U.S. Department of Agriculture signed a *Memorandum of Understanding Regarding Air Quality Analyses and Mitigation for Federal Oil and Gas Decisions through the NEPA Process.* The EPA has begun to use this helpful tool to ensure effective and efficient NEPA air quality evaluations for federal oil and gas decisions. The EPA is committed to working productively with our federal partners on this effort and encourages the use of the procedures included in the MOU.

Recommendations:
Discuss the applicability of the *Air Quality Analyses and Mitigation for Federal Oil and Gas Decisions* MOU in the Final RMP/EIS.

Incorporate into the Final RMP/EIS an Air Resources Management Plan, if appropriate, using standardized approaches developed in the MOU and BLM Wyoming's recently developed Lander Air Resources Management Plan, adapted as necessary as a template. A draft of the plan can be found at:
http://www.blm.gov/pgdata/etc/medialib/blm/wy/programs/planning/rmps/lander/drmp-eis/vol3.Par.70973.File.dat/Vol3-017apdF.pdf

Surface Waters and Wetlands

The Draft RMP/EIS does not include detailed information or maps that illustrate the location of surface waters, major drainages, or ephemeral washes in the planning area.

Recommendations:
Provide illustrations, in the Final RMP/EIS, that accurately portray surface water features in the study area, including perennial streams, major drainages, and large ephemeral washes.

Discuss, in the Final RMP/EIS, protections for ephemeral/intermittent waters under each alternative fully evaluated.

The Draft RMP/EIS does not address the jurisdictional status of wetlands in the planning area, except to note that smaller washes that naturally convey storm flows to the Upper Las Vegas Wash and, ultimately, into Lake Mead may be considered waters of the United States (WUS). Given the size and topography of the planning area, EPA would expect there to be numerous intermittent and ephemeral drainages that qualify as WUS and warrant consideration and protection under the RMP/EIS. Future project planning would be better informed by the identification, in the RMP/EIS, of areas where sensitive resources are most at risk.

Recommendations:
Include a preliminary assessment of wetland jurisdiction in the Final RMP/EIS.
Clarify, in the Final RMP/EIS, how jurisdiction would be determined in future project-specific EISs.

Prepare an inventory of aquatic resources, characteristics, functions and overall ecological health. Having such an inventory would provide greater wetland and riparian area protection in the planning area by providing information that could be used by BLM when authorizing surface disturbance or planning mitigation for unavoidable impacts to wetlands. Because preparation of an inventory may take time, we recommend that the Final RMP/EIS explain how BLM would undertake an aquatic resources inventory.

Consider whether high value wetland or riparian areas warrant protection through an NSO stipulation.

If there is any question as to the jurisdictional status of waters in the planning area, consult with the local U.S. Army Corps of Engineers office.

Wild and Scenic Rivers

According to the Draft RMP/EIS, seven river segments within the planning area have been deemed eligible for Wild and Scenic River designation (pg. 495). Alternative 3 (preferred alternative) calls for only one eligible river segment to be determined suitable for WSR designation. The EPA is concerned that waterway segments warranting protection may lose their wild and scenic characteristics under the preferred alternative.

Recommendation:
Commit, in the Final RMP/EIS and ROD, to continue to manage any river segments found eligible for Wild and Scenic River designation to protect and enhance their natural values.

Biological Resources

Habitat Fragmentation

Surface disturbance and disruptive activities can cause loss of habitat, habitat fragmentation, and wildlife displacement. Sites suitable for solar energy development also provide habitat for desert scrub species, such as the desert tortoise. As noted in the Draft RMP/EIS, projects sited in narrow valleys or in valleys with other developments or other barriers can severely restrict habitat connectivity or reduce corridors for movement for the desert tortoise and other species (pg. 787). This habitat loss/fragmentation can negatively affect genetic viability of special status species. According to the Draft RMP/EIS, the U.S. Fish and Wildlife Service has conducted some initial modeling efforts to identify corridors between areas that currently provide some level of protection for tortoises (e.g. ACEC, National Parks). The FWS will be further refining these models through site specific analysis at a more local scale across the landscape (pg. 346). In addition, the U.S. Geological Survey has conducted long-term monitoring and modeling of desert tortoise populations.

Recommendations:
Obtain, from the U.S. Fish and Wildlife Service, the most recent maps of desert tortoise habitat linkages and high value habitat areas that should be protected by the RMP. Include maps illustrating avoidance/exclusion areas consistent with the recovery network for desert tortoise in the Final RMP/EIS.

Consult with the U.S. Geological Survey to obtain the most recent research on desert tortoise monitoring, including how the species and habitat may be impacted by climate change.

Identify, in the Final RMP/EIS, those areas that comprise habitat linkages for desert tortoise. Exclude such areas from development and close them to surface disturbance to ensure that these linkages remain functional. Ensure that utility corridors would not compromise the capability of an area to function as an important desert tortoise habitat linkage.

Explain, in the Final RMP/EIS, how BLM plans to mitigate for the loss of desert tortoise habitat due to solar energy development.

Ensure that solar development in the proposed Ash Meadows and Lathrop Wells SEZs would not affect sensitive resources in the Ash Meadows National Wildlife Refuge nearby.

Migratory birds are also affected by loss of habitat and reduced habitat functionality due to development projects.

Recommendation:
Coordinate with federal and state wildlife management agencies to identify mitigation measures to compensate for unavoidable losses of habitat and reduced habitat functionality for migratory and special status bird species in conjunction with large-scale development projects.

Avian Mortalities

As noted in the Draft RMP/EIS, migratory birds may mistake large expansive fields of reflective solar panels for water sources and try to land on them, leading to collisions with the panels (pg. 749). The reflection from the panels may also mirror the sky, since non-aquatic species have also been colliding

with the panels. In addition, solar flux from power tower projects can cause singeing, blinding, and death to birds and bats. As the document indicates, limited data are available from mortality monitoring at solar facilities; thus, it is difficult to know the scope of avian mortalities.

> *Recommendation:*
> Work with the U. S. Fish and Wildlife Service to develop a Bird and Bat Conservation strategy that includes a robust monitoring plan to determine whether avian impacts are significant. Use the resulting data to inform appropriate mitigation and minimization strategies. Consider opportunities to further ongoing research for the development of effective deterrent methods and Best Management Plans.

Biological Opinions

Biological Opinions can play an important role in informing the decision about which alternative to approve and what commitments, terms, and conditions must accompany that approval.

> *Recommendations:*
> Coordinate with FWS on the timing of the Final RMP/EIS and future Biological Opinions. The Final RMP/EIS should provide an update on the Endangered Species Act consultation process. We strongly recommend including all updated or new Biological Opinions as an appendix.
>
> Pending completion of future Biological Opinions, discuss with FWS the best approach to ensure that current Biological Opinions are informing the decision process for this RMP/EIS.
>
> Mitigation and monitoring measures that result from consultation with FWS to protect sensitive biological resources, including threatened and endangered species, should be included in the Final RMP/EIS and, ultimately, the ROD.

Greenhouse Gases

Executive Order 13514 and Secretarial Order No. 3289, among other directives, have charged the BLM with accounting for, and reducing, emissions resulting from Federal land management practices, and considering and analyzing potential climate change impacts when developing multi-year management plans. The Draft RMP/EIS provides a short discussion on greenhouse gas emissions and discusses how climate change may affect various resources within the planning area; however, the document does not quantify GHG emissions associated with the implementation of the RMP.

On December 18, 2014, the Council on Environmental Quality released revised draft guidance for public comment that describes how Federal departments and agencies should consider the effects of GHG emissions and climate change in their NEPA reviews. The revised draft guidance supersedes the draft greenhouse gas and climate change guidance released by CEQ in February 2010. This guidance explains that agencies should consider both the potential effects of a proposed action on climate change, as indicated by its estimated greenhouse gas emissions, and the implications of climate change for the environmental effects of a proposed action.

> "CEQ recognizes that many agency NEPA analyses to date have concluded that GHG emissions from an individual agency action will have small, if any, potential climate change effects. Government action occurs incrementally, program-by-program and step-by-step, and climate impacts are not attributable to any single action, but are exacerbated by a series of smaller

decisions, including decisions made by the government. Therefore, the statement that emissions from a government action or approval represents only a small fraction of global emissions is more a statement about the nature of climate change challenge, and is not an appropriate basis for deciding whether to consider climate impacts under NEPA. Moreover, these comparisons are not an appropriate method for characterizing the potential impacts associated with a proposed action and its alternatives and mitigations."[5]

The revised draft guidance suggests that, if an agency determines that evaluating the effects of GHG emissions would not be useful in the decision-making process and to the public to distinguish between the proposed action, alternatives and mitigations, the agency should document the rationale for that determination.

Recommendation:
Provide additional information in the Final RMP/EIS regarding potential GHG emissions, consistent with the recent CEQ guidance.

[5] Council on Environmental Quality. *Guidance on Considering Climate Change in NEPA Reviews.* Dec 2014.Print.