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

NOV 16 2009

Hal Peterson, Middle Kyle Complex Project Manager
Spring Mountains National Recreation Area
4701 North Torrey Pines Drive
Las Vegas, Nevada 89130

Subject: Draft Environmental Impact Statement (DEIS) for the Middle Kyle Complex, Spring Mountains National Recreation Area, Humboldt-Toiyabe National Forest, Clark County, Nevada (CEQ# 20090332)

Dear Mr. Peterson:

The U.S. Environmental Protection Agency (EPA) has reviewed the above-referenced document pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), and our NEPA review authority under Section 309 of the Clean Air Act. Our detailed comments are enclosed.

EPA commends the Forest Service effort to balance the multiple uses of the popular Middle Kyle Complex located in the Humboldt-Toiyabe National Forest. We acknowledge that the Project is a positive step in addressing resource impacts from recreational uses. Of special note is the proposal to prohibit dispersed camping within 300 feet on either side of Forest Service roads and trails, closure of unauthorized user created roads and trails in the project area and restoration of various abandoned areas to natural vegetative condition.

Based on our review, we have rated the DEIS as Environmental Concerns – Insufficient Information (EC-2) (see enclosed "*Summary of Rating Definitions*") due to our concerns regarding potential impacts to water quality, hydrology and aquatic resources, critical habitat and air quality. Additional information is also necessary to fully describe the Purpose and Need and monitoring and enforcement commitments.

While we support the Forest Service goal to meet desired future conditions and provide protection for sensitive species and ecosystems, we recommend the Forest Service modify the alternatives under consideration to further reduce impacts to air and water quality, critical habitat, and aquatic resources, and to minimize habitat fragmentation. We also urge the Forest Service to describe and implement an aggressive and reliable monitoring and enforcement program.

We appreciate the opportunity to review this DEIS. When the FEIS is released for public review, please send one (1) hard copy to the address above (mail code: CED-2). If you have any questions, please contact me at (415) 972-3521 or contact Tom Plenys, the lead reviewer for this project. Tom can be reached at (415) 972-3238 or plenys.thomas@epa.gov.

Sincerely,

Kathleen Goforth, Manager
Environmental Review Office

Enclosure:
Summary of EPA Rating Definitions
Detailed Comments

cc: Edward Monnig, Forest Supervisor, Humboldt Toiyabe National Forest
Jed Botsford, Bureau of Land Management
Lewis Wallenmeyer, Clark County Department of Air Quality and Environmental Management
Roddy Shepard, Nevada Department of Wildlife

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.

EPA DETAILED DEIS COMMENTS FOR THE MIDDLE KYLE COMPLEX, SPRING MOUNTAINS NATIONAL RECREATION AREA, HUMBOLDT-TOIYABE NATIONAL FOREST, CLARK COUNTY, NEVADA, NOVEMBER 16, 2009

Purpose and Need

The Draft Environmental Impact Statement (DEIS) identifies three "Need-for-Action Statements" for the Project, including the need to provide new Spring Mountain National Recreation Area (SMNRA) recreation facilities and visitor services that a) respond to anticipated increased SMNRA recreation demands from population growth in Las Vegas and Clark County; b) respond to future types of public recreation activities and trends; c) direct recreation users to less congested areas of the SMNRA and into developed recreation sites; and d) are outside of upper Kyle, Lee, and Deer Creek Canyons to reduce natural resource impacts on major concentrations of plant and wildlife species of concern.

The DEIS does not conclusively demonstrate how the proposed construction and operation of a recreational complex on approximately 4,300 acres in Kyle Canyon meet the above Need Statement. For example, data are not provided that illustrate the need for the expanded infrastructure, nor how proposed actions address use levels and safety needs. Of specific concern are how new facilities may result in increased traffic and visitors that could result in cumulative watershed effects and may adversely affect sensitive aquatic resources and threatened species.

Recommendations:

- The Final EIS (FEIS) should provide specific examples and park use data, and incorporate references to demonstrate the need for the proposed recreation complex. For instance, include information on existing trail use, percentage of trails for different hiking abilities, current use of hiked-into terrain, demand for access to additional terrain, seasonal camping demand, and increases in vehicular traffic and off-highway vehicle (OHV) use. We recommend the FEIS also include an evaluation of the impacts from additional vehicular and OHV traffic, including an analysis during the seasons of poorest air quality.

- The FEIS should include a cost comparison of the action alternatives and describe the implementation priority for the facilities, trail additions, modifications and closures, and other Project infrastructure.

The DEIS indicates that rapid population growth of Clark County, Nevada is exerting pressure on existing recreation facilities in the SMNRA (at p. 1-3). The DEIS improvements to this Middle Kyle Complex are considered necessary to provide for the existing and projected demand attributed to large-scale growth in the greater Las Vegas Area. We commend the Forest Service for including extensive projected growth studies as part of the DEIS. However, we note the current market projections discussion in Section 1.3 is based on the Clark County Department of Comprehensive Planning Study from 2008 and the Hutton study from 2005. In light of the major economic events since early 2008, the FEIS should include updated projections as a result of the recent economic downturn.

For example, we note that the DEIS mentions that the 16,000 new home master plan at the intersection of SR 157 and US95 has been put on hold. The FEIS should fully discuss how future growth projections have been or could be significantly impacted by recent economic factors, such as the continued downturn in the housing market, the more recent credit crisis, and the sustained economic recession, which will likely have a slowing impact on growth in these areas as well as travel demand to and from Las Vegas.

Recommendation:

- Update all growth related projections to reflect the latest economic developments and visitor forecasts and update the evaluation of alternatives, as appropriate. The impact of these recent events on previous growth projections should be considered, and their relevance to the Project and future plans for the SMNRA discussed. Each of the alternatives analyzed should be considered in light of the most recent forecasts.

Integrate the Agency Direction and Guidance Documents into this Environmental Analysis

The DEIS references the Clark County Multiple Species Habitat Conservation Plan (HCP), the Conservation Agreement for the Spring Mountains National Recreation Area (CA), and the Spring Mountains National Recreation Area Landscape Assessment (LA). While the DEIS indicates that each of these documents provides guidelines for management of the SMNRA and development of the Proposed Action and alternatives, the DEIS does not provide a concise or tabulated description of the data and analyses relied upon in the DEIS, nor fully integrate these analyses into the analysis for the Project. The DEIS also indicates that the CA has expired and is in the process of being amended. The DEIS should describe the implications of the CA revisions and how the Project will conform to the modified CA expected in 2010.

Recommendation:

- The FEIS should provide a summary of the decisions and actions approved in the HCP, CA, and LA and describe how they relate to the Project. This summary should include any proposed actions; the direct, indirect, and cumulative environmental effects of these actions; and mitigation and monitoring commitments. We recommend including the Executive Summaries of these documents in an appendix in the FEIS.

Water Quality

As the designated water quality management agency under the Clean Water Act Section 208 Management Agency Agreement, the Forest Service is required to implement Best Management Practices (BMPs) and other measures to achieve full compliance with all applicable State water quality standards. Implementation of BMP measures alone does not necessarily ensure full compliance with State water quality standards. The DEIS indicates

that operation and use of the recreational facilities could also reduce water quality and productivity and cause accelerated erosion and subsequent sedimentation of downstream waters (at p. 3.1-14). The DEIS also indicates that implementation of BMPs and stormwater management practices will minimize these effects and no significant adverse impacts are anticipated (at p. 3.1-14). While we support the inclusion of the BMPs in the FEIS, additional management actions beyond BMPs may be required to achieve full compliance with all applicable water quality standards.

Additionally, the DEIS indicates that "no streams in the project area are listed as impaired pursuant to the Clean Water Act Section 303(d); however, the Las Vegas Wash from Telephone Line Road to the confluence of Las Vegas Wash with Lake Mead, of which these streams are tributaries, is listed as impaired or as needing further study for possible listing as an impaired water resource by the State of Nevada, as required by the Clean Water Act Section 303(d)" (at p. 3.1-13). The impairment status of the Las Vegas Wash should be clarified and further explained. Additionally, Section 3.1.4 on Hydrology does not analyze the Las Vegas Wash any further nor does the Section discuss the implications of a future listing as an impaired water.

Recommendations:

- The Final Environmental Impact Statement (FEIS) should describe water quality standards and BMPs for the project area, including standards for pathogens and Clean Water Act antidegradation requirements. Evaluate the Forest Service's ability to ensure full compliance with water quality standards through the use of BMPs and identify additional measures that may be necessary to achieve compliance.

- Discuss the implications of a future listing of the Las Vegas Wash as an impaired water resource and include specific measures within the EIS that could help protect the wash from further degradation as a result of the project.

- The FEIS should expand the evaluation of potential impacts to stream channels and the waters of the United States. For example, state the percentage of stream channels in the area that may be affected, and the significance of the potential impacts on those channels, whether these impacts may be in critical or vulnerable stream channel locations, and the ecological significance of these resources. Each table should clearly state the measurement units for the presented data.

The FEIS should discuss whether the proposed reconstructed and new campsites are within 50 feet of water, regardless of the site type, and whether they would contribute sediment and/or manure to surface water with significant local adverse effects. Furthermore, the FEIS should disclose whether any stockholding sites would be located less than 50 feet from water, and whether they are contributing substances to water resulting in water quality concerns. These adverse water quality effects would be of significant concern given the use of surface waters by other wilderness users.

Recommendations:

- The Forest Service should work closely with pack and recreational livestock operators to address water quality impacts caused by any stockholding sites and campsites less than 50 feet from water.
- We recommend closure or relocation of campsite and stockholding areas with significant and observable adverse effects to water quality.

The DEIS does not describe existing environmental conditions at any current stations for pack and recreational livestock, although they are mentioned in the DEIS on pages 3.3-27 and 28. Nor does the DEIS evaluate potential environmental effects of pack and recreational livestock or the effect of commercial pack stock use authorizations on the environmental conditions at any pack stations.

Recommendation:

- The FEIS should include a description of existing conditions at current stations for pack and recreational livestock, especially those located on Forest Service land. Evaluate the potential environmental effects of action alternatives and use authorization on existing conditions. For example, describe existing conditions and potential effects of reduced or increased use authorization on water quality, meadow conditions, and threatened species habitat at pack station locations.

The DEIS does not appear to describe or address packstock watering practices which could contribute to water quality impacts.

Recommendation:

- The FEIS should describe packstock watering practices and the potential for environmental impacts to water quality, threatened species, fish and wildlife, and sensitive aquatic habitat. If potential impacts are likely, describe alternate stock management practices and mitigation measures to reduce these impacts.

The DEIS should describe any impact to water quality from campsites, eroded/incised trails, stockholding, and grazing areas. The DEIS should describe water quality monitoring and include quantitative data to support any assumptions.

Recommendation:

- The FEIS should describe current water quality monitoring, if any. EPA recommends implementing a monitoring program in areas with known moderate to severe water quality degradation and high use. If funding and staffing resources are limited, the Forest Service should consider a limited, one-time water quality sampling project to validate water quality assumptions and

determine if human health risks are present in drinking water sources (e.g. *E. coli*, *Giardia*, other bacterial pollutants).

Hydrology and Aquatic Resources

Hydrology

Natural washes perform a diversity of hydrologic and biogeochemical 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 are adapted to the unique conditions of these systems.

Reconstruction of the Kyle Canyon Campground is proposed along the Kyle Wash (at Figure 2-6). The FEIS should commit to the use of natural washes, in their present location and natural form, to the maximum extent practicable with the inclusion adequate natural buffers for flood control. The FEIS should identify how hydrological connectivity along the Project corridor supports the intent to utilize natural stream channels where they can provide adequate protection from flooding. The potential damage that would result from altered, flat-bottomed washes includes alterations to the hydrological functions that natural channels provide in arid ecosystems: adequate capacity for flood control, energy dissipation, and sediment movement, as well as impacts to valuable habitat for desert species. The FEIS should provide adequate hydrological modeling to demonstrate that downstream flows will not be disrupted due to proposed changes to any natural washes, the creation of wetlands, or the excavation of large amounts of sediment.

Recommendations:

- Commit to the use of natural washes, in their present location and natural form, to the maximum extent practicable with the inclusion of adequate natural buffers for flood control.
- Identify how hydrological connectivity along the Project corridor supports the intent to utilize natural stream channels where they can provide adequate protection from flooding.
- Provide adequate hydrological modeling to demonstrate that downstream flows will not be disrupted due to proposed changes to any natural washes, the creation of wetlands, or the excavation of large amounts of sediment.
- Identify where construction of the Project may provide for an opportunity to improve obstructed natural flows resulting from project construction.

Aquatic Resources

The purpose of the Clean Water Act is to restore and maintain the chemical, physical and biological integrity of waters of the United States (waters). These goals are

achieved, in part, by controlling discharges of dredged or fill material pursuant to EPA's *Federal Guidelines for Specification of Disposal Sites for Dredged or Fill Materials* (40 CFR 230), promulgated pursuant to Section 404(b)(1) of the CWA (Guidelines). Fundamental to the Guidelines is the principle that dredged or fill material should not be discharged into the aquatic ecosystem, unless it can be demonstrated that there is no less environmentally damaging practicable alternative that achieves the Applicant's project purpose. In addition, no discharge can be permitted if it will cause or contribute to significant degradation of waters.

The DEIS presents contradictory information as to the status of the jurisdictional determination for the Project. Section 3.7-17 indicates there are no wetlands within the project area under the jurisdiction of the U.S. Army Corps of Engineers (Corps) and there are no non-jurisdictional wetlands that would be adversely impacted from implementation of either action alternative. Section 3.7.7 indicates that coordination with Corps regarding the jurisdictional determination of Kyle Wash and Section 404 and 401 permitting requirements is ongoing and will be determined prior to publication of the FEIS.

The FEIS should include the Corps verification of the delineation of the extent of waters, including wetlands, on the Project site. The FEIS should provide sufficient information to discern the extent of impacts to waters.

Recommendations:

- The Forest Service should identify the location, extent, and functions and values of all jurisdictional wetlands within the project areas and potential impacts to these wetlands from the proposed project.

- The FEIS should establish measures that prevent adverse impacts to the hydrology and biology of wetlands and meadows.

Pursuant to the Guidelines, the applicant bears the burden of clearly demonstrating that the preferred alternative is the least environmentally damaging practicable alternative (LEDPA) that achieves the overall project purpose, while not causing or contributing to significant degradation of the aquatic ecosystem. Identification of the LEDPA is achieved by performing an alternatives analysis that estimates the direct, indirect, and cumulative impacts to jurisdictional waters resulting from each alternative considered. Project alternatives that are not practicable and do not meet the project purpose are eliminated. The LEDPA is the remaining alternative with the fewest impacts to aquatic resources, so long as it does not have other significant adverse environmental consequences. Only when an analysis is correctly structured can the applicant and the permitting authority be assured that no discharge other than the practicable alternative with the least adverse impact on the aquatic ecosystem has been selected (40 CFR 230.10(a)). In addition, the applicant must clearly demonstrate that alternatives that do not result in the discharge of dredged or fill material in aquatic sites are either not practicable, or have other significant adverse environmental consequences.

EPA offers the following recommendations to help facilitate compliance of the project with the Section 404 Guidelines, in the event it is determined that jurisdictional waters will be affected:

Recommendations:

- The FEIS should include an evaluation of the project alternatives in order to demonstrate the project's compliance with the 404(b)(1) Guidelines. The alternatives analysis should include a reasonable range of alternatives that meet the Project purpose while avoiding and minimizing damage to waters. If, under the proposed project, dredged or fill material would be discharged into waters of the U.S., the FEIS should discuss alternatives to avoid those discharges.

- If a discharge is permitted, the FEIS should discuss how potential impacts would be minimized and mitigated. This discussion should include: (a) acreage and habitat type of waters of the U.S. that would be created, restored, or preserved; (b) water sources to maintain the mitigation area; (c) a revegetation plan utilizing native plants; (d) maintenance and monitoring plans, including performance standards to determine mitigation success; (e) an Adaptive Management Plan; (f) the parties that would be ultimately responsible for the plan's success; and (g) contingency plans that would be enacted if the original plan fails. Mitigation should be implemented in advance of the impacts to avoid habitat losses due to the lag time between the occurrence of the impact and successful mitigation.

Air Quality

Although the DEIS reports in Section 3.1.1 that the Project will have no adverse operational or construction impacts to air quality, the document contains insufficient information to support this conclusion. While we recognize the DEIS references an Air Quality Specialist Report for the Middle Kyle Complex, the DEIS itself does not comprehensively assess the Project's operational and construction direct, indirect, or cumulative impacts to air quality. To address this insufficiency, the FEIS should include a complete description of potential impacts and commitments to reduce those impacts. In particular, EPA has concerns regarding:

1) the minimal mitigation measures to curb particulate matter (PM) and nitrogen oxides (NOx) emissions from construction equipment,
2) the absence of data describing additional vehicular traffic and resulting emissions from the Project, and
3) the lack of discussion and analysis of OHV and helipad use.

Emissions from diesel construction equipment, haul trucks, OHVs and other vehicles associated with this Project include PM, sulfur oxides, volatile organic compounds (VOCs), and NOx. VOCs and NOx are precursors to ozone. In March 2008, EPA further tightened the National Ambient Air Quality Standard (NAAQS) for ozone. Clark County is

currently within a non-attainment area for carbon monoxide (CO), PM_{10}, and 8-hour ozone. Note that the nonattainment boundaries do not follow the air basin or county boundaries and are different for each pollutant and area. The FEIS should include a discussion of the regional impacts of increased NOx and VOC emissions on the area's ability to attain the ozone standards.

The DEIS does not state whether there are existing visibility concerns caused by dust generated by motorized use, valleys subject to inversion conditions, or smoke from residential areas, dispersed camping, timber management activities, or wildfires. Direct effects of fugitive dust and smoke are reduced visibility on and adjacent to routes and increased levels of particulate matter less than 10 microns in diameter (PM_{10}), and particulate matter less than 2.5 microns in diameter ($PM_{2.5}$) which are human health concerns. We are concerned with the potential increase in ozone, fugitive dust, and smoke in vulnerable viewsheds and areas of high use which could have adverse impacts on smog levels, visibility, and human health.

Recommendations:

- The FEIS should include a discussion of the regional impacts of increased NOx and VOC emissions on the area's ability to attain the ozone standards
- The section for Air Quality should include a detailed description of conducted air quality analyses, including analysis of current and projected emissions from vehicular, OHV and helicopter usage, anticipated exceedences of standards, and mitigation measures to address these impacts.
- The FEIS should provide a description and evaluation of the potential visibility impacts from fugitive dust, ozone, and smoke in the project area, in addition to effects on nearby Class I airsheds. We recommend the evaluation include information on dust generated in motorized vehicle high-use areas, the presence and frequency of valley inversion conditions, and the extent of existing visibility concerns as a result of smog and smoke.

EPA commends the Forest Service for incorporating mitigation strategies to reduce or minimize fugitive dust emissions (at p. 2-33). However, in addition to a fugitive dust control plan, this Project should incorporate more stringent emission controls for PM and ozone precursors for construction-related activity. There are additional mitigation measures that can be considered and applied to reduce emissions. Under NEPA, "all relevant, reasonable mitigation measures that could improve the project are to be identified. Mitigation measures must be considered even for impacts that by themselves would not be considered significant" (see Council on Environmental Quality (CEQ), 1981, "Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations").

All applicable state and local requirements and the additional and/or revised measures listed below should be included in the FEIS and ROD in order to reduce impacts associated with emissions of PM and other toxics from construction-related activities:

Recommendations:

Due to the serious nature of the PM_{10} and 8-hour ozone conditions in Clark County, EPA recommends that the best available control measures (BACM) for these pollutants be implemented at all times. At a minimum, these measures should be incorporated into the ROD. We recommend that all applicable requirements under local rules and the following additional measures be incorporated into a Construction Emissions Mitigation Plan and that the FEIS and ROD incorporate the Construction Emissions Mitigation Plan.

Fugitive Dust Source Controls:

- Stabilize open storage piles and disturbed areas by covering and/or applying water or chemical/organic dust palliative where appropriate. This applies to both inactive and active sites, during workdays, weekends, holidays, and windy conditions.
- Install wind fencing, and phase grading operations, where appropriate, and operate water trucks for stabilization of surfaces under windy conditions.
- When hauling material and operating non-earthmoving equipment, prevent spillage, and limit speeds to 15 miles per hour (mph). Limit speed of earth-moving equipment to 10 mph.

Mobile and Stationary Source Controls:

- Reduce use, trips, and unnecessary idling from heavy equipment.
- Maintain and tune engines per manufacturer's specifications to perform at California Air Resources Board (CARB) and/or EPA certification, where applicable, levels and to perform at verified standards applicable to retrofit technologies. Employ periodic, unscheduled inspections to limit unnecessary idling and to ensure that construction equipment is properly maintained, tuned, and modified consistent with established specifications. CARB has a number of mobile source anti-idling requirements. See their website at: http://www.arb.ca.gov/msprog/truck-idling/truck-idling.htm
- Prohibit any tampering with engines and require continuing adherence to manufacturer's recommendations
- If practicable, lease new, clean equipment meeting the most stringent of applicable Federal or State Standards. In general, only Tier 2 or newer engines should be employed in the construction phase.
- Utilize EPA-registered particulate traps and other appropriate controls where suitable, to reduce emissions of diesel particulate matter and other pollutants at the construction site.

Administrative controls:

- Identify all commitments to reduce construction emissions and incorporate these reductions into the air quality analysis to reflect

additional air quality improvements that would result from adopting specific air quality measures.

- Identify where implementation of mitigation measures is rejected based on economic infeasibility.
- Prepare an inventory of all equipment prior to construction, and identify the suitability of add-on emission controls for each piece of equipment before groundbreaking. (Suitability of control devices is based on: whether there is reduced normal availability of the construction equipment due to increased downtime and/or power output, whether there may be significant damage caused to the construction equipment engine, or whether there may be a significant risk to nearby workers or the public.) Meet CARB diesel fuel requirement for off-road and on-highway (i.e., 15 ppm), and where appropriate use alternative fuels such as natural gas and electric.
- Develop a construction traffic and parking management plan that minimizes traffic interference and maintains traffic flow.
- Identify sensitive receptors in the project area, such as children, elderly, and infirm, and specify the means by which you will minimize impacts to these populations. For example, locate construction equipment and staging zones away from sensitive receptors and fresh air intakes to buildings and air conditioners.

If specific mitigation measures are used for purposes of determining total emission levels, a firm commitment to implementing the mitigation measures should be included in the FEIS.

Recommendation:

- The FEIS should identify and commit to specific mitigation measures or specific emission reduction target levels not only for fugitive dust emissions, but also for exhaust emissions.

Wildlife Impacts

Habitat Fragmentation

The DEIS indicates that potential wildlife habitat fragmentation may occur in areas that are currently undeveloped – north of SR 157 and along the bench south of SR 157 (at p. 3.3-2). The FEIS should address wildlife movement impacts associated with the proposal and present mitigating measures to maintain wildlife movement at specific locations in the Project area, especially where wildlife movement already occurs. Monitoring to determine where wildlife currently crossover the existing roadways is critical to determining where the Forest Service should commit to wildlife movement features within the design of the proposed project. In addition, proposed stream and ephemeral wash crossings should be designed to maintain or improve existing wildlife passages, as appropriate.

EPA provides the following recommendations for the FEIS. Much of the information identified below will contribute to a better understanding of the measures needed to reduce impacts to biological resources.

Recommendations:

- The FEIS should include a commitment to incorporate into the design of the Project specific wildlife crossing features that are developed to support key movement patterns for each species. Information such as roadkill data can inform placement of larger wildlife movement structures. Monitoring of wildlife usage of existing roadways is important for designing how the Project can incorporate design measures to maintain existing movement.

- Identify the connections that would likely remain after construction of the Project and highlight these areas as "connectivity zones" for protection and preservation. In the FEIS, identify specific commitments for preservation of these corridors through mitigation measures and cooperative agreements.

- As applicable, disclose how fencing in the Project area will affect wildlife movement and discuss how fencing will be integrated with any identified "connectivity zones".

Critical Habitat

The proposed project could have direct effects on the habitat of the Spring Mountains acastus checkerspot butterfly. The DEIS identified the potential effects on butterfly habitat as a significant issue in the DEIS due to construction of the Kyle Canyon Wash Trail and utility right-of-ways. Section 3.7.4 ultimately identifies the permanent acreage loss of butterfly habitat as irreversible and irretrievable.

Proposed designs for the Project should avoid and minimize impacts to all federally threatened and endangered species, as well as Forest Service species of concern and State species of concern. Any mitigation measures that resulted from consultation with the US Fish and Wildlife Service to protect sensitive biological resources should be included in the FEIS and, ultimately, the ROD. While the DEIS describes mitigation measures for potential impacts to sensitive species, it does not provide a clear commitment to implement these measures. The FEIS should also clearly articulate under which alternatives sensitive biological resources would be least impacted and to what extent impacts can be mitigated.

Recommendations:

- A clear commitment to implement mitigation measures to avoid and minimize adverse effects to the habitat of the Spring Mountains acastus checkerspot butterfly and other sensitive species should be made in the FEIS. These measures should include the identification of sensitive habitats and seasons, a

user education program, pet restrictions, and monitoring and enforcement of trail use and pet restrictions.

- Mitigation measures that resulted from consultation with the US Fish and Wildlife Service to protect sensitive biological resources should be included in the FEIS and, ultimately, the ROD

Monitoring and Enforcement

It is important that wildlife protection, vegetation management, and erosion control goals be achieved to minimize the adverse effects of the proposed Project. While we recognize the monitoring and implementation strategy described with respect to invasive and non-invasive species, we believe the public and decision makers would benefit if this strategy is expanded to include specific information on funding, monitoring and enforcement criteria, thresholds, and priorities.

Recommendation:

- We recommend development of a detailed Monitoring and Enforcement Strategy. Such a Strategy should include specific information on the monitoring and enforcement program priorities, focus areas (e.g., issues, specific locations), personnel needs, costs, and funding sources. We recommend the FEIS demonstrate that the proposed monitoring and enforcement strategy is adequate to assure that motorized vehicle use will not violate access restrictions or exacerbate already identified road-related resource problems. We recommend the Monitoring and Enforcement Strategy be periodically updated (e.g., annually or biennially).