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

February 25, 2008

Robert F. Janson
Acting Executive Director
Asset Management
U.S. Customs and Border Protection
1300 Pennsylvania Avenue, NW
Room 3.4D
Washington, DC 20229

Subject: Draft Environmental Impact Statement for the Proposed Construction, Operation, and Maintenance of the Proposed Tactical Infrastructure, U.S. Border Patrol San Diego Sector, California (CEQ# 20070555)

Dear Mr. Janson:

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. Thank you for agreeing to accept our comments late, per the telephone conversation between Marthea Rountree of EPA Headquarters office and Dave Reese of Department of Homeland Security on February 13, 2008. Our detailed comments are enclosed.

The proposed project is to construct and operate approximately 4.4 miles of tactical infrastructure and 5.2 miles of supporting patrol roads along the U.S./Mexico international border adjacent to or including the Otay Mountain Wilderness area, with a segment extending the existing fence west of Tecate in San Diego County, California. The proposed tactical infrastructure would include fences, access roads, patrol roads, and construction staging areas.

Based on our review, we have rated the DEIS as Environmental Objections – Insufficient Information (EO-2) (see enclosed "Summary of Rating Definitions"). EPA has objections to the filling of two well developed riparian corridors in Copper and Buttewig Canyons and has concerns regarding high potential for significantly increasing erosion in the watershed from the combination of road widening, new vehicle trail construction, fence installation on steep slopes, and fence installation across intermittent streams. This combination of impacts is expected to have unacceptable adverse impacts under Section 404 of the Clean Water Act, especially considering cumulative impacts from other border fence projects that are proposed in the Tijuana River Watershed. These impacts must be avoided to provide adequate protection for the environment.

EPA recommends that the U.S. Customs and Border Protection (CBP) develop alternatives that avoid the filling of Copper and Buttewig Canyons. We recommend the use of clear-span bridges to cross drainages, wherever practicable, or the use of bottomless culverts or oversized box culverts buried below stream grade to encourage natural channel substrate for terrestrial and aquatic life and a more natural sediment transport regime.

EPA appreciates the opportunity to review this DEIS and will contact you to discuss our comments in coordination with the U.S. Army Corps of Engineers. When the FEIS is released, please send two hard copies and a CD to this office at the address above (mail code: CED-2). If you have any questions, please contact me at 415-972-3846 or Karen Vitulano, the lead reviewer for this project, at 415-947-4178 or vitulano.karen@epa.gov.

Sincerely,

For Nova Blazej, Manager
Environmental Review Office

Enclosure: Summary of EPA Rating Definitions
EPA's Detailed Comments

cc: Charles McGregor, U.S. Army Corps of Engineers, Fort Worth District
Patricia Sanderson Port, U.S. Department of the Interior
Kurt Roblek, U.S. Fish and Wildlife Service
Robert Smith, U.S. Army Corps of Engineers, Los Angeles District
Justin Seastrand, Bureau of Land Management, Otay Mountain Wilderness Area
Harry Cuero, Lisa Gover, Campo Band of Kumeyaay Indians
Leroy Elliott, Keith Adkins, Manzanita Band of Kumeyaay
Daniel Tucker, Anna Rzepko, Sycuan Band of the Kumeyaay Nation
Harlan Pinto, Sr., Desiderio Vela, Ewiiaapaayp Band of Kumayaay

SUMMARY OF EPA RATING DEFINITIONS

This rating system was developed as a means to summarize EPA's 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 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 must 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 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 COMMENTS FOR THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE PROPOSED CONSTRUCTION, OPERATION, AND MAINTENANCE OF TACTICAL INFRASTRUCTURE, U.S. BORDER PATROL SAN DIEGO SECTOR, FEBRUARY 25, 2008

IMPACTS TO WATERS OF THE U.S.

Filling of Copper and Buttewig Canyons

EPA has objections to the filling of two well developed riparian corridors in Copper and Buttewig Canyons (p. 4-20). The riparian corridors in these canyons are up to 60 feet wide and contain intermittent streams. The presence of boulders up to 2 meters in diameter and rocks strewn across canyon bottoms are evidence that there is heavy flow in these canyons during precipitation events (p. 3-21).

Under Section 404 of the Clean Water Act, dredged or fill material should not be discharged into the aquatic ecosystem unless it can be demonstrated that such a discharge will not have an unacceptable adverse impact either individually or in combination with known and/or probable impacts of other activities affecting the ecosystem (40 CFR Part 230). Based on the information in the DEIS, it appears that the fill of these canyons, along with the project's high potential for significantly increasing erosion in the watershed from the combination of road widening, new vehicle trail construction, fence installation on steep slopes, and fence installation across intermittent streams, would be expected to have unacceptable adverse impacts under Section 404. This is especially true considering the cumulative impacts from the other border fence projects that are proposed in the Tijuana River Watershed.

> *Recommendation*: EPA recommends that the U.S. Customs and Border Protection (CBP) develop alternatives that avoid fill in these canyons. The use of clear-span bridges to cross drainages should occur wherever practicable with piers or abutments placed above ordinary high water when clear-span is infeasible. The use of bottomless culverts or oversized box culverts buried below stream grade to encourage natural channel substrate for terrestrial and aquatic life and a more natural sediment transport regime would also minimize impacts. The CBP should minimize the use of hardscape bank materials such as riprap, and incorporate more environmentally-friendly bank-stabilization materials, such as native riparian vegetation, into project design. CBP should avoid locating in-stream sediment, flood debris and water quality detention basins within waters of the United States.

Compliance with Section 404 of the Clean Water Act

The DEIS states that CBP will comply with Section 404 of the CWA (p. 4-13), implying that CWA Section 404-related impact analysis and mitigation is deferred until future permitting actions. However, EPA recommends coordinating the National Environmental Policy Act (NEPA) and CWA Section 404 permitting processes to streamline the environmental review required for the project and ensure that the thresholds of the CWA Section 404(b)(1) Guidelines are satisfied through the environmental review process, instead of being deferred to future CWA permitting. Because only the Least Environmentally Damaging Practicable Alternative (LEDPA) can be permitted pursuant to the 404 (b)(1) Guidelines (40 CFR Part 230), the FEIS should provide enough information to demonstrate that adverse impacts to resources have been

avoided and minimized to the greatest extent feasible and that any unavoidable adverse impacts from the project's construction and operation are adequately mitigated. The alternatives analysis in the DEIS is not sufficient to comply with the CWA Section 404(b)1 Guidelines. There is an insufficient range of alternatives, and an alternative that avoids the discharge of dredged or fill material to waters of the U.S. was not evaluated.

The level of analysis for alternatives that were evaluated is not sufficient to adequately assess the direct, indirect and cumulative impacts to waters of the U.S., which is needed to determine if the proposed action is the LEDPA. The delineations for wetlands and waters of the U.S. were not conducted in time for inclusion in the DEIS (p. 3-21). Without adequate information on the location, classification and function of these waters, CBP cannot demonstrate avoidance and minimization of impacts as required under the CWA Section 404 (b)(1) Guidelines (40 CFR Part 230).

Additionally, the DEIS does not identify the type of primary pedestrian fence design that will be used, which will largely influence impacts. The DEIS only states that the fence design must be engineered not to impede the natural flow of water and also must extend below ground (p. 2-16). The mitigation measures for impacts to waters of the U.S. state that construction of the project would result in no net loss of wetlands because no wetlands would be permanently drained or filled (p. 5-7). This conclusion is premature since no information is disclosed on quantity or location of fill in the canyons.

> *Recommendation*: Alternatives that first avoid and minimize and then compensate for impacts to waters of the U.S. should be evaluated. The FEIS should include the necessary information and analysis to demonstrate compliance with Section 404 of the CWA. Include the wetland delineation in the Final EIS (FEIS) and identify the fence design that will be used. Analyze an additional alternative in the FEIS that does not fill Copper and Buttewig canyons.
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> The FEIS should fully describe expected impacts to surface waters as a result of filling and culverting intermittent streams and altering sediment transport, and identify avoidance, minimization, and mitigation that will reduce impacts. Update the statement regarding no net loss of wetlands based on the jurisdictional delineation.
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> If CBP pursues the filling of Copper and Buttewig Canyons, based on our knowledge of their intermittent streams, it appears CWA Section 404 Individual Permits may be necessary. For all areas where CWA 404 Individual Permits are required, we recommend the FEIS discuss how potential impacts would be avoided, minimized, and mitigated. Once this has been demonstrated, compensatory mitigation can be used. The FEIS should clearly identify suitable mitigation areas, both within the project site and in the project vicinity. Suitable mitigation areas are areas that will not be subject to frequent disturbances. The FEIS should identify the legal mechanism, such as a conservation easement managed by a third party, that will be used to protect the mitigation area as well as the funding mechanism to ensure protection (endowment, etc.) into perpetuity. The FEIS should also establish long-term management measures for the mitigation areas to address issues such as invasive species, approved uses, and human disturbances.

Fencing across intermittent streams

Fencing across intermittent streams is of concern. While the DEIS states that fence design would allow water to flow unimpeded, it is not clear that the potential fence designs in Appendix A, all of which would extend below ground in the riparian corridor, would not restrict flows to an undesirable extent, especially during heavy precipitation events. If water flow is even partially restricted, changes to the flow regime will occur, disturbing the balance between the supply of sediment and the sediment carrying capacity of the flow, which can cause significant problems both upstream and downstream. These effects could include headcutting of the stream bank around the fence, which could undermine fence stability, and excessive sediment deposition upstream from debris jams, which can increase erosion and bank instability in downstream waters, including the Tijuana River. If banks collapse as a result, this increases sediment loads. Widening of the streams due to extensive bank collapse increases flow capacity, and increases sediment supply and transport downstream. The resulting erosion and increased sediment transport can reduce water quality, and the DEIS identifies total suspended solids (TSS)/turbidity as an existing highly-occurring constituent of concern in the Tijuana River watershed, likely caused by grading/construction and slope erosion (p. 3-22). These sediment effects may continue or even accelerate for many years after the project has been completed. As such, EPA disagrees with the conclusions of the DEIS that these impacts to waters of the U.S. are minor (p. 4-12).

The DEIS states that fence crossings would need to be inspected following run-off events to remove debris and maintain the integrity of the fence (p. 4-13). The importance of fence inspections and maintenance in the riparian corridors to remove boulders, debris and sediment cannot be overstated, yet the DEIS states that maintenance activities associated with the proposed action would be comparable to current maintenance within the San Diego Sector (p. 4-5), which does not recognize this substantial maintenance task increase. It states that maintenance would initially be performed by USBP but would eventually become a contractor performed activity (p. 2-18), but there is no indication that adequate funding is being proposed for the significant workload and budget required for sufficient maintenance of fence crossing intermittent streams.

> *Recommendation:* EPA recommends the FEIS include discussions of the potential changes to hydrology and sediment transport capacity of the intermittent streams that feed the Tijuana River that are likely to occur from the proposed project, the potential changes to water velocity as a result of any direct and indirect channel modifications, and bank instability that could result from increased bank erosion due to fence-related channel modifications.
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> EPA recommends that the proposed action be redesigned to: (1) eliminate primary pedestrian fence in riparian areas and use other techniques to secure these areas, or (2) at a minimum, construct vehicle fence in riparian areas instead of primary pedestrian fence. For fencing outside riparian areas, we recommend a fence design be utilized that offers the maximum flow-through potential for surface runoff. Of the designs presented in Appendix A, a bollard-type fence over a mesh design would appear to offer a greater flow-through potential.

EPA recommends that CBP provide assurances that the significant maintenance burden for fencing in intermittent streams is being considered and budgeted for this project. Monitoring protocols, including frequency of inspection, monitoring elements, and documentation and reporting should be developed and included in the FEIS as an appendix. The FEIS should detail the maintenance and monitoring element of the project, which directly relates to environmental impacts.

Watershed erosion

EPA is very concerned about alterations to the watershed, which will result in increased erosion, affecting habitat and sediment loadings in the Tijuana River watershed. The topography of the Segment A-1 area consists of very steep rugged mountainous terrain (p. 1-3, 2-5) with elevations ranging from 500 feet to 1,350 feet above mean sea level (MSL) (p. 3-15). The fence alignment for Segment A-1 is along the Pack Trail, which skirts the mid-span of the mountain, and the terrain is steep along most of the trail (p. 3-36). The DEIS states that the steep slopes in these areas can lead to heavy runoff and high erosion potential in the watershed of the three intermittent tributaries to the Tijuana River during precipitation events (p. 3-18). The slopes near Segment A-2 range from 1,850 to 2,300 feet above MSL and flow to another intermittent tributary of the Tijuana River. The project involves extensive cut and fill activities with an estimated 270,000 cubic yards (cy) of disturbance for Segment A-1 (p. 2-16), impacting between 62.5 to 82.4 acres (p. 4-10, 4-13), and an estimated cut and fill of 30,000 to 306,268 cy for Segment A-2 (p. 2-16, 4-4). Blasting, grinding and contouring will also occur, especially in Segment A-1, further exposing soils to increased erosion and runoff.

The DEIS acknowledges that proposed construction activities and resulting soil disturbance on steep slopes has the potential to result in "excessive" erosion due to instability of the disturbed soils and high storm water runoff energy and velocity (p. 4-10). Disturbed soil and vegetation removal can reduce the cohesiveness of surface soils leading to accelerated rates of surface erosion and gully formation during rain events. Grading on steep terrain can also reduce the stability of the upper slopes resulting in landslides. Without proper erosion control, these conditions can negatively impact both terrestrial habitat and aquatic habitat from erosion and sedimentation. The specific mitigation proposed is not described; the DEIS refers to a project-wide Dust Control Plan and a Stormwater Pollution Prevention Plan that will be prepared later (p. 5-5).

Because no specific mitigation measures are described, EPA cannot evaluate the effectiveness of the proposed erosion control measures to determine to what extent excessive erosion impacts are likely to be mitigated. We expect that standard erosion control efforts may alleviate some erosion impacts, but will not be fully effective in such a steep topographic environment and would not mitigate impacts below a level of significance. The DEIS also states that revegetating the area following construction could reduce impacts of erosion and runoff depending on success of vegetation establishment (p. 4-12), but there are no commitments to revegetation. Based on the topography and amount of soil disturbance proposed, we do not agree with the DEIS that the proposed project would result in short-term minor impacts on soils and surface hydrology (p. 4-10, 4-11).

The DEIS also does not discuss potential impacts of eroded sediment on the Tijuana River Estuary. Altering the magnitude and/or frequency of sediment delivery has the potential to impact the stability and health of this ecosystem. Any increases in erosion and sediment transport can result in the deposition of large quantities of sediment within wetland habitats. Sedimentation in the Tijuana estuary can be harmful to the benthic ecosystem, and could exacerbate the existing water quality problems related TSS/turbidity (p. 3-22).

> *Recommendation:* Due to the steep topography and potential for excessive erosion from soil disturbance, EPA considers these watershed impacts to be potentially significant. The FEIS should evaluate the impacts of changing the magnitude and frequency of sediment delivery on the intermittent streams, Tijuana River and Estuary. EPA recommends that every effort be made to minimize disturbance of soil and vegetation from the project, including avoiding fencing on the steepest portions or areas subject to severe erosion, avoiding vegetation removal, and revegetation and restoration of disturbed areas.
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> Efforts should be directed at developing a fully effective plan for controlling pollutants in stormwater discharges from this project. Roadside drainage should be managed, and treated where possible, prior to reaching waterways. Mitigation and monitoring plans, vital to the assessment of impacts, should be included in the FEIS as appendices. At a minimum the FEIS should include more detail regarding erosion and sediment control proposed for this project, including detailed post-construction Best Management Practices that will be implemented. The FEIS should discuss the effectiveness of these BMPs and the probability of the mitigation measures being implemented[1]. These plans should be consulted when re-assessing the magnitude of expected impacts to soils and surface hydrology.
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> We understand that the Secure Fence Act allows CBP to use means other than pedestrian fences to secure areas with elevation grades exceeding 10%. We strongly recommend alternatives to fence and road construction for these high grade areas.

ALTERNATIVES ANALYSIS

EPA is concerned that the DEIS may not evaluate all reasonable alternatives. The DEIS states that it considered but dismissed alternatives that evaluate additional agents in lieu of tactical infrastructure and various forms of technology in lieu of tactical infrastructure (p. 2-3) and determined additional agents or technology alone would not meet the purpose and need of achieving effective border control. The DEIS did not evaluate the use of these alternative methods in conjunction with fencing and tactical infrastructure, such as their use in certain environmentally sensitive areas to avoid impacts. In fact, the DEIS quotes a Congressional Research Service Report stating that a "rigid enforcement system that could integrate infrastructure, manpower, and new technologies to further control the border region" was needed (p. 2-3); yet such an integrated alternative was not included for analysis.

[1] 40 Most Asked Questions Concerning CEQ's NEPA Regulations, Question 19a.

Additionally, the "Tactical Infrastructure following Natural Topography Alternative" was dismissed from further evaluation because the fence would be more than 1000 feet from the border. This alternative would meet the purpose and need of increasing border security within the Sector (p. 1-4) and preventing individuals from entering urban or suburban areas where it is difficult to apprehend suspects (p. 2-1) and appears to be a reasonable alternative.

> *Recommendation:* EPA recommends an additional alternative be evaluated in the Final EIS (FEIS) for this project that integrates infrastructure, manpower, and new technologies, consistent with the Congressional Research Service Report. Specifically, we recommend that a modified proposed action alternative that avoids use of pedestrian fencing in riparian corridors be evaluated as a reasonable alternative. This would be consistent with CBP's screening criteria for alternatives which states that the selected alternative would be designed to avoid and minimize impacts on surface waters and floodplain resources to the maximum extent practicable (p. 2-1). The Tactical Infrastructure following Natural Topography Alternative should also be fully evaluated in the FEIS. Additionally, alternatives that avoid fill in Copper and Buttewig canyons should be evaluated to address alternative analysis requirements of Section 404 of the Clean Water Act, as stated above.

IMPACTS TO VEGETATION AND WILDLIFE

EPA has concerns regarding potentially significant impacts to vegetation habitat and wildlife, including special status species. The project would remove over 190 acres of vegetation and temporarily impact another 43 acres; would impact riparian areas in canyon bottoms that are considered high-quality habitat (p. 3-36); and would remove 75 acres of suitable habitat for the endangered Quino checkerspot butterfly (p. 4-22). The DEIS states that the proposed project could have major beneficial impacts to the Quino checkerspot butterfly (4-23), the Arroyo Toad and the Coastal California Gnatcatcher (p. 4-24) but the basis for these conclusions is not clear, especially since the impact analysis does not identify the criteria it used to assess significance of impacts to specific resources.

The proposed action will also locate a construction staging area within the Marron Valley Preserve, owned by the San Diego Water Department and designated as "cornerstone lands" under the City's Multiple Species Conservation Program (MSCP) Subarea Plan because it is considered an "essential building block for creating a viable habitat preserve system" (p. 3-13). While it is commendable that the CBP may possibly compensate the City for removal or disturbance of the lands in this land conservation bank, the DEIS does not discuss the impacts that this could have on the success of the MSCP or the species it is designed to protect.

The DEIS does not sufficiently assess impacts to special status species. The DEIS notes that the timing of surveys affected the observance of special status species, and the impact assessment relied largely on data available on the NatureServe database network and not field studies. The DEIS states that no records for the San Diego fairy shrimp, San Diego button celery, Otay Mesa mint, spreading navarretia, or California orcutt grass were known in or near the project corridor but if surveys reveal their presence, they will be considered in detail. It is not clear where it will be considered in detail, or how the impact assessment could be complete without this information.

The DEIS notes that San Diego County has a greater number of threatened and endangered species than anywhere in the continental U.S. (p. 3-29); that the ecosystem in the project area is amphibious, alternating between very wet and very dry, which creates a unique ecological situation that supports a variety of fauna (p. 3-39), and that the project area for Segment A-1 is species rich, with 29 wildlife species recorded (p. 3-37). This combination of attributes warrants a greater attention to the effects of the proposed action on biodiversity. The Council on Environmental Quality (CEQ) affirms that it is critical that federal agencies understand and take into account general principles of biodiversity conservation in their decision-making[2], yet the DEIS does not directly address biodiversity impacts in the project or cumulative impacts analyses.

> *Recommendation:* EPA recommends that the FEIS identify impacts to the City of San Diego's MSCP and its species from the proposed action, update the impact analysis based on survey data, clarify the basis for significance determinations for adverse and beneficial impacts, and address biodiversity impacts.
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> We understand that CBP is consulting with U.S. Fish and Wildlife Service (USFWS) regarding impacts to threatened and endangered species from this and other proposed border fence projects. We recommend that CBP comply with all avoidance and conservations measures identified by USFWS.
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> EPA recommends that additional attention be given to biodiversity impacts. CEQ's *Incorporating Biodiversity Considerations into Environmental Impact Analysis under the National Environmental Policy Act* offers guidance on potential approaches. Appropriate mitigation measures should be identified in response to potential impacts on biodiversity and should be developed within an ecosystem framework.
>
> CEQ notes that some general principles in biodiversity conservation are to minimize fragmentation, protect rare species, protect unique and sensitive environments, and protect genetic diversity. Preserving natural corridors and migration routes minimizes biodiversity impacts. CBP should ensure that corridors are available for transboundary migration. Include the map of all existing fence segments in the cumulative impacts section and clearly identify where these migration corridors lay. EPA strongly recommends the use of wildlife-friendly vehicles barriers in conjunction with virtual fencing components such as laser barriers, motion sensors, etc. at critical intervals to ensure transboundary wildlife migration.

CUMULATIVE IMPACTS

The DEIS does not include a sufficient cumulative impacts assessment. The DEIS states that projects that do not occur in close proximity (within several miles) to the proposed project would not contribute to cumulative impacts and were generally not evaluated further in the assessment (p. 6-1). The selection of geographic boundaries for a cumulative impact assessment should be,

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[2] *Incorporating Biodiversity Considerations into Environmental Impact Analysis under the National Environmental Policy Act*, Council on Environmental Quality, January 1993, p. 16. Available: http://www.eh.doe.gov/nepa/tools/guidance/Guidance-PDFs/iii-9.pdf

whenever possible, based on the natural boundaries of resources of concern. It appears that the cumulative impacts assessment has not used geographic boundaries large enough to include all potentially significant effects on the resources of concern.

Additionally, the cumulative impacts from past actions are not specifically considered and discussed in the cumulative impacts assessment, but instead the reader is referred to Chapter 3, the description of existing conditions. The cumulative impact assessment should describe the "identifiable present effects[3]" to various resources attributed to past actions. The purpose of considering past actions is to determine the current health of resources, which forms the baseline for assessing potential cumulative impacts. The cumulative impact analysis should link the project's effects to the health of these resources, which would reveal the ability of these resources to withstand additional stressors. A sufficient cumulative impact assessment is important for this project, especially considering the piecemeal nature of the impact assessments for this and other border fence projects.

The DEIS states that the proposed action would neither affect nor be affected by the climate (p. 3-1), however scientists expect global warming to lead to increases in climatic variability and extreme weather events.[4] More extreme storms and drought, coupled with the fires that occur as part of the natural disturbance regime in these habitats, could exacerbate erosion resulting from the project's extensive disturbance in the watershed. These potential cumulative impacts should be identified in the Final EIS.

> *Recommendation:* EPA recommends substantial improvements be made to the cumulative impacts assessment. The cumulative impacts assessment should delineate appropriate geographic areas including natural ecological boundaries, whenever possible. Trends analysis, or how the resource condition has changed over time, is the most useful tool for looking at the accumulated effect of past actions. Qualitative and quantitative thresholds can also be useful, such as the consideration of water quality constituents of concern occurring in the Tijuana River Watershed (p. 3-22).
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> EPA recommends the *Guidance for Preparers of Cumulative Impact Analysis* (June 2005), available at http://www.dot.ca.gov/ser/cumulative_guidance/purpose.htm, as a useful methodology[5] .

IMPACTS POTENTIALLY NOT ASSESSED

The DEIS identifies some actions that will occur, or are likely to occur, under the proposed action but it is not clear if they were included in the project scope for which impacts were analyzed in this DEIS. We request clarification for the following actions.

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[3]Guidance on the Consideration of Past Actions in Cumulative Effects Analysis, CEQ, June 2005. Available: http://www.nepa.gov/nepa/regs/Guidance_on_CE.pdf

[4] Intergovernmental Panel On Climate Change (IPCC) Report on Impacts, Adaptation & Vulnerability, April 2007

[5] This guidance, developed jointly by Caltrans, FHWA, and EPA, focuses on transportation projects in California; however, it is useful for non-highway projects and will assist in identifying cumulative impacts and preparing an analysis that is sound, well documented, and compliant with requirements of Section 404 of the Clean Water Act.

The DEIS indicates that in addition to the earth movement described, an additional 60,000 cy of fill material will be needed from offsite and another 60,000 cy would need to be removed from the project (p. 4-4), but the DEIS does not indicate where this material will originate or be disposed, nor identify the impacts to resources from offsite borrow areas or to disposal areas.

The DEIS also indicates that the project would require an additional 75,000 cy of cut and fill disturbance for areas of road east of Segment A-1 that will be utilized for this project. While upgrades to this road were covered in a previous EA, widening and drainage upgrades were not included. It is not clear whether this portion of the project is included in the estimates of cut and fill disturbance for the total project or whether impacts from this portion were assessed in this EIS. It is also not clear whether the impacts were assessed for the significant road widening of Otay Mountain Road and the BLM road leading to Puebla tree that would be required for the project (p. 4-19), or for the similar improvements that may be required for Marron Valley Road (p. 2-16).

Additionally, in those areas of the road not adjacent to the fence, the proposed project will require construction of trails suitable for light-tracked vehicles for the purposes of fence installation and maintenance. Vehicle trails would require clearing of brush and boulders and minor grading, and rock outcrops might require leveling (p. 2-9). Maps show that these areas are some of the steepest areas, including those near Buttewig canyon. The DEIS does not identify the number or location of vehicle trails to be constructed, and it is not clear that impacts from these trails were included in the impact analysis.

The DEIS does not identify whether the project will also create and operate new drag roads, which involve vehicles dragging tires or brushes behind to smooth the surface of an unpaved road so evidence of crossing is apparent, or describe any impacts to the watershed from the expansion and operation of these roads.

The DEIS does not indicate where debris removed from behind the fence during maintenance would be deposited. It doesn't appear that impacts from maintenance have been included in the DEIS.

> *Recommendation:* Clarify the scope of the impact assessment in the DEIS and whether it included the actions specified above. If the DEIS did not include these actions, update the impact discussions in the FEIS accordingly.

LACK OF DETAILED MITIGATION MEASURES

The DEIS states that adherence to a Construction, Mitigation, and Restoration (CM&R) Plan will mitigate impacts to soils (p. 5-5), waters of the U.S. (p. 5-7), vegetation (p. 5-9) and wildlife (p. 5-10). The DEIS also states that construction would not begin until CBP prepares a mitigation and monitoring plan consistent with identified mitigation measures (p. 6-11). No mitigation measures are identified, however, since the CM&R Plan is not included. A conceptual plan for mitigation is also not described. Without this information, an assessment of whether this plan would sufficiently mitigate losses to these resources is not possible.

Recommendation: A draft CM&R Plan should be included in the FEIS as an appendix so that agencies and the public can assist in determining potential for successful mitigation and to recommend additional mitigation that may be appropriate. CBP will need to include specific mitigation measures for the Record of Decision (ROD), per 40 CFR 1505.2(c).

EPA believes a comprehensive mitigation strategy should be developed for cumulative impacts resulting from the many border fence and infrastructure projects that are occurring along the border. We understand that preliminary discussions with U.S. Fish and Wildlife Service (USFWS) have occurred at a senior staff level regarding a comprehensive programmatic mitigation agreement to address wildlife impacts. We encourage such an approach and are available to assist in identifying comprehensive mitigation for impacts to watersheds and waters of the U.S.

IMPACTS TO TRIBAL CULTURAL PROPERTIES (TCPS)

The DEIS identifies Tecate Peak (Kuchamaa) as a sacred mountain serving as a spiritual center for Native American people of southern California and northern Baja California (p. 3-56). BLM determined that the Tecate Peak District was eligible for the National Register of Historic Places based on its uniqueness as a site of extreme religious significance to the Kumeyaay and other tribes throughout southern California. The boundary of BLM's Kuchamaa Area of Critical Environmental Concern (ACEC) is approximately 500 feet west of fence segment A-2 (p. 3-14). The area of potential affect for analysis of impacts on resources of traditional, religious or cultural significance to Native American tribes includes the viewshed. The DEIS concludes that the line of sight from Tecate Peak appears to be negligible, but it is not clear how this was determined.

Such a determination should be made in consultation with affected tribes. 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. The DEIS indicates that letters to tribes were sent and no responses were received to date (p. 3-50), however sending letters alone does not constitute meaningful government-to-government consultation.

The DEIS concludes that impacts on Kuchamaa have not been defined and the development of protective measures has not been accomplished. CBP acknowledges that additional consultation will be necessary to arrive at appropriate project protocols. (p. 4-27).

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 of such sacred sites. The DEIS does not discuss how the project could impact Baja California tribal access to their sacred mountain and spiritual center.

Finally, no discussions of cumulative impacts to this site are included in the cumulative impacts assessment.

Recommendation: The FEIS should describe the process and outcome of government-to-government consultation between the U.S. Customs and Border Protection (CBP) and each of the tribal governments within the project area that deem Kuchamaa a sacred site, identify issues that were raised (if any), and how those issues were addressed in the selected alternative.

The FEIS should address Executive Order 13007 and discuss how the project could impact access to Kuchamaa for tribes north and south of the border. Discuss potential cumulative impacts to traditional cultural properties at this site.