Federal Agency

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

APR 18 2012

Gregory Helseth
Bureau of Land Management/Las Vegas Field Office
4701 North Torrey Pines Drive
Las Vegas, NV 89130-2301

Subject: Draft Environmental Impact Statement for the Searchlight Wind Energy Project, Clark County, Nevada (CEQ #20120010)

Dear Mr. Helseth:

The U.S. Environmental Protection Agency (EPA) has reviewed the January 2012 Draft Environmental Impact Statement for the proposed Searchlight Wind Energy Project in Clark County, Nevada. Our review and comments are provided pursuant to the National Environmental Policy Act, the Council on Environmental Quality Regulations (40 CFR Parts 1500-1508), and our NEPA review authority under Section 309 of the Clean Air Act.

EPA supports increasing the development of renewable energy resources, as recommended in the National Energy Policy Act of 2005, in an expeditious and well planned manner. Using renewable energy resources such as wind power can help the nation meet its energy requirements while reducing greenhouse gas emissions. We encourage BLM to apply its land management and regulatory authorities in a manner that will promote a long-term sustainable balance between available energy supplies, energy demand, and protection of ecosystems and human health.

According to the subject DEIS, Searchlight Wind Energy, LLC, a subsidiary of Duke Energy, has filed an application for a right-of-way authorization with the Bureau of Land Management to construct, operate, maintain, and decommission a wind energy facility that would generate up to 200 MW of energy and be located on approximately 18,949-acres of both private and BLM-administered land. The proposed Project would include wind turbine generators, an operations and maintenance facility, transmission line, four meteorological masts, laydown areas, a temporary rock crusher and concrete batch plant, two substations, and access roads. In addition, the Western Area Power Administration has submitted a ROW application to the BLM to construct, operate and maintain a new switching station to interconnect the Searchlight Wind Energy Project (SWEP).

On December 17, 2008, EPA provided formal scoping comments for the proposed Project. We identified several issues, including potential impacts to water resources, air quality, habitat, vegetation, and wildlife, as well as the cumulative impacts to these resources.

Based on our review of the subject DEIS, we have rated the project and the document as *Environmental Concerns – Insufficient Information* (EC-2). Please see the enclosed "Summary of Rating Definitions." An "EC" signifies that EPA's review of the DEIS has identified environmental impacts that should be avoided in order to provide adequate protection for the environment. A "2" rating signifies that the DEIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment. EPA is concerned with the impacts to air quality, water resources, biological resources, and cultural resources; as well as with the scope of the cumulative impact analysis. In the enclosed detailed comments, we provide specific recommendations regarding analyses and documentation needed to assist in assessing potential significant impacts from the proposed Project.

We appreciate the opportunity to review this DEIS and are available to discuss our comments. Please send one hard copy and one CD ROM copy of the FEIS to this office at the same time it is officially filed with our Washington D.C. Office. If you have any questions, please contact me at (415) 972-3521, or Anne Ardillo, the lead reviewer for this project. Anne can be reached at (415) 947-4257 or ardillo.anne@epamail.epa.gov

Sincerely,

Kathleen Martyn Goforth, Manager
Environmental Review Office (CED-2)

Enclosures: EPA Summary of Rating Definitions
EPA 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.

US EPA DETAILED COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE PROPOSED SEARCHLIGHT WIND ENERGY PROJECT, CLARK COUNTY, NEVADA, APRIL 18, 2012.

Air Quality

The DEIS analyzes the proposed 96-Wind Turbine Generator Alternative and an 87-WTG Alternative, and indicates that BLM selected the 87-WTG Alternative as the Preferred Alternative, in part, because it would minimize impacts to sensitive biological resources and air quality. According to the DEIS, the 96-WTG Alternative would exceed the threshold for particulate matter emissions during construction, even after mitigation (p. ES-xiii). In contrast, under the preferred alternative, tailpipe and fugitive dust emissions generated from construction equipment would not contribute to regional exceedances of the National Ambient Air Quality Standards (NAAQS) for criteria air pollutants (p. ES-xvi). It is unclear what standard thresholds were used for particulate matter emissions.

Recommendation:
In the FEIS, explain what standard thresholds for particulate matter emissions were used. EPA recommends that the FEIS include, in tabular format for each alternative project, emission contributions toward NAAQS, and demonstrate whether or not each alternative will contribute to regional exceedances based on these standards.

Section 4.6-Air Quality Impacts has been amended to use the correct PM-10 emissions threshold of 70 tons/year. Section 4.6-Air Quality Impacts has been updated to include, in tabular format, each alternative, emission contributions toward NAAQS, and demonstrate whether or not each alternative will contribute to regional exceedances based on these standards.

The current de minimis levels for the Las Vegas area are: CO 100 tons/year; NO_x 100 tons/year; and PM_{10} 70 tons/yr. The DEIS states that the yearly construction emissions for the 87 WTG Layout would be less than the de minimis thresholds as specified under the General Conformity Rule (40 CFR 93), thus conforming to the SIPs and the regional air quality plans. This statement appears to be incorrect, since Table 4.6-5 shows that the proposed Project PM10 levels will exceed the current de minimis level in that area.

Recommendation:
Clarify, in the FEIS, for each alternative, whether PM10 levels exceed current de minimis levels in that area. EPA recommends BLM work with the local air district and EPA to complete the evaluation and to determine whether general conformity can be achieved.

Section 4.6-Air Quality Impacts has been amended to use the correct PM-10 emissions threshold of 70 tons/year. BLM and Applicant will work with the local air district and EPA to complete the evaluation and to determine whether general conformity can be achieved.

Water Resources

Drainages and Ephemeral Washes
Natural washes perform a diversity of hydrologic, biochemical, and geochemical functions that directly affect the integrity and functional condition of higher-order waters downstream. Healthy ephemeral waters with characteristic plant communities control rates of sediment deposition and dissipate the energy associated with flood flows. Ephemeral washes also provide habitat for breeding, shelter, foraging, and movement of wildlife. Many plant populations are dependent on these aquatic ecosystems and adapted to their unique conditions. The potential damage that could result from disturbance of flat-bottomed washes includes alterations to the hydrological functions that natural channels provide in arid ecosystems, such as adequate capacity for flood control, energy dissipation, and sediment movement; as well as impacts to valuable habitat for desert

species. The DEIS provides minimal information on the direct and indirect impacts to these resources as a result of the proposed Project and fails to consider the up- and downstream reach and extent of these aquatic features or their importance in this desert landscape.

Recommendations:
The FEIS should characterize the functions of aquatic features, such as washes, on the proposed Project site and discuss potential mitigation for impacts to those not subject to protection as waters of the U.S.

To avoid and minimize direct and indirect impacts to desert washes (such as erosion, migration of channels, and local scour):

- Do not place turbine support structures in washes or waters;
- Commit to the use of natural washes, in their present location and natural form and including adequate natural buffers, for flood control to the maximum extent practicable.
- Demonstrate that the proposed Project layout, roads, and drainage channels have been configured to avoid ephemeral washes, including desert dry wash woodlands within the proposed Project's footprint.
- Include a functional assessment of the waters on the proposed Project site and describe the changes to the function of those waters that would result from the proposed Project.

Section 3.3-Water Resources characterizes the function of ephemeral washes as periodic storm water conveyance. MM-Water-1-7 and APMs 1, 4, and 5 accomplish these objectives as they are designed to protect and maintain the function of the existing ephemeral drainages to the extent possible.

Fencing
The DEIS does not provide information about fencing nor the effects of fencing on drainage systems. By entraining debris and sediment, fencing can interfere with natural flow patterns. Fence design should address hydrologic criteria, as well as security performance criteria.

Recommendations:
Provide more detailed information, in the FEIS, about fencing and potential effects of fencing on drainage systems. Ensure that the fencing proposed for this project will meet appropriate hydrologic performance standards.

Review the National Park Service's published article[1] on the effects of the international boundary pedestrian fence on drainage systems and infrastructure, and ensure that such issues are adequately addressed with this project.

Section 2.3.3-Public Access and Safety has been updated to reflect that project fencing would be designed and constructed to meet appropriate hydrologic performance standards both for flows and to protect water quality and meet regulatory requirements.

Floodplain Hazards
Executive Order 11988 Floodplain Management requires federal agencies to avoid, to the extent possible, the long and short-term adverse impacts associated with the occupancy and modification of floodplains. According to the DEIS, approximately 0.32 square mile of a FEMA designated Zone A 100-year floodplain traverses the southwestern part of the proposed Project. Another designated 100-year floodplain lies immediately outside the northeastern boundary of the project area. Drainage within the proposed Project area occurs via sheet flow, and extreme

[1] National Park Service, August 2008, Effects of the International Boundary Pedestrian Fence in the Vicinity of Lukeville, Arizona, on Drainage Systems and Infrastructure, Organ Pipe Cactus National Monument, Arizona,

rain events can result in substantial damage due to flood waters across the project and localized areas (p. 4-18).

Recommendations:
Include in the FEIS an evaluation of the project to demonstrate the project's compliance with Executive Order 11988.

The FEIS should provide a detailed description of the current FEMA floodplain.

The results of consultation with FEMA, if appropriate, should be included in the FEIS.

The FEIS includes a description of the possible presence of a FEMA mapped flood hazard zone and include potential impacts, if any, on the Project and describe mitigating measures to reduce possible flood impacts.

Water Supply
The DEIS states that all water would be obtained from either the existing Searchlight Water System, which is supplied by two wells, or another existing water right in the Searchlight area and transported to the proposed Project site. No wells would be drilled or springs developed for use by the proposed Project (p. 4-15). According to the 2006 Searchlight Water Conservation Plan, water is currently supplied to residents by the aforementioned two wells (S-1 and S-2). Well S-2 was drilled in 1990 and is the primary production well. The water table at Well S-2 has declined steadily over time. The plan indicates that, should this trend continue, Well S-2 will be unable to meet projected future demands for the town of Searchlight. Well S-1 was drilled in 1983 and serves as an emergency backup well, with limited resource and pumping capacity (p. 1).

Recommendation:
The FEIS should confirm the availability of an adequate water supply for construction and operations of the proposed Project and fully evaluate the environmental impacts associated with the ultimately proposed supply of water.

The Applicant will coordinate with the Las Vegas Valley Water District to support the water needs for the project. If sufficient resources are not available, the Applicant will procure water from local willing sellers.

Clean Water Act (CWA) Section 404 Jurisdictional Determination
According to the DEIS, a formal jurisdictional delineation was conducted and identified areas under the jurisdiction of the US Army Corps of Engineers. USACE jurisdictional non-wetland Waters of the US total 0.174 acres, with no USACE jurisdictional wetlands occurring (p. 3-16). According to Chapter 4 of the DEIS, the approved jurisdictional determination stated that the USACE would require a Section 404 permit (p. 4-19). It is our understanding that the proposed Project may qualify for a Nationwide Section 404 Permit for construction of an access road and drainage system crossing jurisdictional waters located within the boundaries of the proposed Project.

Recommendation:
The FEIS specify whether the project will require an individual section 404 permit or be covered under a nationwide permit, and should include a final determination of the extent of jurisdictional waters at the project site.

See Section 3.3.2.6-Jurisdictional Waters, Drainages, and Riparian Areas, for determination of jurisdictional waters at the project site. It is anticipated the Project would qualify for a Nationwide Section 404. The Corps is planning on processing the application upon completion of the NEPA process.

Biological Resources

EPA is concerned about potential impacts to sensitive wildlife species, since the proposed area supports resident and migratory birds, mammals, reptiles, and their supporting habitats, including desert tortoise, golden eagles, burrowing owls, desert bighorn sheep, chuckwallas, and many bat species. Long-term impacts may occur as a result of permanent loss of habitat, increased predation, habitat fragmentation, and collisions with wind turbines and vehicles.

Consultation and Coordination with U.S. Fish and Wildlife Service
The DEIS states that the applicant and Western Area Power Administration have prepared a Biological Assessment to assess SWEP impacts on desert tortoise and will submit it to the US Fish and Wildlife Service for a Biological Opinion. The BO should play an important role in informing the decision on which alternative to approve and what commitments, terms, and conditions must accompany that approval; however, it is unclear whether a BO is currently under development specific to the resources identified. It is also unclear whether USFWS has reviewed or commented on the adequacy of the surveys and monitoring of biological resources conducted to date.

Recommendations:
We urge BLM to coordinate with USFWS on the timing of the Biological Opinion and the FEIS. Ideally, the FEIS should be published after the BO has been released, and should include the BO as an appendix. If this is not possible, the FEIS should provide an update on the consultation process and explain how the BO will be factored into BLM's decision making.

Mitigation and monitoring measures that result from consultation with USFWS to protect sensitive biological resources should be included in the FEIS and, ultimately, the Record of Decision.

Discuss, in the FEIS, coordination with USFWS and their review of the surveying, monitoring, and reporting protocols completed to date. Include a commitment to consistent application of USFWS supported methods in future protection and mitigation efforts.

USFWS finalized the voluntary Land-Based Wind Energy Guidelines on March 23, 2012, which provide a structured scientific process for addressing wildlife conservation concerns at all stages of land-based wind energy development. They also promote effective communication among wind energy developers, government agencies and local conservation organizations and tribes. The Guidelines use a "tiered approach" for assessing adverse effects to species of concern and their habitats.[2].

[2] US Fish and Wildlife, Land-Based Wind Energy Guidelines, March 23, 2012, Available: http://www.fws.gov/windenergy/

BLM has completed consultation with the USFWS pursuant to Section 7 of the Endangered Species Act (For details refer to Section 5.2.2-U.S. Fish and Wildlife Service Section 7 Consultation and Appendix B-2: USFWS Biological Opinion).

Recommendation:
Coordinate with USFWS to incorporate recommendations from the recently published USFWS Land-Based Wind Guidelines into the FEIS and ROD. Given the current status of the project, Tier 3 of the Guidelines (Field Studies and Impact Prediction) may be the most appropriate section with which to start.

Bats
According to the U.S. Geological Survey, bat fatalities have been documented at nearly every wind facility in North America where adequate surveys for bats have been conducted. Thousands of bats are estimated to have been killed each year at these sites. The DEIS indicates that 13 out of 16 bat species found in SWEP area have some federal or State special status and that bat activity in the area is generally considered to be lower than at other locations in Nevada (p. 3-25). EPA is concerned that bat use at the proposed site may have been underestimated.

According to the DEIS, no topographic or habitat features that are considered bat attractants exist within or immediately adjacent to the proposed Project area, and that accounts for the low bat use. Table 3.1-2, indicates that there are 561 active and 1,862 closed mining claims within and adjacent to the proposed Project area, however, it is unclear how many represent mining operations. Abandoned mines often serve as roosting sites and maternity colonies and are prime habitat for many different types of bats. Bat surveys conducted in 2008-2009 and 2009-2010 indicated that only two mining complexes were monitored for both years. Given the large number of mining claims and the historic use of the area, it is unclear if there are additional mines that should be surveyed. The DEIS acknowledges that no correlation has been established between preconstruction surveys and post-construction fatalities (NWCC30, 2010); therefore, even though bat activity in the area may be lower than at other locations in Nevada, the proportional effects on the bat population cannot be predicted.

Recommendation:
The FEIS should clarify the number of mine sites in and adjacent to the proposed Project area. BLM should consider whether bat surveys should be conducted at additional mine sites. It not, the FEIS should explain the rationale for surveying only 2 mining complexes.

The DEIS states that detention ponds will be used to control stormwater flow offsite (p. 2-36). We are concerned that these basins may provide a water source for bats and serve as an attractant to the SWEP site.

Recommendations:
Incorporate design features for proposed detention basins (e.g. pond netting, fencing), and commit to regular inspection and maintenance, to ensure proper protection of bats, birds, and wildlife.

The FEIS should describe avoidance measures to deter bats from roosting in the additional man-made structures.

Refer to Section 5.2.3-Coordination on the BBCS and Appendix B-4: Bird and Bat Conservation Strategy (formerly referred to as the Avian and Bat Protection Plan [ABPP]), which have been added to the EIS.

BLM reviewed the mine information in the area and selected the mines that they were most concerned about due to previous surveys and possible hibernacula.

Acoustic monitoring at the Project revealed the presence of 16 species of bats, which is a relatively high diversity. The richness reflects the topographical diversity found at the Project, which accounts for available foraging and roosting habitats (O'Farrell 2010). The level of species richness may also be a function of intensive sampling over 2 full years, unlike many acoustic-monitoring studies, which are limited to certain seasons. Taking this into consideration, it is unlikely that bat diversity and use of the area have been underestimated.

Detention ponds would be a temporary bat attractant, but would be reclaimed after construction is completed as stated in MM-BIO-1. Refer to Section 2.3.2-Construction under Temporary Concrete Batch Plant for a description of wildlife deterrent measures. If necessary, an artificial pond permit would be obtained from the Nevada Department of Wildlife. The artificial pond permit would require regular inspection, maintenance, and reporting of wildlife mortality.

The only permanent structures include the O&M building, WTGs, and the switching station, which are all unlikely to provide roosting opportunities; therefore, no mitigation measures are proposed.

Migratory Birds

EPA is concerned that avian use at the proposed site may have been underestimated. For example, the DEIS concludes that, compared with raptor use of other wind energy facilities, raptor use at the proposed Project area is relatively low and, therefore, raptor negative interactions would be minimized and mortality is anticipated to be low (p. 4-36). However, it is unclear whether prey availability or variations in biotic factors were considered or accounted for when the avian surveys were conducted. Raptor nesting surveys conducted in 2009 and 2010 demonstrated that 23 red-tailed hawk nests were found within the project area and 10-mile buffer. The DEIS does not explain if the number of raptor nests found was of any significance, and if they were factored in determining the proposed Project area's raptor use.

The DEIS also states that the proposed Project area does not receive a large influx of breeding birds during spring and migrants pass through infrequently, suggesting that birds are not abundant and most fly below the rotor sweep area. These results suggest a low likelihood of interactions with turbines and a low overall risk to birds (p. 4-35). However, avian surveys conducted in 2007-2009 do not account for nocturnal migrants. The avian report acknowledges that, at newer generation wind energy facilities outside of California, approximately 80 percent of documented mortalities have been songbirds, of which 50 percent are often nocturnal migrants. In addition, calculations used to determine the encounter rates for the proposed Project did not account for the migrating behavior of nocturnal migrants.

Recommendations:

Elaborate on risk assessment methods and how seasonal, prey, and biotic variations and uncertainty of avian and bat numbers and use were accounted for.

Conduct nocturnal avian surveys to account for avian species that migrate at night and incorporate the results in risk assessment, siting, mitigation and avoidance measures.

The DEIS indicates that the Pacific Flyway, a major migratory route for millions of birds and waterfowl, extends through the western portion of the proposed Project area (p. 3-29). While this is disclosed in the document, it is not discussed in the avian use analysis.

Recommendation:

Include a discussion of the Pacific Flyway in the avian use analysis of the proposed Project site.

The DEIS states that an Avian and Bat Protection Plan (MM BIO-5) will be developed that will include pre-construction surveys and post-construction monitoring. The ABPP will incorporate mitigation requirements and adaptive techniques to minimize impacts to avian and bat species and will span a 3-year period (p. 2-30).

Recommendations:

Include a copy of the Avian and Bat Protection Plan in the FEIS and ROD. The ABPP should describe how mortalities of red-tailed hawks and other avian species will be assessed and evaluated for compliance with the Migratory Bird Treaty Act.

Refer to Section 5.2.3-Coordination on the BBCS and Appendix B-4: Bird and Bat Conservation Strategy (formerly referred to as the Avian and Bat Protection Plan [ABPP]), which have been added to the EIS.

Early in the project methods nocturnal avian surveys were considered. However, little data exists that correlates migrant passage rate with mortality at wind farms; therefore, it was determined that nocturnal migrant surveys would not help in assessing impacts to birds. For more information refer to Appendix B-4: Bird and Bat Conservation Strategy.

Added a discussion of the bird use in the area relative to the Pacific Flyway in Section 4.4.5.11 Migratory Birds - Direct and Indirect Effects by Alternative and in Appendix B-4: Bird and Bat Conservation Strategy.

Appendix B-4: Bird and Bat Conservation Strategy has been added to the EIS.

Golden Eagles

In 2009, a helicopter survey for raptor nests within the project boundary and a 2-mile buffer was conducted and no active golden eagle nests were found. In 2011, another survey was conducted between a 2-mile and a 10-mile buffer of the project area. All golden eagles identified were located on cliffs at least 4 miles from the project area. In addition, two nests were located approximately 10 miles from the project site boundary (p. 3-31). The 2011 raptor nesting survey references studies conducted in Idaho and suggests that golden eagle home range size should not overlap the project boundary; however, it acknowledges that data from a more xeric environment is lacking and home range of these golden eagles cannot be estimated from the nest data alone. In February 2011, USFWS issued Draft Eagle Conservation Plan Guidance. The Eagle Conservation Plan Guidance provides the background information necessary for wind energy project proponents to identify appropriate siting, design, and operational modifications that can be incorporated into an Eagle Conservation Plan (ECP) that will assess the risk of their project(s) to eagles and how to mitigate that risk.

> *Recommendation:*
> Coordinate with USFWS on the development of an Eagle Conservation Plan and post-construction fatality monitoring. Include the ECP in the FEIS.

Cumulative Impact Assessment

Cumulative impacts are defined in the Council on Environmental Quality's (CEQ) NEPA regulations as "the impact on the environment that results from the incremental impact of the action when added to the other past, present, and reasonable foreseeable future actions, regardless of what agency (Federal or non-Federal) or person undertakes such actions (40 CFR Part 1508.7)". The DEIS indicates that, within the project vicinity, there are ongoing mining operations (at a small scale), electric transmission lines, pipelines and a nearby airport. We understand, however, that there may be two solar projects nearby: American Capital Energy/ Searchlight Solar LLC, 1.5 miles northwest west of Searchlight (currently in the permitting process), and Nevada Solar One in Boulder City. It is unclear why these were not included in the cumulative impact assessment.

The DEIS states that the geographic boundary utilized for the assessment of cumulative impacts is defined as the SWEP area and an immediately adjacent buffer sized 25 % larger than the project area (p. 4-129). The DEIS identifies resources affected by the proposed Project and the Western transmission line, provides a brief description and cumulative impact discussion and discusses the rationale for spatial scope of the analysis (Table 4.20-1). In its cumulative impact analysis, there is no mention of the project's potential effects on the health of the area's population of threatened desert tortoise. CEQ guidance indicates[3] that choosing the appropriate scale to use for cumulative effects analyses is critical (CEQ Guidance, p. 12). According to the guidance, the geographic areas occupied by affected resources outside of the project impact zone should be identified, and in most cases, the largest of these areas will be the appropriate area for

[3] Council on Environmental Quality, "Considering Cumulative Effects Under the National Environmental Policy Act, January 1997. Available: http://ceq.hss.doe.gov/publications/cumulative_effects.html

Appendix B-4: Bird and Bat Conservation Strategy has been added to the EIS. The decision if a take permit (and associated ECP) is being requested is between the FWS and Searchlight Wind Energy, LLC.

the analysis of cumulative impacts (CEQ Guidance, p. 15). CEQ suggests that, for resident wildlife, a species' habitat or ecosystem should be used in a cumulative impact analysis.

Recommendations:
EPA recommends that the BLM expand its cumulative impact assessment to include the Searchlight and Nevada Solar One solar projects and any other past, present, or reasonably foreseeable future actions that may affect the same resources as the proposed Project.

EPA recommends that the impacts to the threatened Mojave desert tortoise be included in the cumulative impact assessment. We recommend consulting with the USFWS on an appropriate boundary and spatial scope for this analysis.

Section 4.17 Cumulative Impacts Analysis has been updated.

Consultation with Tribal Governments

Consultation for tribal cultural resources is required under Section 106 of the National Historic Preservation Act. Historic properties under the NHPA are properties that are included in the National Register of Historic Places or that meet the criteria for the National Register. Section 106 of the NHPA requires a federal agency, upon determining that activities under its control could affect historic properties, to consult with the appropriate State Historic Preservation Officer or Tribal Historic Preservation Officer.

Executive Order 13007, Indian Sacred Sites (May 24, 1996), requires federal land managing agencies to accommodate access to, and ceremonial use of, Indian sacred sites by Indian Religious practitioners, and to avoid adversely affecting the physical integrity, accessibility, or use of sacred sites. Executive Order 13175, Consultation and Coordination with Indian Tribal Governments (November 6, 2000), was issued in order to establish regular and meaningful consultation and collaboration with tribal officials in the development of federal policies that have tribal implications, and to strengthen the United States' government-to-government relationships with Indian tribes. President Obama directed all federal agencies to develop an action plan to implement this Executive Order by February 3, 2010. For more information, refer to: http://www.whitehouse.gov/the-press-office/memorandum-tribal-consultation-signed-president.

BLM initiated consultation with the Chemehuevi Indian Tribe, Colorado River Indian Tribes, Fort Mojave Indian Tribe, Hualapai Tribe, Fort Yuma-Quechan Tribe, Las Vegas Paiute Tribe, Moapa Band of Paiute, and Pahrump Paiute Tribe. Consultations are still on-going for this project (p. 5-3). According to the DEIS, Spirit Mountain is a National Historic Place and is also listed as a Traditional Cultural Property for its significance to the Yuman tribes as the spiritual birthplace of the tribes. Spirit Mountain is about 10 miles southeast of the SWEP area. According to the DEIS, BLM is consulting with the Tribes to determine potential visual impacts from the SWEP (p. 3-36).

The DEIS indicates that construction and use of the proposed WTGs and associated access roads will have various levels of direct and indirect adverse effects on two prehistoric and three

historic sites that are eligible for NRHP listing. Types of mitigation recommended for these five sites include consultations between the proponent and the agencies to determine if some project elements can be rerouted or not constructed; development of a Treatment Plan for each eligible site, describing in detail how the impacts would be mitigated; and development of a Memorandum of Agreement outlining all of the affected parties' roles and responsibilities including the Treatment Plans (p. 4-40).

Recommendations:
The FEIS should describe the process and outcome of government-to-government consultation between the BLM and each of the tribal governments within the project area. Discuss issues that were raised, including Spirit Mountain, and how those issues were addressed in relation to the proposed action and selection of a preferred alternative.

Include a copy of each Treatment Plan and MOA in the FEIS.

Refer to Section 5.2.4-Native American Consultation for a summary of the tribal consultation process and results. The comments expressed would not differ between alternatives. An MOA, in consultation with the Nevada SHPO, will be completed prior to the signing of the ROD. Avoidance and proposed cultural mitigation measures as well as an ethnographic/ethno-historic study preclude the need for treatment plans for the NRHP-eligible properties.

National Historic Trails

BLM Wind Energy Development Program Policies and Best Management Plans state that the BLM will not issue ROW authorizations for wind energy development on lands on which wind energy development is incompatible with specific resource values. Lands that will be excluded from wind energy site monitoring, testing and development include designated areas that are part of National Historic and Scenic Trails (Appendix C, p. A-2). The development of the SWEP appears to be in conflict with this policy. The DEIS states that a review of historic maps indicates that the Mojave Route of the Old Spanish National Historic Trial is within the SWEP area (p. 3-35). In addition, approximately 1.5 miles of an existing road, which is an element of the proposed Project and proposed for upgrading, crosses the northern portion of the Old Spanish National Historic Trail. Construction activities would have minimal but permanent impacts on the trail (p. 4-94).

Recommendations:
Clarify whether the SWEP will include the Old Spanish National Historic Trail area and whether it will conflict with the BLM Wind Energy Development Program Policies and BMPs.

If mitigation measures are required, include them in the FEIS.

Section 3.5-Cultural Resources has been modified to indicate that existing access roads and/or highways cross the Congressional route of the Mojave Road Variant of the Old Spanish Trail. No surface evidence of the trail is present and the town of Searchlight, bladed roads, and multiple transmission lines has already physically and visually impacted the corridor. No mitigation measures are recommended. In concurrence with the National Trails Intermountain Region Office of the NPS, there would be no conflict with the Mojave Route and this project. The proposed project is consistent with the BLM Wind Energy Development Program and Policies.

Completion of Plans

Searchlight Wind LLC has included a suite of Applicant Proposed Measures to avoid or minimize impacts of the proposed Project on environmental resources. While the DEIS provides expanded discussion on some of them, most of the specific plans associated with the APMs have yet to be developed. In addition, mitigation measures will require development of plans such as the Cactus and Yucca Salvage Plan, Wildlife Mitigation and Monitoring Plan, Terrestrial Wildlife Plan, and Traffic Management Plan.

Implementation of applicant proposed measures are the responsibility of the Applicant as part of the proposed project. Although some mitigation measures have not yet been developed, all the elements of those plans are included in the EIS. The following mitigation plans have been completed and included in the document: Appendix B-1: Weed Management Plan, Appendix B-3: Terrestrial Wildlife Plan, and Appendix B-4: Bird and Bat Conservation Strategy

Recommendation:
Further discussion on all the APMS, such as identification of identifying responsible parties, relative timelines, potential impacts and expected effectiveness should be included in the FEIS. All salvage plans, mitigation and monitoring plans, wildlife plans and traffic management plan should be completed and included in the FEIS and ROD.

BLM requires that mitigation measures are identified as a stipulation of the ROW Grant. Development of mitigation plans often requires input, review, and approval by other regulating agencies such as USFWS, NDEP, DAQ, and NDOT and are not typically completed prior to a Final EIS. However, all the elements and basic requirements of the mitigation plans are discussed throughout the EIS.

Federal Agency

United States Department of the Interior

NATIONAL PARK SERVICE
Lake Mead National Recreation Area
601 Nevada Way
Boulder City, NV 89005

IN REPLY REFER TO:

D18
xL30

April 18, 2012

Bob Ross, Field Manager
Bureau of Land Management
Las Vegas Field Office
4701 North Torrey Pine Drive
Las Vegas, NV 89130

RE: Draft Environmental Impact Statement for the Searchlight Wind Energy Project NVN-084626 and NVN-086777

The National Park Service has reviewed the Draft Environmental Impact Statement (DEIS) for the Searchlight Wind Energy Project and offer the following comments.

General Comments:

The National Park Service (NPS) is a cooperating agency in the development of this DEIS, and as such, has provided comments on administrative drafts of this document. The NPS supports the development of renewable energy in the southwestern United States. It should be understood that the NPS comments are offered to refine alternatives to make the proposed project fit in the sensitive environmental setting of the Mojave Desert. Because of the unique purposes for which Congress created Lake Mead National Recreation Area on behalf of the public, we maintain that the proposal should be sensitive to the values of Lake Mead and the associated visitor experience.

In our previous comments, we are on record proposing the relocation or removal of 11 turbines that are located along the Cottonwood Cove Access Road. The reasoning for this request is to provide a minimal setback between the turbines and the visitors traveling the road to enter and experience Lake Mead National Recreation Area. These turbines include turbine numbers 27, 28, 29, 30, 31, and 32 on the north side of the Cottonwood Cove Access Road and turbines 33, 34, 35, 36 and 37 on the south side of the Cottonwood Cove Access Road, as illustrated and numbered on Figure 2-2 on page 2-5. We believe the 11 turbines could be relocated to southern portion of the project area as illustrated in Figure 2.3, the 161 WTG Layout Alternative.

In addition, the NPS has previously requested the relocation of the interconnect facility to a location that provides some separation from the park entrance station located on the Cottonwood Cove Access Road. Such a large and mechanical facility located immediately adjacent to the

The micro-siting of the 11 turbines is in compliance with BLM guidelines.

The location of the switching station is in compliance with BLM guidelines.

park entrance station is not compatible with the designed the entrance to Lake Mead National Recreation Area.

The NPS National Trails Intermountain Region office has reviewed documents and maps associated with the Searchlight Wind Energy Project near Searchlight, Nevada. This office co-administers the Old Spanish National Historic Trail (NHT) with BLM. While this segment is not on our draft list of high-potential segment, it appears that the northern portion of the project area overlies a portion of the Congressionally designated route of the NHT, and that the trail alignment is less than a mile from the southwestern boundary of the project area. We are concerned about the visual impacts of the wind turbine generators on the setting of the Old Spanish NHT and the trail experience. The towers are stated to be up to 427.5 feet high on p. xii, and a construction of this height will be visible for about 25 miles unless screened, using the common rule of thumb of *visible horizon=sqrt (height in feet) x 1.2 miles*. The visual effects could be especially pronounced on the southwestern side of the project, which is currently less impacted by development and urban features, although we see that transmission lines, pipelines, and the US 95 highway cross the area. We recommend some of the westernmost towers on the southwest end of the project could be eliminated or moved further east within the current project area.

Section 3.5-Cultural Resources has been modified to indicate that existing access roads and/or highways cross the Congressional route of the Mojave Road Variant of the Old Spanish Trail. In November of 2012 the BLM consulted with the NPS National Trails Intermountain Region office representative and they concurred with the BLM that there would be no conflict between this route and the project either directly or visually due to this Congressional route already having been adversely impacted from historic and modern improvements along the corridor in the Searchlight Wind Energy Project vicinity. No mitigation is recommended for this project.

In the mitigation section there are a number of additional plans required. There may be additional planning identified as we move through the compliance process. Prior to final approval, the NPS requests the opportunity to review and comment on the Dust Management Plan, Stormwater Pollution Prevention Plan, Spill Prevention Control and Countermeasure Plan, Waste Management Plan, Site Rehabilitation and Facility Decommissioning Plan, Restoration Plan, Traffic Management Plan, and Hazardous Materials Handling Management Plan.

Comment noted.

The NPS also request the opportunity to participate in the development of the Emergency Response Plan and the Lighting Plan. We would seek the opportunity to help develop and implement the Wildlife Mitigation and Monitoring Plan and the Avian and Bat Protection Plan. Lastly, we believe it is important to verify the noise modeling that has been completed for this project by establishing a noise monitoring station within Lake Mead National Recreation Area following the completion of construction of the wind turbine generators. We believe it is incumbent on the project proponent to fund the monitoring elements that are required within the Recreation Area.

Comment noted. These plans have been completed by the technical team including the USFWS, BLM, NDOW, and Tetratec, which has been in place since the beginning of the project. The Terrestrial Wildlife Plan and Bird and Bat Conservation Strategy (formerly known as the Avian and Bat Protection Plan [ABPP]) have been completed and included in the FEIS (Appendix B-3: Terrestrial Wildlife Plan and Appendix B-4: Bird and Bat Conservation Strategy).

Specific comments:

Page xvi, Visual Resources. The plan states, "*All WTGs and Western's proposed switching station would be constructed with the designated visual resources management area (VRM) Class III areas. The project and switching station would introduce weak to moderate levels of contrast, which is the maximum allowable level of change for the VRM Class III areas*." While this is true, the VRM classification was completed as part of the previous Resource Management Plan and prior to the legislated transfer for land in Section 26, Township 28 South, Range 64 East to be included in Lake Mead National Recreation Area. As part of this EIS process, it was agreed the park entrance station should serve as a Key Observation Point (KOP). It is our position that the view from this KOP is of greater value than the Class III classification provided

A visual resources specialist per BLM Visual Resources Management guidance determined contrast ratings. An updated visual simulation for the proposed Western Switching Station has been included in the FEIS and re-evaluated. Text has been updated for this KOP to reflect a moderate contrast rating, which remains consistent with a Class III Visual Resources Management Area.

in the earlier agency planning. We also maintain the impact will likely be greater than "*weak to moderate*" and therefore find the switching station incompatible with the site selected.

Page 2-1, Lines 28-34. The document states, "*The project is subject to expensive development, transmission upgrade, and construction costs which add to the overall costs. In order for the project to achieve minimum commercial viability for purposes of meeting potential financing criteria, the minimum power generation requirements are 200 MW. The project achieves this minimum threshold of 200 MW using 87 Siemens 2.3 MW turbines. Below the 87 turbine threshold, therefore, the project becomes uneconomic.*" There are no data provided to support this statement and there is no project power agreement to say whether this project is economical or not. And if this statement is accurate, the 97 turbine alternative is not a practical alternative or there needs to be some additional information provided to support the 97 turbine alternative. We assert that a 175 MW alternative using 76 Siemens 2.3 MW turbines is economic and could be developed at this site. Such an alternative would only be necessary if the 11 turbines along the Cottonwood Cove Access Road (listed in our general comments) could not be relocated.

The micro-siting of these 11 turbines is in compliance with BLM guidelines.

Page 2-4, Table 2-7 Mitigation Measures. Under MM NOI-1 it says that construction activities would be limited to "daytime" hours of 7 am to 10 pm. We would appreciate clarification as to why the hours of 7 pm to 10 pm are considered "daytime." Campers and visitors to Lake Mead NRA would expect quieter conditions during these hours, so we are concerned about construction activities occurring during this period and the impacts they would have on resources and visitor experience at Lake Mead.

Under MM NOI-4 there is mention of maintaining a noise level not to exceed 43 dBA. We would appreciate the addition of a discussion as to how that number was chosen.

Comment noted. MM-NOI-1 has been updated to include that blasting would be limited to the hours of 7:00 a.m. to 5:00 p.m. during weekdays only.

The Clark County noise ordinance limit is based on individual octave band limits, rather than an overall dBA number. The dBA scale is more familiar to most people. In order to provide a frame of reference, the individual octave band limits from the ordinance were combined into a single dBA number, which in this case equates to 43 dBA.

Page 2-11, Lines 1-23. The document states, " *Western's primary selection criteria was to site its proposed switchyard within close proximity to the Davis-Mead 230-kV transmission line and meet BLM resource planning requirements, including siting the switchyard outside the Area of Critical Concern (ACEC), except for ½ mile area adjacent to a federally designated highway, per the BLM Resource Management Plan. In addition, Western's site must comply with Federal and utility regulation which governs the power industry. Interconnections must have a redundant and diversely-routed communications for reliability; therefore, the switchyard location must have line-of-sight to one of Western's nearby mountain-top communication sites for the primary communication path. The second, redundant communications path is less restrictive but also guided by regulation. Other operational requirements also impact location, including all-weather access to the switchyard during storm events and access to distribution power lines to provide primary station service power.*" The concern with this paragraph is that we believe Western failed to fully consider other alternatives to the site selected immediately adjacent to the National Park Service entrance station. It remains our position to relocate this facility to a location that does not conflict with the entrance to Lake Mead National Recreation Area. It may cost more to eliminate the conflict between the two facilities, but locating it immediately adjacent to the entrance to Lake Mead National Recreation Area is not appropriate.

The location of the switching station is in compliance with BLM guidelens. See Section 2.2.3-Western's Interconnection Switching Station Location Alternatives, for a discussion of alternatives considered but eliminated.

Page 2-31, Lines 2-11. We recommend the description of the proposed switching station location include the proximity to the entrance to Lake Mead National Recreation Area. The

Section 4.2.1-Western's Interconnection Switching Station has been updated to include the proximity of the proposed switching station to the NPS Entrance Station.

proposed facility would be right next to the park's entrance station, yet the project description fails to acknowledge this existing facility. In fact, the walls surrounding the proposed facility will abut the traffic monument on the north side of the entrance station. The electrical towers within the switching station will dwarf the entrance station and dominate the view as one approaches the entrance station.

Page 2-43, Interim Reclamation. The mitigation plan calls for the collection, storage and re-application of top soil. We have had some recent experience with top soil restoration efforts on Northshore Road and U.S. Highway 93 both in Arizona and Nevada. Top soil based restoration programs require planning ahead of time. We recommend a top soil management plan be required that outlines how the contractor will collect, store and reapply the top soil. Further, as part of the bid process, we recommend the management of topsoil be a separate bid item.

Comment noted. A reclamation plan is a condition of the bonding process and will be approved by the BLM (BLM-IM-2009-043).

Page 3-46, Figure 3.8-1. This figure illustrates the Existing ROWs in the Project Area. It clearly shows the switching facility overlaying the National Park Service lands along the Cottonwood Cove Access Road at the entrance station. We believe this is an error. We recommend the Figure be revised to eliminate this conflict.

In addition to the NPS lands at the entrance station location, there is a NV Power right-of-way that extends north of the entrance station to the existing powerline. The switching facility will be located on top of this powerline as illustrated in Figure 3.8-1.

Figure 3.8-1. Existing ROWs in the Project Area. has been revised. The proposed project would not encroach on NPS ROW.

Page 3-50, Lines 22-30. The document states, "*Material site ROWs are allowed only within 0.5 miles of the centerline of Federal aid Highways and specified county roads, including US-95 and Cottonwood Cove Road (SR 164) (BLM 1998)*". We have stated in our earlier comments, that the Cottonwood Cove Access Road (east of Searchlight) is owned and maintained by Clark County and not a State Highway. SR 164 only exists on the west side of Searchlight. It is not clear if the County Road east of Searchlight is a Federal Aid Highway. We would appreciate any supporting information from Clark County or the Nevada Department of Transportation that this road is a Federal Aid Highway.

For a map of Federal Aid Highways that included SR 164 see the following link:

http://www.nevadadot.com/uploadedFiles/NDOT/About_NDOT/NDOT_Divisions/Planning/Roadway_Systems/FCM_Clark.pdf

Page 3-55 & 3-60. Note that BLM Visual Resource Management guidelines do not address visual resources at night. The omission of dark skies in the BLM VRM methodology should be mentioned in either section 3.9 or section 3.9.4.7.

Refer to Section 3.9.4.7-Dark Skies for a discussion of dark skies policy.

Page 3-60, Lines 9-10. The document states, *"No designated scenic vistas or state-designated scenic highways are within or within view of the Proposed Project Area."* While this statement is technically true, the drive down to Lake Mohave from Searchlight on the Cottonwood Cove Access Road is highly scenic and steps should be taken to protect that scenic drive. This is the foundation for our earlier comment to relocate 11 turbines currently proposed to be located within one mile of the access road. This road's primary use is to enter Lake Mead National Recreation Area and over 300,000 visitors enter the park at this entrance each year. We maintain this provides ample reason to protect the scenic nature of this drive. The BLM does not have to have state scenic road designation to protect this view.

Visual resources are analyzed for visual impacts whether or not there are presence of scenic vistas or state-designated scenic highways. All BLM administered surface acres are subject to the BLM's Visual Resource Management policy which calls for all BLM administered surface acres to be inventoried for visual values and Visual Resource Management (VRM) Classes be designated within the Resource Management Plan (RMP) establishing visual management objectives. The Cottonwood Cove Access Road is identified as a KOP and analysis performed to determine the project's conformance to the VRM Class objectives designated within the RMP.

Page 3-84, Lines 10-12. The document states, "*Lake Mead National Recreation Area is located east of the Proposed Project area. The Recreation Area boundary is approximately 11,000 feet from the nearest WTG. Lake Mohave and the associated lakeside camping areas are located approximately 7.5 miles from the nearest WTG*"." While this statement is generally accurate, there are additional noise sensitive receivers within Lake Mead National Recreation Area. Specifically, the Nellis Wash Wilderness is located within the two-mile radius from Wind Turbine Generators as illustrated on Figure 3.10-1. The National Park Service is to manage wilderness to protect the wilderness character as defined in the Wilderness Act of 1964. Wilderness character includes untrammeled; undeveloped, natural, outstanding opportunities for solitude or primitive unconfined recreation or unique attributes or other features that reflect the character of this wilderness. Dispersed camping is a common use of wilderness and should be included in the description of Lake Mead National Recreation Area and specifically, the Nellis Wash Wilderness. We recommend this information be included in the Chapter 3 description of the area. We also recommend it be repeated or referenced under the recreation heading currently beginning on page 3-88 and illustrated in Figure 3.11-1 Recreation Opportunity Spectrum Designations.

Sections 3.10-Noise, and 3.11-Recreation have been updated to include that the Nellis Wilderness Wash is located approximately 2-miles from the nearest turbine.

Page 3-86, Lines 1-2. The statement that "*Notably, the NPS did not include sound level data measured during high wind conditions, and as such, the ambient data presented reflect very conservative levels, including times....*" does not adequately clarify the accepted convention for avoiding measurement when accurate environmental sound levels are extraordinarily difficult to measure. NPS respectfully requests that it be changed to read "Notably, the NPS did not include sound level data measured when wind speeds near the microphone exceeded 5 m/s (11 mph), in compliance with national standard ANSI 12.18 Section 4.4.1.1. As such, the ambient data presented reflect conservative levels, including times...."

Section 3.10.2.4-Ambient Sound in the Project Area Vicinity has been changed as requested.

Page 4-26, Lines 35-44. The conclusions made in Lines 39-42 regarding the Barber et al. 2009 article are inaccurate. One of the co-authors of the Barber et al. 2009 article works in the NPS Natural Sounds and Night Skies Division and does not believe that the claims made in this sentence are supported by their article. Wind turbine noise has been shown to substantially alter antipredator behavior in ground squirrels due to masking (Rabin et al. 2006). Those squirrels spent much more time scanning their environment visually in a noisier environment, which meant less time for foraging and other activities. They also reacted much more vigorously to any perceived threat, and took much longer to recover and resume normal behavior after their threat responses. We would appreciate if this sentence was removed from the document.

Overall, we would greatly appreciate if the discussion on potential noise impacts to wildlife is expanded. We understand that there are no current quantitative thresholds or standards on wildlife, but there are several sources of literature documenting noise impacts to wildlife that should be discussed. Lines 37-39 make it appear as though the research on noise impacts to wildlife is undeveloped or unavailable, which is incorrect. Research is not needed to investigate whether noise impacts wildlife, but to identify quantitative thresholds of impact. The most extensive data regarding noise impacts comes from the road ecology literature. Additionally, three studies of noise from energy development (Bayne et al. 2008; Habib et al. 2007; Francis et al. 2009) that controlled for other disturbance factors have documented significant noise effects at the level of species demography and community diversity. The similarities of road and energy development noise spectra to wind turbine spectra offer a

Lines were removed as requested. Section 4.4.4-Wildlife has been updated with a discussion of potential noise impacts to wildlife using provided literature.

solid basis for generalizing the impacts observed in these studies to wind energy scenarios. In addition to this broad, comparative framework to evaluate wind turbine noise impacts, we have a specific study that documented substantial changes in ground squirrel antipredator behavior due to wind turbine noise (Rabin et al. 2006). In addition to these studies, we provide a summary of other literature below.

"The peer reviewed literature widely documents that sound plays a critical role in intra-species communication, courtship, predation and predator avoidance, and effective use of habitat. Additionally, similar studies have shown that wildlife can be adversely affected by sounds and sound characteristics that intrude on their habitats. While the severity of the impacts varies depending on the species being studied and other conditions, research strongly supports the fact that wildlife can suffer adverse behavioral and physiological changes from intrusive sounds (noise) and other human disturbances. Documented responses of wildlife to noise include increased heart rate, startle responses, flight, disruption of behavior, and separation of mothers and young (Selye 1956, Clough 1982, National Park Service 1994, US Department of Agriculture 1992, Anderssen et al. 1993).

When noise elevates ambient sound levels, signals that might otherwise have been detected and recognized are missed. The noise is said to mask these signals. Masking degrades an animal's auditory awareness of its environment, and fundamentally alters interactions among predators and prey. There are many animal species that rely almost exclusively on sounds to locate their prey (e.g., gleaning bats). Masking also affects acoustical communication. Animals have been shown to alter their calling behavior and shift their vocalizations in response to noise (Brumm and Slabbekoorn 2005; Patricelli and Blickley 2006; Slabbekoorn and Ripmeester 2008; Warren *et al.* 2006). These shifts have been documented in a variety of signal types: begging calls of bird chicks (Leonard and Horn 2007), alarm signals in ground squirrels (Rabin et al. 2006), echolocation cries of bats (Gilman and McCracken 2007) and sexual communication signals in birds and anurans (Brumm and Slabbekoorn 2005, Patricelli and Blickley 2006, Warren et al. 2006, Slabbekoorn and Ripmeester 2007, Parris et al. 2009). Vocal adjustment likely comes at a cost to both energy balance and information transfer; however, no study has addressed receivers. Some species are unable to adjust the structure of their sounds to cope with noise even within the same group of organisms (Lengagne 2008)."

Anderssen, S.H., Nicolaisen, R.B., and Gabrielsen, G.W. 1993. Autonomic response to auditory stimulation. *Acta Paediatrica* 82:913-918.

Brumm, H. and Slabbekoorn, H. (2005) Acoustic communication in noise. Adv. Stud. Behav. 35, 151–209.

Clough, G. 1982. Environmental Effects on Animals Used in Biomedical Research. *Biological Reviews* 57:487-523.

Gillam, E.H. and McCracken, G.F. (2007) Variability in the echolocation of Tadarida brasiliensis: effects of geography and local acoustic environment. Anim. Behav. 74, 277–286

Lengagne, T. (2008) Traffic noise affects communication behaviour in a breeding anuran, Hyla arborea. Biol. Conserv 141, 2023–2031

Leonard, M.L. and Horn, A.G. (2008) Does ambient noise affect growth and begging call structure in nestling birds? Behav. Ecol. 19, 502–507

National Park Service. 1994. *Report to Congress, Report on Effects of Aircraft Overflights on the National Park System.* September 12, 1994.

Parris, K.M. et al. (2009) Frogs call at a higher pitch in traffic noise. Ecol. Soc. 14, 25 In: http://www.ecologyandsociety.org/vol14/iss1/art25

Patricelli, G.L. and Blickley, J.L. (2006) Avian communication in urban noise: causes and consequences of vocal adjustment. Auk 123, 639–649.

Selye, H. 1956. *The Stress of Life*. New York: McGraw-Hill.

Slabbekoorn, H. and Ripmeester, E.A. (2008) Birdsong and anthropogenic noise: implications and applications for conservation. Mol. Ecol. 17, 72–83.

US Department of Agriculture, Forest Service. 1992. Report to Congress. *Potential Impacts of Aircraft Overflights of National Forest System Wildernesses.*

Warren, P.S. et al. (2006) Urban bioacoustics: it's not just noise. Anim. Behav. 71, 491–502.

Weisenberger, M. E., et al. 1996. Effects of Simulated Jet Aircraft Noise on Heart Rate and Behavior of Desert Ungulates. *J. Wildlife Management* 60(1):52-61.

Page 4-65, Lines 2-3. The document states, *"Figure 4.9-2 represents the view that recreational viewers who are boating/fishing on Lake Mohave would have looking east toward the Proposed Project."* The sentence should state the view is to the west from Lake Mohave.

Text has been corrected under KOP 6 – View Across Lake Mohave.

Page 4-65, Lines 6-10. The documents states, *"The viewshed analysis demonstrates that the easternmost portion of the project area maybe visible from KOP 6 and portions of up to 50 proposed WTGs could be seen. A viewer might be able to discern the smooth white cylindrical base of the WTG against the brown and green medium-textured background. However, due to the distance, terrain, and atmospheric conditions, contrasts in texture would be weak. The WTGs would introduce moving, vertical, angular structures against the rugged mountains background resulting in a moderate contrast in form, line and color.* We expect the impact will be greater than what is being described. The view of the landscape will be changed from a view dominated by natural features to a view dominated by the hand of man. With portions of up to 50 WTGs visible from the surface of Lake Mohave, the contrast will be much greater than "weak" and "moderate" in form, line and color. We suggest the analysis be revised to reflect a higher level of contrast.

Visual resources specialists in accordance with BLM Visual Resources Management methodology determined contrast ratings.

Page 4-75 Lines 1-7. The document states, *"Recreational visitors from KOP 15, Cottonwood Cove Access Road, would have a high level of visibility to the Proposed Action (Figure 4.9-7). Viewers at this location would be approximately 0.3 miles west of the project area. Although some natural screening exists, approximately 7 WTGs would be in the foreground. The WTGs would contribute to the vertical lines in relation to the rugged terrain. Visual contrast in line, color, and form are anticipated moderate with the 96 WTG Layout Alternative."* We contend the contrast is underestimated. With WTGs as close at 0.3 miles and over 400-feet tall, the WTGs are going to dominate the view from the primary access road to Lake Mead National Recreation Area. The area's natural features are going to masked by the large and moving WTGs. We question that such a high level of contrast is consistent with BLM VRM Class III standards.

Visual resources specialists per BLM Visual Resources Management methodology determined contrast ratings.

Page 4-77. Though anti-collision lighting is less likely to contribute to sky glow, the flashing nature of lights can impact the natural lightscape (the human perception of natural nighttime environment) as does a shiny reflection in the daytime. The dark-adapted human eye is more sensitive to flashing lights in peripheral vision than during the day. Additionally, nighttime obstruction lighting can, under certain circumstances, disorient migrating birds. (http://www.sfbayjv.org/pdfs/night%20migrant%20fatalities%20at%20wind%20turbines.pdf). We would appreciate the revision of this paragraph to acknowledge that red lights, while not contributing to skyglow, may impact nighttime viewshed via visual distraction and glare at close range.

Section 4.9 Visual Resources Impacts under Dark Skies has been revised per this suggestion.

Page 4-77, Lines 1-9. The document states, *"Recreational viewers from KOP 17, Cottonwood Cove Access Road, would have a high level of visibility to Western's proposed switching station (simulation currently under development). Viewers at this location would be directly adjacent to the switching station, which represent a foreground view. The switching station would introduce another manmade structure into the foreground, although several structures, including a propane tank, parking area, overhead transmission lines, lights, and the park entrance station, already exist in the area. Because manmade structures exist in the area, including the NPS Fee Station, Cottonwood Cove Road, and various radio and cell towers, the switching station would cause a weak to moderate contrast in form, texture and color."*

Visual resources specialists per BLM Visual Resources Management guidance determined contrast ratings. A visual simulation for the proposed Western Switching Station has been included in the FEIS (Figure 4.9-8. KOP-17 – View from Cottonwood Cove Access Road at MP 4 Looking North). Text has been updated to state that for this KOP a moderate contrast rating, which is still consistent with a Class III Visual Resources Management Area.

We strongly disagree with this statement and finding. The view of the switching station will be large measuring over 6 acres (described on page 2-31). *"Facilities would include a control building, microwave tower, take-off structures and other steel support structures, buswork, and electrical and control equipment for switching, protection, metering, safety, and O&M purposes. The switching station would occupy approximately 3.5 acres, with an additional 2.5 acres outside the security fence required for site preparation, drainage, and road access. An 8-foot tall chain-link fence topped with razor wire would provide security for the switching station. Adequate space would be provided inside the fence to maneuver construction and maintenance vehicles. Additionally, the facility would be sized to accommodate additional bays for future interconnections"*. While it is not described in this section, some of the steel structures will extend 30 to 40 feet in height and the microwave tower is proposed to be 100 feet in height. This switching facility will dominate the view as one drives down the Cottonwood Cove Access Road. The document does not accurately describe the magnitude of this facility and should be revised to better describe the impact it will have on the park visitor using this road to access Lake

Mead National Recreation Area. It is the position of the National Park Service that this facility is not compatible in close proximity to the existing entrance station and the entrance to Lake Mead National Recreation Area.

Page 4-77, Line 10. Red colored anti-collision lights are preferred. The intensity should fall between 1500 and 2500 candela. Flash duration length should be a short as allowed by FAA, and flash interval should be as long as allowed by FAA. We would appreciate if the document was revised to include upper and lower range of red beacon intensity and appropriate flash characteristics. Please include this in MM-VIS5.

FAA would determine flash duration and intensity.

Page 4-77, Line 17. Under the Mitigation section for visual impacts there is no discussion of the steps that will be taken to lighten the visual impact of the switching station. There were discussions during the ADEIS of replacing the proposed chain link fence with a concrete block wall and painting the wall to blend with the setting. The elevation of the switching station could be lowered some to reduce the height of the steel structures. None of these measures are presented in this chapter. We recommend the mitigation measures be outlined to reduce the impact of the switching station on the visual setting.

Section 4.9.4-Mitigation Measures lists mitigation measures that would be applicable to both the wind facility and the proposed switching station.

Page 4-79, Lines 19-20. The NPS notes and appreciates that the DEIS introduces and offers impact assessments in comparison to the 35 dBA nighttime limit proposed by Lake Mead National Recreation Area for park lands. The addition addresses previous ADEIS comments on appropriate management thresholds proposed by NPS to protect park visitors and overnight camping that could occur on LMNRA lands. Pedersen and Waye (2004) have shown that with wind turbine noise around 35 dBA, the percentage of highly annoyed persons increases above 5%, and the percentage of annoyed persons increases above 10% (Pedersen et al. 2009). Pedersen and Nielsen (1996) recommended a minimum distance to neighbors so that the wind turbine noise would be below 33–38 dB. The NPS has used the 35 dBA metric to identify substantial levels of exposure above natural ambient sound (ongoing Grand Canyon overflights analysis, Zion Soundscape Management Plan). Other example standards and guidelines that support this threshold include:

Comment noted.

a. Oregon Administrative Rules (OAR) 340-035-0035 Noise Control Regulations for Industry and Commerce - Wind turbine development cannot exceed an L50 of 36 dBA at an appropriate measurement point on a noise sensitive property (background ambient sound level is assumed to be 26 dBA in this case)
b. Technical Guidelines on Noise Control (Technische Anleitung zum Schutz gegen Lärm - TA Lärm, Germany) - Emission limit (applied to wind turbines) in rural "reinen Wohngebieten" (residential-only) areas is 35 dBA from 10:00 PM to 6:00 AM
c. New Zealand Standards (NZS) 6808:2010 Acoustics – Wind farm noise – This standard contains provisions for quiet (high amenity) locations, and recommends that the sound from a wind farm in such locations during the evening and night–time not exceed the background sound level by more than 5dB(A) or a level of 35dB(A) L90 (10min) whichever is the greater.

d. South Australia EPA Noise Guidelines for Wind Farms (July 2009) - The predicted equivalent noise level (LAeq, 10min), adjusted for tonality, should not exceed 35 dBA in 'rural living' zones (intended to have a relatively quiet amenity), or the background noise level by more than 5 dBA, whichever is greater.
e. Buller från vindkraft—Riktvärden för ljud från vindkraft (Noise from Wind Turbines—Recommended Limits For Sound From Wind Turbines), Naturvårdsverket (Stockholm, 2009) Sweden - Wind turbine noise is limited to 35 dBA in quiet (low background) areas.
f. Ekstern støj fra virksomheder(External Ind. Noise), Vejledning nr. 5 (Danish Environmental Protection Agency, 1984); Bekendtgørelse om støj fra vindmøller (Statutory Order on Noise from Wind Turbines), Bekendtgørelse nr. 1518 af 14, December 2006 (Danish Ministry of the Environment, 2006) - The evening/nighttime/weekend limit for industrial noise is 35 dBA in recreational areas. Wind turbine noise, specifically, is limited to 39 dBA (wind speed 8 m/s at 10m height) and 37 dBA (wind speed 6 m/s at 10m height) for noise sensitive areas, such as recreation.
g. ETSU-R-97 report "The Assessment and Rating of Noise from Wind Farms" contains several relevant recommendations (United Kingdom) - Noise from wind farms should be limited to 5dB(A) above background for both day-time and night-time (with the exception of the lower limits and simplified method described below). In low noise environments the day-time level of the LA90, 10min of the wind farm noise should be limited to an absolute level within the range of 35-40 dB(A).

Pedersen, E. and K. P. Waye, "Perception and annoyance due to wind turbine noise—A dose-response relationship," J. Acoust. Soc. Am. 116(6), 3460–3470 (2004).
Pedersen, E, F. van den Berg, R. Bakker, and J. Bouma, "Response to noise from modern wind frams in The Netherlands," J. Acoust. Soc. Am. 126(2), 634–643 (2009).
Pedersen, T. H. and K. S. Nielsen, "Genevirkning af støj fra vindmøller," (Annoyance noise from wind turbines), Report 150, Delta Akustik & Vib., 1996.

Page 4-79, Line 39. For facility lighting, additional impact reductions can be made by avoiding bluish lighting and using warm white or amber lighting for general security and human vision needs. Facility lighting should be less than Kelvin color temperature (warm white or amber in color).

MM-VIS-5 in Section 4.9.4-Mitigation Measures has been updated to incorporate these suggestions, as appropriate.

Page 4-79, Line 93. For large wind farms, OCAS or other aircraft-detection systems can improve safety and reduce light pollution impacts. NPS would appreciate if this was included as an alternative being investigated for mitigation.

The Federal Aviation Administration is assessing the suitability of Audio Visual Warning System applications to wind energy development. The BLM is unable to require mitigation treatments not yet approved by the air flight safety regulatory authority.

Page 4-81, Lines 16-17. In this sentence it says "*should construction activities occur at night…*" It was our understanding from the mitigation measures that construction activities would only be

This statement has been removed from Section 4.10-Noise Impacts.

conducted during the daytime hours (please see comment #1 for concerns with current daytime hours). We would appreciate if this was clarified in the document.

Page 4-82, Line 8. If the statement "expected to result in a minimal rise in transportation noise levels" was intended to apply to the US-95 corridor only, NPS respectfully requests this statement be clarified to read "expected to result in a minimal rise in US-95 transportation noise levels" so the statement is not misinterpreted to apply to all side roads that might be used by construction personnel and deliveries.

Section 4.10-Noise Impacts has been clarified as requested.

Page 4-82, Lines 27-33. The document describes land use and landscape designations that might be sensitive to noise and noise impacts, such as recreation. However, it does not identify the Nellis Wash Wilderness. This wilderness is located well within the noise contours illustrated for the 87 WTG layout on Figure 4.10-2. We request the Nellis Wash Wilderness be identified as a noise sensitive receptor in this analysis.

Refer to Figure 4.10-1. Noise Contours for the 96 WTG Layout Alternative and Figure 4.10-2. Noise Contours for the 87 WTG Layout Alternative for the illustration of sound levels in the LMNRA. These figures have been updated to illustrate the Nellis Wilderness Wash. Refer to Section 4.10.1-Indicators and Methodology and Section 4.10.2-Direct and Indirect Effects by Alternative for a discussion of noise modeling methodology and noise impacts.

Page 4-83, Lines 33-34. The distance between the proposed interconnect facility and the LMNRA boundary appears to be approximately 8,000 feet, less than the maximum distance which is claimed to create potential disturbances for residential receptors. NPS respectfully requests that the Final EIS disclose an estimated A-weighted sound level at the LMNRA boundary due to any low-frequency transformer hum that may result from the interconnect facility.

Page 4-83, Lines 44-45. The DEIS appropriately discloses the potential for power line corona noise near the Western's proposed switching station. It is understood that the amount of corona noise may vary considerably. If appropriate, NPS respectfully requests the Final EIS disclose an estimated corona noise level and increase in corona noise within the LMNRA due to the proposed Wind Turbine Generator alternatives. The estimates should be based, to the extent possible, on standard conditions expected for the Western Area Power Administration lines and a typical distance between power lines and the right-of-way edge within LMNRA.

Discussion of corona noise added to Section 4.10-Noise Impacts.

Page 4-95, Lines 9-19. The impact of the 87 turbine layout is described on recreation in this paragraph. There is no mention of the Nellis Wash Wilderness. As a Federal land manager, we are charged with the protection the wilderness character of this Wilderness. This includes the characteristics of wilderness as defined in the Wilderness Act of 1964; "untrammeled; undeveloped, natural, outstanding opportunities for solitude or primitive unconfined recreation or unique attributes or other features that reflect the character of this wilderness". While the activity is occurring outside of wilderness and there are no physical impacts on the wilderness, but there may be impacts on the wilderness character. Natural sounds are integral to the wilderness character of an area, and decisions that compromise this character are in conflict with the Wilderness Act. The BLM has previously stated that no impacts are anticipated to the Nellis Wash Wilderness. Given the proximity of the turbines to the wilderness area, the NPS has concerns with the accuracy of this statement.

Refer to Figure 4.10-1. Noise Contours for the 96 WTG Layout Alternative and Figure 4.10-2. Noise Contours for the 87 WTG Layout Alternative for the illustration of sound levels in the LMNRA. These figures have been updated to illustrate the Nellis Wilderness Wash. Refer to Section 4.10.1-Indicators and Methodology and Section 4.10.2-Direct and Indirect Effects by Alternative for a discussion of noise modeling methodology and noise impacts.

The NPS would appreciate if the BLM added a post-installation strategy that requires the applicant to be responsible for sound monitoring within LMNRA, as well as corrective action in the event that acceptable levels are exceeded. This monitoring effort would ensure that actual

Comment noted. This will be considered in the development of the ROW grant.

noise levels are not exceeding the 35 dBA nighttime standard and are not causing impacts to park resources (including wildlife) and visitor experience. Since the monitoring would occur in LMNRA boundaries, we recommend use of NPS Acoustical Sampling and Analysis Guide," available at http://science.nature.nps.gov/im/monitor/VitalSigns/BrowseProtocol.aspx. If through monitoring the applicant determines that noise levels are higher than predicted or there are impacts to park resources, the applicant should be responsible for implementing further mitigation measures.

We appreciate the opportunity to share these comments and should you have questions or require addition information, please contact Park Planner, Jim Holland at (702) 293-8986.

Sincerely,

for William K. Dickinson
Superintendent

United States Department of the Interior

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April 16, 2012
File Nos. 84320-2010-CPA-0019
84320-2011-TA-0152

Memorandum

To: Field Manager, Las Vegas Field Office, Bureau of Land Management, Las Vegas, Nevada

From: State Supervisor, Nevada Fish and Wildlife Office, Reno, Nevada

Subject: Comments on Searchlight Wind Energy Draft Environmental Impact Statement

Thank you for the opportunity to comment on the draft environmental impact statement (DEIS) for the construction, operation and maintenance, and decommissioning of a wind energy facility and associated infrastructure in Clark County, Nevada. We prepared this letter under the authority of and in accordance with provisions of the National Environmental Policy Act of 1969, as amended (42 U.S.C. 4321 4347), Migratory Bird Treaty Act of 1918 (MBTA), as amended (16 U.S.C. 703 *et seq.*), the Endangered Species Act of 1973 [16 U.S.C. 1531 *et seq.*; 87 Stat. 884], as amended (Act), and other authorities mandating the Fish and Wildlife Service's (Service) concern for environmental values.

We understand the Bureau of Land Management (BLM) proposes to grant a right-of-way (ROW) on public land to Searchlight Wind Energy, LLC, a wholly-owned subsidiary of Duke Energy, to develop a 200-megawatt wind energy generation project. In addition, BLM proposes to grant a ROW to Western Area Power Administration (Western) to construct, operate, and maintain a new switching station to interconnect the Searchlight Wind Energy Project with Western's Davis-Mead 230-kilovolt transmission line.

BLM's preferred project alternative is comprised of 87 wind turbine generators, new and upgraded project roads and crane pads, an operations and maintenance facility, equipment storage and construction laydown areas, an overhead transmission line, substations, a batch plant, and meteorological towers. Total surface disturbance is approximately 230 acres located within an area that is approximately 29 square miles, 60 miles southeast of Las Vegas, Nevada, and 40 miles north of Laughlin, Nevada.

We are concerned this project may adversely affect the Mojave desert tortoise (*Gopherus agassizii*) (tortoise), a species listed as threatened under the Act. The direct and interrelated impacts resulting from the BLM-preferred alternative to the tortoise are described in the DEIS and include disturbance of approximately 230 acres of tortoise habitat: 152 acres of permanently removed habitat, and 78 acres of temporary disturbance; death and injury to tortoises from various construction, trenching, and ground-disturbing activities; disturbance of normal tortoise activity patterns from construction noise and vibration; and risk of predation from a potential increase in numbers of common ravens and other raptors attracted to the area. The DEIS outlines applicant-committed mitigation measures to minimize these effects. However, we are concerned that indirect effects due to fragmentation and degradation of desert habitat are potentially large since the project occurs within an area of 29 square miles and are not adequately addressed in the DEIS. The potentially long-term effects resulting from the degradation and fragmentation of habitat may contribute to the loss of individuals from local breeding populations; create movement barriers; negatively affect the connectivity of wildlife populations; and increase the spread and presence of weeds thereby altering or increasing fire regime cycles. In order to strengthen the EIS analysis, we recommend a more in-depth discussion of these indirect and potentially long-term effects the project would have on tortoises.

Section 4.4.5.2 Desert Tortoise – Direct and Indirect Impacts by Alternatives has been updated to include a more in-depth discussion of indirect and potentially long-term effects on tortoises.

We are concerned about the effects of the project to avian and bat species, including golden eagles (*Aquila chrysaetos*), a species protected by the MBTA and Bald and Golden Eagle Protection Act. Many of the direct effects to birds and bats are similar to those of the desert tortoise and are described in the DEIS and include the removal of avian nesting habitat; the risk of injury and death to birds and bats, as well as the destruction of avian nests resulting from ground-disturbing activities. Many of the bird species detected during surveys use the habitat in the project area for nesting, and roosting bat habitat is located in and around the area. Although no golden eagle nests occur within the project area, several nests are present in adjacent areas. The habitat within the project area may be used by foraging or migrating golden eagles as well as other avian and bat species. Knowledge about the potential for bird and bat mortalities resulting from collisions with wind turbine generators is well established in the literature. The DEIS stated the project may attract additional ravens and raptors to the area, which increases the potential mortality risk to these species from the wind turbine generators. We are concerned about the mortality and injury risk from wind turbine generators to all birds and bats. Therefore, we strongly encourage BLM to develop a robust bird and bat conservation strategy that outlines monitoring and minimization measures to offset project effects and provide options should initial mitigation measures prove ineffective.

Refer to Section 5.2.3-Coordination on the BBCS and Appendix B-4: Bird and Bat Conservation Strategy (formerly referred to as the Avian and Bat Protection Plan [ABPP]), which have been added to the EIS.

We are concerned about the number of new and upgraded roads needed for the project. The increased number of roads would increase fragmentation and degradation of habitat, provide opportunities for higher levels of use in the area by recreationists, increase dust produced by traffic, and provide an increase risk of vehicular collisions with wildlife using the area. In addition, we are concerned with the widening of roads through mature Joshua tree forest. Estimates from literature age mature Joshua trees (*Yucca brevifolia)* to be between 800 and 1,000 years old. We recommend incorporating into the project's travel management plan a requirement for workers to carpool to reduce the number of vehicles utilizing project roads. This will help minimize impacts to air quality

Comment noted.

by reducing dust produced by traffic; and wildlife, including the tortoise and bird and bat species using the project area by minimizing the risk of death and injury from collisions with vehicles. We also recommend that BLM minimize the number of new and upgraded roads for this project and BLM only support the use of access routes that avoid the mature Joshua tree forest.

We are concerned about the effects from evaporation ponds and soil surface binding products to wildlife, including the tortoise, birds, and bats. Although the DEIS mentions evaporation ponds, there is no description of the number, location, or size in the DEIS. Also, the DEIS includes a measure to use a product to bind soil particles to prevent dust, but no analysis of their effects to wildlife was made. Therefore, we recommend BLM disclose possible impacts to wildlife from evaporation ponds and application of a soil binding product and include mitigation measures to avoid or offset any impacts to wildlife in the EIS.

We encourage BLM and the project applicant develop robust monitoring and mitigation plans within an adaptive management framework to assess long-term project impacts on all wildlife species, especially the desert tortoise, birds, and bats. Monitoring methods should be developed to evaluate the effectiveness of mitigation measures to minimize impacts to birds and bats. Thresholds and triggers to adapt ineffective measures should be proposed and implemented during the construction and operation of the project. These plans should include effective monitoring strategies to evaluate the effectiveness of minimization measures; determine if tortoise, avian, and bat mortalities are within levels expected based on pre-construction surveys; and assess impacts of the project on all aspects of desert tortoise biology, including breeding and wintering behavior and movement patterns.

In summary, we recommend BLM provide a more thorough analysis of effects, including long-term and indirect effects, of the project to wildlife species, especially to tortoises, birds, and bats in the EIS. The analysis should disclose project impacts to species and include measures to avoid, minimize or mitigate impacts in an adaptive management framework. Furthermore, we recommend that BLM consider environmental impacts of each alternative and select the alternative least damaging to fish and wildlife resources as the preferred alternative in the EIS. Although we do agree with BLM's selection of the preferred alternative as it is the option with the least impacts to resources, we ask that BLM address our concerns as stated above.

We appreciate the opportunity to comment on the DEIS for the Searchlight Wind Energy Project in Clark County, Nevada. If you have any questions regarding our comments, please contact Susan Cooper in the Nevada Fish and Wildlife Office in Las Vegas at (702) 515-5230

for Edward D. Koch

Section 4.4.4.2- Direct and Indirect Impacts by Alternative has been updated to disclose potential impacts of the artificial ponds on general wildlife. No soil surface binding products would be utilized per BLM policy. The number of ponds required has not been determined; however, ponds would be within the temporary staging and laydown areas. Searchlight Wind LLC will obtain all required permits for artificial ponds from NDOW and NDEP, as applicable.

Refer to Section 5.2.3-Coordination on the BBCS, Appendix B-4: Bird and Bat Conservation Strategy (formerly referred to as the Avian and Bat Protection Plan [ABPP]), and Appendix B-3: Terrestrial Wildlife Plan, which have been added to the EIS

Section 4.4.5.2 Desert Tortoise – Direct and Indirect Impacts by Alternatives, Section 4.4.5.8-Bats - Direct and Indirect Effects by Alternative, 4.4.5.11-Migratory Birds - Direct and Indirect Effects by Alternative, and Appendix B-4: Bird and Bat Conservation Strategy have been updated to address these concerns.

BLM has chosen the 87-WTG Alternative based as the alternative with the least impacts.