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

April 15, 2013

Colonel R. Mark Toy
Commander, Los Angeles District
U.S. Army Corps of Engineers
915 Wilshire Boulevard, Suite 1101
Los Angeles, CA 90017

Subject: Draft Environmental Impact Statement for the Gregory Canyon Landfill Project, San Diego County, CA (CEQ # 20120383)

Dear Colonel Toy:

The U.S. Environmental Protection Agency (EPA) is providing comments on the Draft Environmental Impact Statement (DEIS) for the Gregory Canyon Landfill Project. Our comments are provided pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), our NEPA review authority under Section 309 of the Clean Air Act, and the provisions of the Federal Guidelines promulgated at 40 CFR 230 under Section 404(b)(1) of the Clean Water Act.

EPA provided scoping comments for this project in a June 10, 2010 letter. In a subsequent letter dated June 17, 2010 (enclosed), we identified the Clean Water Act section 404 permit action for Gregory Canyon Landfill as a candidate for review by EPA and Corps Headquarters. We reaffirmed our concern about the project's impacts to the San Luis Rey River -- an Aquatic Resource of National Importance -- in correspondence dated July 12, 2010 (also enclosed).

EPA believes that the DEIS does not demonstrate a need for the proposed federal action, and that the Applicant's Proposed Alternative (Gregory Canyon Landfill), while well designed, is poorly located with respect to its close proximity to sacred sites and its acknowledged adverse secondary affects to waters of the U.S. Based on our review of the DEIS, it appears that alternatives other than the Proposed Alternative may meet San Diego County's landfill needs and be environmentally preferable. For example, Sycamore Landfill Expansion[1] appears to offer a practicable and less environmentally damaging alternative. In addition, the DEIS does not sufficiently explore potentially practicable and less environmentally damaging out-of-county alternatives, such as the Mesquite Regional Landfill. Even though the Needs Assessment contained in Appendix B appears outdated and inconsistent, and may overestimate the need for the proposed project, it acknowledges the availability of sufficient regional landfill capacity for 40 to 70 years in the absence of the Gregory Canyon Landfill; therefore, the No Federal Action Alternative may be capable of meeting the need for landfill space.

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[1] Sycamore Canyon Landfill is an existing landfill that currently occupies 354 acres of a 491-acre facility located in the City of Santee. The process of obtaining approvals for expansion of the Sycamore Canyon Landfill is underway. A Revised Final EIR was completed in August 2012. Allied Waste, which operates the landfill, has submitted a Clean Water Act Section 404 permit application to the Corps (DEIS p. 3-152-155).

EPA is seriously concerned by the likely impact of the proposed Gregory Canyon Landfill on tribal cultural resources. As the DEIS acknowledges, Gregory Mountain -- Chokla to many Indian peoples -- and Medicine Rock are sacred to the Pala Band of Mission Indians, the greater Luiseno community, and other Southern California Indians.[2] The sacred attributes derive from traditions, beliefs, practices, lifeways, arts and crafts and social institutions that have been passed down through the generations since pre-history. Even with the proposed mitigation, the DEIS states that the Applicant's Proposed Alternative would significantly impact these Traditional Cultural Properties. Under 33 CFR 320.4, the Corps must give due consideration to the effects of a proposed project on values associated with Indian religious or cultural sites in assessing whether the project would be contrary to the public interest and, therefore, ineligible for a permit. The sanctity of Gregory Mountain and Medicine Rock to Southern California Indians should weigh heavily in the Corps' public interest review and implementation of its trust responsibilities.

EPA believes that the DEIS does not provide sufficient information to support sound regulatory decision-making by the Corps regarding the proposed action's compliance with EPA's CWA 404(b)(1) Guidelines. Compliance with the Guidelines is required for the proposed action, i.e., issuance of a 404 permit, to proceed. In addition to the direct fill of 4,256 linear feet of waters under the Applicant's Proposed Alternative, the DEIS describes adverse secondary impacts from discharges of dredged or fill material that are likely to: degrade waters; modify flow and sedimentation regimes, thereby reducing the watershed's resiliency and further degrading beneficial uses; create debris build-up and channel scour; and cause impacts to endangered species. Under CWA regulations, permit applicants bear the burden of clearly demonstrating the proposed action 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. The DEIS does not provide sufficient information to demonstrate that the Applicant's Proposed Action is the LEDPA.

EPA believes that the precedent set in the Corps' decision on the permit application for the Ox Mountain Sanitary Landfill may be relevant to the Gregory Canyon project. In May, 1987, Browning-Ferris Industries, Inc, applied to the Corps for a fill permit for the Ox Mountain Sanitary Landfill, in Apanolio Canyon, San Mateo County, California. On September 10, 1990, the Corps denied the permit application, stating that issuance of a permit would be in non-compliance with the Guidelines and contrary to the public interest. Denial was on the grounds that the expansion of the existing Corinda Los Trancos landfill was practicable and less environmentally damaging.

We have rated the document, itself, as "2" (Insufficient Information) because the DEIS did not analyze nor screen a potentially reasonable alternative, i.e., Mesquite Regional Landfill, and because the information presented is not sufficient to determine the environmental impacts of the Aspen Road, Gopher Canyon, Merriam Mountain, and East Otay Mesa alternatives. The Gregory Canyon Landfill Alternative is rated EO (Environmental Objections), due to impacts to the San Luis Rey River, an Aquatic Resource of National Importance. The Sycamore Canyon Expansion

[2] The DEIS describes Chokla as a traditional Cultural Property that is eligible for listing under the National Register of Historic Places (NRHP) and discusses the revised 2009 documentation. The California State Historic Preservation Office determined Chokla, or Gregory Mountain, and Medicine Rock are eligible for the NRHP (p. 4.5.2-20).

Alternative is rated EC (Environmental Concerns), due to its impact to waters. Our Detailed Comments on the DEIS are enclosed.

We offer our assistance to the Corps more thoroughly analyzing the full range of alternatives. Because the Corps decision may affect communities near Sycamore Landfill or out-of-county landfills, we recommend the Corps conduct as robust and responsive a public involvement process for the FEIS as allowed by your regulations and policies.

We appreciate the opportunity to review this DEIS. When the Final EIS is released for public review, please send one hard copy and one electronic copy to the address above (mail code: CED-2). If you have questions, please contact me at (415) 972-3856 or have your staff contact Tom Kelly at kelly.thomasp@epa.gov.

Sincerely,

Enrique Manzanilla, Director
Communities and Ecosystems Division

Enclosures:

1. EPA's Detailed Comments
2. Summary of EPA's Rating Definitions
3. EPA Letter to the U.S. Army Corps Regarding the Jurisdictional Determination for the Proposed Gregory Canyon Landfill, dated June 17, 2010
4. EPA Letter to the U.S. Army Corps Regarding the Public Notice for the Proposed Gregory Canyon Landfill, dated July 12, 2010

cc: Robert H. Smith, Pala Band of Mission Indians
Rob Roy, La Jolla Band of Luiseno Indians
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Syndi Smallwood, Pechanga Band of Luiseno
Robert Smith, Southern California Tribal Chairman's Association
Michelle Moreno, U.S. Fish and Wildlife Service
Mark Capelli, National Marine Fisheries Service
Mike Porter, Regional Water Quality Control Board
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Mary Larson, California Department of Fish and Wildlife
Carol Mortensen, CalRecycle
Jack Miller, County of San Diego, Department of Environmental Health
Gordon Burns, CalEPA

EPA DETAILED COMMENTS, DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE GREGORY CANYON LANDFILL, SAN DIEGO COUNTY, CALIFORNIA (CEQ # 20120383), April 15, 2013

Project Need

County vs Regional Need and Landfill Availability

To assess the need for waste disposal, the DEIS includes a Needs Assessment in Appendix B[1]. This assessment considers the waste needs of San Diego County and the six county "waste shed" that also includes Imperial, Los Angeles, Orange, Riverside and San Bernardino Counties. The Needs Assessment concludes that Gregory Canyon Landfill will have little effect on the six county waste disposal capacity, extending it from the year 2052 to 2053 under the most conservative assumptions of the assessment (p. 29 of the Needs Assessment, Appendix B). The Needs Assessment concludes that Gregory Canyon Landfill could extend San Diego County's landfill capacity by 7 years (from 2024 to 2031), under a base conditions scenario; by 18 years (from 2026 to 2034), assuming per person landfill disposal decreases 20% by 2020 and thereafter; and by 13 years (from 2027 to 2040), assuming a per person landfill disposal decreases 50% by 2030. We note, however, that this assessment did not consider the availability of landfills that are located outside of San Diego County, such as Mesquite Regional Landfill and El Sobrante Landfill.

As the Needs Assessment explains, each California county is obligated to demonstrate, in an Integrated Waste Management Plan and Siting Element, 15 years of countywide or regional solid waste disposal capacity. It is important to note that a county's plan may rely on out-of-county facilities. For example, Los Angeles County will rely on the Mesquite Regional Landfill[2], which is located in Imperial County. As the No Federal Action Alternative notes, some of San Diego County's waste is expected to taken out of the County to Prima Deshecha and El Sobrante Landfills (p. 3-108).

Needs Assessment is Outdated

The Needs Assessment was prepared in 2011, and projects waste disposal into the future through a 3-year (2006-2008) average of past waste generation, further adjusting this for future population growth. It provides two alternative scenarios: one assumes a 20% reduction of waste generation by 2020; and the second assumes a 50% waste reduction by 2030. EPA believes that the results of the Needs Assessment could change substantially if based on more recent data. Since the preparation of the Needs Assessment in 2011, California has passed AB 341, which set a goal of 75% landfill waste diversion by 2020, and established recycling requirements for commercial businesses and multi-family housing complexes. A 75% diversion rate could represent a 45% decrease in waste disposal by

[1] Needs Assessment of the Proposed Gregory Canyon Landfill in Northern San Diego County, R3 Consulting Group, April 14, 2011.
[2] 2009 Annual Report, Los Angeles County Countywide Integrated Waste Management Plan < http://dpw.lacounty.gov/epd/swims/docs/pdf/CIWMP/2009.pdf >

2020, from San Diego County's 2006 waste diversion rate[3]. While this rate is a goal, rather than a requirement, we note that California's statewide business and residential diversion rates were 64% and 65%, respectively, in 2011. Although we do not have the data to calculate San Diego County's current diversion rate, we note that it was comparable to the statewide diversion rate in 2006 (53% vs. 54%). Furthermore, San Diego County's actual solid waste disposal volume[4] in 2010 (the baseline year for all three waste generation estimates in the DEIS) is more than 12% below the amount estimated in the Needs Assessment.

Gregory Canyon and the expansion at Sycamore (Canyon) Landfill are included in the current San Diego County Integrated Waste Management Plan and Siting Element; however, the Needs Assessment does not assume that either of these facilities will be available. Although the Needs Assessment discusses the Sycamore Canyon Landfill Expansion (a DEIS alternative), it does not consider that landfill's ability to meet the needs of San Diego County. In addition, the City of San Diego now estimates the year of closure for the Miramar Landfill as 2022[5], not 2019, as stated in the Needs Assessment. CalRecycle, which regulates solid waste landfills, provides a 2028 as the estimated year of closure for the Otay landfill[6], but the Needs Assessment estimates the date of closure as 2019 (Appendix G of the Needs Assessment).

Inconsistencies Should be Clarified

The Needs Assessment appears to be internally inconsistent on the subject of restricting Gregory Canyon to accept waste generated only within San Diego County. While it acknowledges that Southern Riverside County is likely to use Gregory Canyon (p. 29 Needs Assessment Appendix B), the values provided in the Needs Assessment appear to be based on the assumption that the facility has restricted waste to San Diego County. The waste capacity values are prefaced with "and if GCL [Gregory Canyon Landfill] were restricted to accept in-county waste only" (Needs Assessment, p. 28). These values are consistent with the results provided in Tables 11 and 12. No other capacity values are presented in the Needs Assessment that would shorten the life of Gregory Canyon due to the acceptance of out-of-county waste. By assuming that only waste generated within the County would be accepted, the Needs Assessment overemphasizes the ability of the Gregory Canyon Landfill Alternative to serve San Diego County.

In estimating the need for landfill space, the Needs Assessment of Appendix B estimates solid waste density as 1,000 pounds per cubic yard. The DEIS uses 1350 pounds per cubic yard (p. 3-79) for combined waste and daily cover density. It is not clear whether these two densities are consistent. One EPA document[7] states that compacted waste densities range from 1100 to 1400 pounds per cubic yard, recommending 1160 pounds per cubic yard when site specific data are not available. While we note that the same document estimates the

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[3] The Needs Assessment provides diversion rates on a per capita per day basis for 2007 and 2008.
[4] From http://www.calrecycle.ca.gov/LGCentral/Reports/DRS/Origin/WFOrgin.aspx.
[5] From http://www.sandiego.gov/environmental-services/miramar/ accessed on March 8, 2013.
[6] From http://www.calrecycle.ca.gov/SWFacilities/Directory/37-AA-0010/Detail/
[7] Emission Factor Documentation for AP-42, Section 2.4, Municipal Solid Waste Landfills, Revised, U.S. EPA, 1997.

density of waste after degradation and settling to be 1700 to 1900 pounds per cubic yard, that figure appears high in comparison to a more recent, readily available journal article[8] providing a thorough discussion of factors affecting landfill waste density.

Recommendations:
In the FEIS, update the needs assessment to:

- Consider the latest available data;
- Consider the availability of landfills outside of San Diego County to accept waste from San Diego County;
- Use a 75% diversion rate by 2020 to calculate a likely waste generation rate, or explain why this would not be appropriate.
- Account for the likelihood that Gregory Canyon Landfill would accept out-of-county waste to the extent economically feasible, or explain the basis for any assumption that the Landfill would accept only in-County waste.
- Consider the ability of the Sycamore Canyon Landfill, alone or in combination with in- and out-of-county landfills, to meet the needs of San Diego County.
- Explain the basis for the waste densities used in the document and its appendices.

Alternatives

Pursuant to the regulations at 40 CFR 1502.14, the Alternatives section of an EIS must "rigorously explore and objectively evaluate all reasonable alternatives", and "should present the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among the options by the decisionmaker and the public". In accordance with the Federal Guidelines promulgated at 40 CFR 230 under Section 404(b)(1) of the Clean Water Act (Guidelines), ". . .no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem so long as the alternative does not have other significant adverse environmental consequences." The DEIS does not provide sufficient information to fully evaluate the environmental impacts of the following alternatives to the Applicant's Proposed Alternative, nor to assess whether any of them is the Least Environmentally Damaging Alternative (LEDPA) that achieves the overall project purpose while not causing or contributing to significant degradation of the aquatic ecosystem.

<u>Mesquite Regional Landfill</u>

The Mesquite Regional Landfill is owned by the Los Angeles County Sanitation Districts, which are completing a rail line to allow waste shipments to the landfill from their Puente Hills facility later this year[9]. CalRecycle called Mesquite "a colossal mega landfill." It is by

[8] Landfill Airspace and Density: The Big Picture, Municipal Solid Waste Management, July-August 2000, Neal Bolton
[9] See the Los Angeles County Sanitation Districts' Waste by Rail Fact Sheet at http://www.lacsd.org/civica/filebank/blobdload.asp?BlobID=2900

far the largest landfill in California[10], if not the country. It is intended to take 20,000 tons per day of waste from Imperial, Los Angeles, Orange, San Bernardino, San Diego and Ventura Counties over a 100 year life-span (p. 4 and 5, Needs Assessment, Appendix B). Mesquite was intended to serve Los Angeles County when the Puente Hills Landfill closes. Sanitation District staff has indicated that reduced waste volumes and lower cost local alternatives are likely to delay or greatly reduce shipments, but Mesquite remains in their long-term plans.[11] The DEIS did not consider Mesquite Regional Landfill as an alternative nor screen the facility as one of nine possible alternatives (p. 3-96). The DEIS mentions transportation, tipping fees, and the lack of an intermodal rail facility as major constraints with regard to Mesquite (p. 2-6) but the DEIS does not provide these costs or compare them with the costs associated with other alternatives.

The rail line that runs near the coast of San Diego County connects to Mesquite Regional Landfill and appears to offer many potential locations to construct an intermodal facility to transfer waste onto rail lines. A second rail line, crosses over the Mexican border between Tecate and Campo, California also connects with Mesquite facility. Waste hauled from transfer stations in rail-ready trailers could be double-stacked directly on rail cars. Given the available capacity and limited use of Mesquite Regional Landfill, this option should be studied further.

El Sobrante Landfill

In the No Federal Action Alternative, the DEIS states that waste generated in or near North County would continue to be disposed of at Sycamore Canyon, Otay (not Otay Mesa), Miramar, Prima Deshecha, and El Sobrante Landfills; however, the in-County capacity would be exhausted by 2024. (p. 3-108). According to Appendix B[12], the El Sobrante Landfill is expected to remain open until 2045. It can accept more than 16,000 tons per day of waste, but is currently only accepting 5,637 tons per day[13]. Additionally, the landfill is less than 50 miles from the site of the proposed Gregory Canyon Landfill. This existing landfill appears to be less environmentally damaging and practicable, and meets the project purpose as it is currently written (i.e. disposal capacity for waste generated in or near North San Diego County).

Sycamore Canyon Landfill Expansion

Sycamore Canyon Landfill is an existing landfill that currently occupies 354 acres of a 491-acre facility located in the City of Santee off of SR 52 near Mast Boulevard. The process of obtaining approvals for expansion of the Sycamore Canyon Landfill is underway. A Revised Final EIR was completed in August 2012. Allied Waste, which operates the landfill, has submitted a CWA section 404 permit application to the Corps. According to

[10] CalRecycle SWIS Data File database,
< http://www.calrecycle.ca.gov/SWFacilities/Directory/SWFacilities/Directory/search/>
[11] Personal Communication between Tom Kelly, EPA and Paul Prestia, Los Angeles County Sanitation Districts, March 20, 2013

[12] Specifically Appendix G within Appendix B.
[13] 2,057,589 (3-year avg. from App.G Needs Assessment, contained in Appendix B) / 365 = 5,637.

the DEIS, the expansion would increase the waste disposal area by 28.6 acres around the perimeter of the landfill, allowing the existing landfill to increase in waste disposal elevation. Total disturbance caused by the expansion would be 83.8 acres (DEIS Vol. 1, p. 3-152-155). While the expansion would require the discharge of fill material into 0.53 acres of non-wetland waters, those waters are not in or abutting an Aquatic Resource of National Importance. The Sycamore Canyon Landfill Expansion Alternative project area does not support any designated critical habitat. In addition, according to the DEIS, there are no federally listed endangered species on the site of the proposed expansion (DEIS Vol. 1, section 4.4).

The DEIS is unclear on the anticipated capacity of the Sycamore Canyon Expansion Alternative. The alternative is missing from Tables ES-1 and 3.7, which include a variety of information on all the other alternatives. While the DEIS states that the expansion would increase solid waste capacity by 86 million cubic yards (and extend the lifespan by an additional 32 years), it does not clarify whether this value represents gross capacity or net capacity (gross capacity reduced by the volume of daily cover placed at a 4:1 or 7.5:1 ratio as estimated for other alternatives). The landfill expansion capacity is given as 34.5 million tons in Appendix B (Needs Assessment), which converts to 69 million cubic yards based on the 0.5 tons per cubic yard density (in Appendix B.). Table ES-3 states that Sycamore Canyon Landfill Expansion Alternative would have a significant effect on Biological Resources, but this appears to be inconsistent with the text of Section 4.4.9 and Table 5-1.

Miramar Sanitary Landfill Expansion

The City of San Diego operates the Miramar Landfill. A Request for Qualifications[14], dated July 8, 2010, indicates that the City was considering transferring operations of the landfill to a private entity and that the Miramar Landfill property "has potential for expansion into the West portion of the Landfill (tonnage to be determined) and vertically (approximately four to five million tons for a 20-foot vertical increase)." While the City ultimately did not turn over operations to a private entity[15], this suggests the potential for expansion at the facility.

Aspen Road, Gopher Canyon, Merriam Mountain and East Otay Mesa Alternatives

EPA's Guidelines, specifically 230.10(a), prohibit a discharge if there is a less environmentally damaging practicable alternative to the Applicant's Proposed Alternative. For the Aspen Road, Gopher Canyon Road, Merriam Mountain, and East Otay Mesa Alternatives, the DEIS does not provide sufficient information to determine if these are less damaging than the Applicant's Proposed Project. For each of the alternatives, the Corps determined the extent of waters based on remote sensing and observations from site boundaries[16]. Verification of the reach and extent of waters at these sites is necessary to

[14] City of San Diego Request for Qualifications and Non-Binding Statement of Interest for Leaseholder Aquision, Operation and Potential Development of Miramar Landfill, July 8, 2010.
[15] City of San Diego Memorandum on the Miramar Landfill RFQ, <http://www.sandiego.gov/business/mc/pdf/goldstonememo110218.pdf>
[16] Aspen Road Landfill: p. 4.4-75, Gopher Canyon Landfill: p. 4.4-92, 94, Merriam Mountain Landfill: p. 4.4-112, East Otay Mesa Landfill: p. 4.4-124,

assess the environmental impacts of these alternatives, but access was limited or prohibited. The DEIS provides only a conceptual site plan for these facilities. It does not make clear the extent to which waters may be avoided by moving facilities to different locations within the sites, constructing smaller landfills, etc. Additionally, no surveys were taken for the presence of federally listed endangered or threatened species[17]. Although the DEIS describes some environmental concerns regarding these alternatives (e.g. Aspen Road Alternative is within the Santa Ana – Palomar wildlife linkage, p.4.4-44), the information does not appear sufficient to remove any of the alternatives from consideration as the LEDPA, or demonstrate that any of them are impracticable.

Recommendations:

- In the FEIS, evaluate the extent to which the landfill needs of San Diego County could be met by the following alternatives, alone or in combination with each other or other actions, including the No Federal Action Alternative:
    - use of the Mesquite Regional Landfill, including construction of a multimodal rail transfer facility;
    - expanded disposal at El Sobrante Landfill;
    - expansion of the Miramar Landfill;
    - the Sycamore Canyon landfill expansion;
        - Provide a clear and comparable value of net capacity (with a 4:1 and 7.5:1 waste to soil ratio) for this alternative and revise tables ES-1, ES-3 and 3.7, accordingly.
    - Aspen Road, Gopher Canyon, Merriam Mountain, and East Otay Mesa; for these alternatives, provide:
        - a summary of field surveys conducted for each alternative to determine the extent of waters;
        - a demonstration that each conceptual site plan avoids and minimizes impacts to waters, in compliance with 40 CFR 230,10(d);
        - the results of surveys for the presence of federally listed endangered or threatened species.
- Include a CWA 404(b)(1) alternatives analysis in the FEIS.

Water Resources

<u>Jurisdictional Delineation</u>

EPA is concerned that the Applicant's Proposed Alternative may fill as much as 5000 linear feet of potentially jurisdictional drainages, in additional to the 4,256 linear feet of waters noted in the Corps Jurisdictional Delineation. EPA received the Corps' jurisdictional determination (file number 1998-2007000-TO) for the proposed Gregory Canyon Landfill on December 14, 2009. In our December 28, 2009 letter, we recommended further hydrological and ecological evaluations to determine the potential presence of additional

[17] Aspen Road Landfill: p. 4.4-79, Gopher Canyon Landfill: p. 4.4-102, Merriam Mountain Landfill: p. 4.4-118, East Otay Mesa Landfill: p. 4.4-146

jurisdictional waters on tributaries to Gregory Canyon and for drainages tributary to Couser Canyon. We do not believe that the Corps had sufficient information to conclude that several Gregory Canyon tributaries were not jurisdictional waters. Additionally, our analysis of aerial photographs disagreed with the Corps' decision that drainages to Couser Canyon are geographically isolated waters. These were drainages that the Corps could not physically access for its determination. On January 13, 2010, the Corps issued a final determination for Gregory Canyon Landfill concluding that these tributaries were not jurisdictional waters, without responding to EPA's concerns.

> *Recommendation:*
> Include, in the Final Environmental Impact Statement (FEIS), a revised jurisdictional delineation that addresses the concerns raised in EPA's December 28, 2009 letter.

Secondary Impacts of the Proposed Project

The proposed project will modify the hydrologic and hydraulic regimes within the project area and EPA believes that this will adversely affect the functioning of sensitive and regionally significant downstream receiving aquatic and wetland resources of the San Luis Rey River. Secondary (indirect) effects of the proposed project on the aquatic environment include: 1) impacts to riparian habitat along the San Luis Rey River (p. 4.4-29); 2) changes to stream hydrology and hydraulics (Balance Hydrologics, Appendix L[18]) ; 3) changes to sediment transport (Balance Hydrologics, Appendix L); 4) decreases in water quality from the impairment of floodplain and ecosystem services including water infiltration and groundwater recharge (Balance Hydrologics Appendix L); and 5) habitat fragmentation (p. 4.4-12).

Surface Water Quantity

Stormwater flows provide seasonally significant surface water contributions to downstream waters and can contribute significantly to groundwater recharge. [19] Collectively, in unaltered watersheds, stormwater is a significant source of water contributing to the base flow of downstream receiving waters (Levick *et al.* 2008). The proposed project would result in alteration of the natural surface hydrology through construction of stormwater basins and diversions around the facility to convey and store stormwater originating upgradient of the landfill area. Impacts related to surface water quantity include the modification of stormwater peak flows, and modification to overall runoff volume from the watershed. Reductions in runoff are primarily important because they impact the water availability for downstream use.

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[18] Technical review of hydrology studies for the proposed Gregory Canyon Landfill in northern San Diego County dated October 12, 2012, prepared by Balance Hydrologics, Inc.

[19] Levick, L., J. Fonseca, D. Goodrich, M.Hernandez, D. Semmens, J. Stromberg, R. Leidy, M. Scianni, D.P.Guertin, M. Thluczek, and W. Kepner. 2008. *The Ecological and Hydrological Significance of Ephemeral and Intermittent Streams in the Arid and Semi-arid American Southwest.* U.S. EPA and USDA/ARS Southwest Watershed Research Center, 116 pp.

The Army Corps tasked Balance Hydrologics, Inc. to review the hydrology studies for the proposed Gregory Canyon Landfill. The contractor's review (contained in Appendix L[20]) identified concerns with several design elements of the Stormwater Management Plan (SWMP):

- At outfall 1, the SWMP does not provide supporting documentation to demonstrate there are sufficient infiltration rates to control all excess stormwater volumes. High groundwater levels during the wet season may inhibit infiltration and reduce the effectiveness of proposed stormwater controls (p. 8).
- There are no controls for stormwater runoff associated with access roads to the borrow pits. Therefore, alteration to the hydrology can be expected due to higher traffic volumes and the use of soil sealant for dust controls (which would reduce the infiltration capacity and increase runoff) (p. 9).

Recommendations:

- Provide, in the FEIS, supporting documentation to demonstrate that the proposed storm water management facilities are sufficient to address all storm events; redesign the facilities, if necessary, to achieve this.
- Require installation of stormwater runoff controls for the access roads to the borrow pits.

Surface Water Quality

Waters within the San Luis Rey River watershed support riparian areas and provide natural erosion and sediment control. The proposed project will directly affect sediment yield to downstream waters. Seemingly small project-related changes in the delivery of sediment to the San Luis Rey River could cause significant geomorphologic changes to downstream and upstream waters, resulting in increased channel scour and aggradation. Aggradation and scour can alter channel form and result in the filling and scouring of pools and riffles used by fish and other aquatic organisms. Channel scour and aggradation can also result in bank erosion, headcutting, and the loss of riparian vegetation as the channel adjusts to a new equilibrium.

The Balance Hydrologics review reached the following conclusions related to surface water quality:

- The proposed design at Outfall 1 does not describe the outlet, routing and capacity of surface-water discharges from the ephemeral drainage. Erosion of the berm separating the depression from the SLR River may occur if this discharge is not properly managed (p. 8).
- The design of the upper portion of the eastern perimeter drainage channel may be prone to deposition of sediment as a result of debris flows or other, similar sediment-laden flows during large storms. If deposits accumulate in the lower gradient portion of perimeter channels, loss of capacity may result in overflow from

[20] Technical review of hydrology studies for the proposed Gregory Canyon Landfill in northern San Diego County dated October 12, 2012, prepared by Balance Hydrologics, Inc.

the channel and induce scour or gullying. Sediment will also accumulate resulting in reduced capacity over time (p. 8).

The DEIS proposes to address the hydrologic issues identified above through implementation of regular maintenance and monitoring of the project site, as described in Mitigation Measure Gregory SurfHydro-1 (p. 4.14-34 and 35). EPA does not believe that these proposed actions would be sufficient to minimize potential adverse impacts to water quality.

Recommendation:
Redesign the storm water management systems to avoid the impacts noted above and minimize maintenance requirements during extreme weather events.

Endangered Species

The Guidelines state that no discharge of dredged or fill material shall be permitted if it jeopardizes the continued existence of species listed as endangered or threatened under the Endangered Species Act of 1973. Currently, there is insufficient information to assess the effect of the proposed project on three federally listed species known to occur within or adjacent to the project site: least Bell's vireo, southwestern willow flycatcher and the arroyo toad. The Corps has not yet initiated formal section 7 Consultation with the U.S. Fish and Wildlife Service to determine the affects of the proposed project on listed species.

The DEIS concludes that southern California Steelhead (*Oncorhynchus mykiss irideus*) are absent from the site (p. 4.4-16), based on the survey contained in Appendix G. It also states, "the site is not located within any proposed or USFWS designated critical habitat for the southern California Steelhead." The National Marine Fisheries Service (NMFS) Southern California Steelhead Recovery Plan[21] covers an area from the Santa Maria River, in Ventura County, to the Tijuana River on the U.S. – Mexico border. It identifies the San Luis Rey River as a Core 1 steelhead population within the Santa Catalina Gulf Coast Biogeographic Population Group. This designation is intended to indicate a priority in the implementation of recovery actions identified in the Steelhead Recovery Plan, and is based principally on the intrinsic potential of the watershed to support a viable population, and the role of the restored population in the overall recovery strategy and viability criteria identified in the Steelhead Recovery Plan. The steelhead population of the San Luis Rey River (as with all rivers within the Southern California Distinct Population Segment) is severely depressed, which is why the Southern California DPS is listed as endangered[22]. EPA is concerned with the survey timing and method of observation (e.g. walking the banks).

Recommendations:

- Include, in the FEIS, the results of the Corps' consultation with the National Marine Fisheries Service and the U.S. Fish and Wildlife Service.

[21] Final Southern California Steelhead Recovery Plan, National Marine Fisheries Service, January 2012 <http://swr.nmfs.noaa.gov/recovery/SC_Steelhead/>
[22] Personal communication between Mark Capelli, National Marine Fisheries Service, and Tom Kelly, U.S. EPA, on March 7, 2013

- The FEIS should acknowledge the role of the San Luis Rey River in the recovery of southern California Steelhead and evaluate the effects of the alternatives, in combination with other reasonably foreseeable actions, on the species.
- We recommend further coordination with NMFS to ensure the sufficiency of survey methods for California steelhead.

Habitat Fragmentation

Because of its relative isolation, and its continuity and interspersion with high functioning upland, wetland and riverine waters, Gregory Canyon is well-buffered from human disturbance, which is noted in the DEIS. For this reason, Gregory Canyon and its tributaries function as an important wildlife linkage between the San Luis Rey River, Gregory Mountain, and other high-functioning drainages to the southeast. The proposed project would eliminate an existing three-mile-wide north-south movement corridor for wildlife across the site to the San Luis Rey and adjoining watersheds (p.4.4-47). In addition, habitat fragmentation resulting from the proposed landfill would adversely impact wildlife in several ways that are not captured by the DEIS, by: 1) increasing the incidence of predation near the edge; 2) decreasing the use of habitat due to disturbances associated with the adjoining land uses (*e.g.*, noise); and 3) reducing species abundance. This impact is regionally important because of increasing human-induced alterations of the surrounding landscape.

Recommendation:
The FEIS should discuss the above impacts of habitat fragmentation and identify measures that would mitigate these impacts.

Windblown Litter

The DEIS specifies that temporary fencing may be used to control wind-blown litter around the working face of the landfill and that operations may be ceased when winds exceed 40 miles per hour or gusts exceed 55 miles per hour (p. 3-77). No information is provided to support the conclusion that such limitations would be sufficient. The DEIS contains specific details about daily inspection of Interstate76 and the access road for wind-blown litter, but does not provide similar details regarding the rest of the facility (p. 3-77).

Recommendations:

- Fencing around the working landfill face, as high as practicable, should be identified in the FEIS as a mitigation measure for the Applicant's Proposed Alternative.
- The FEIS should provide the rationale for the specific wind speed limitations proposed.
- We recommend that the removal of wind-blown litter be conducted daily and identified as a mitigation measure for the Applicant's Proposed Alternative.

Section 401 Water Quality Certification

The DEIS discusses the need for the project to obtain a CWA Section 401 Water Quality Certification (p.4.14-2), which we note is still under review by the Regional Water Quality Control Board, San Diego Region. The San Luis Rey River is listed, under section 303(d) of the Clean Water Act, for total dissolved solids, chloride and indicator bacteria impairment (DEIS, Vol. 2, 4.14-22). The proposed project would reduce streamflows and alter sediment transport. While the DEIS emphasizes that these impacts are not significant (Section 4.14), they would degrade water quality and the aquatic ecosystem for an Aquatic Resource of National Importance.

Recommendation:
In the FEIS, discuss the status of the CWA Section 401 Water Quality Certification.

Compensatory Mitigation

The Guidelines at 40 CFR 230.10(d) state that "no discharge of dredged or fill material shall be permitted unless appropriate and practicable steps have been taken which will minimize potential adverse impacts of the discharge on the aquatic ecosystem," (except as provided under section 404(b)(2)). For unavoidable impacts of a project that remain, after avoidance and minimization, the applicant is required to comply with "Final Rule for Compensatory Mitigation for Losses of Aquatic Resources" (40 CFR Part 320). The DEIS commits to preparation of a mitigation plan that meets these requirements.

Recommendation:
Include, in the FEIS, a compensatory mitigation plan that complies with EPA's Final Rule for Compensatory Mitigation for Losses of Aquatic Resources.

Renewable Energy

For the Gregory Canyon Landfill and other alternatives, the DEIS describes flares as a means to control emissions from the landfill gas collection system (e.g. p. 3-72). While the DEIS refers to turbines in several locations (e.g. p. 4.3-81), it is not part of the project description or a mitigation measure, Turbines may be used to generate renewable energy from landfill gas. EPA's Landfill Gas Energy Benefits Calculator[23] estimates that the equivalent to more than 34,000 metric tons of carbon dioxide emissions could be avoided through renewable energy generation at Gregory Canyon Landfill. Renewable energy generation may rapidly repay the cost of energy generation equipment through the creation of more than 7 megawatts of energy annually[24]. EPA's Landfill Methane Outreach Program is available to assist the Army Corps or the project proponent in determining the benefits of renewable energy generation. We also note that, if the facility is subject to Prevention of Significant Deterioration permitting requirements (see below), a Best Available Control

[23] EPA's LFG Energy Generation Calculator is located at http://www.epa.gov/lmop/projects-candidates/lfge-calculator.html, landfill gas generation based on 3.97 million cubic feet per day in year 10 (see Appendix F)

[24] Based on the conversion factors in EPA's LFG Energy Generation Calculator (Calculations and Reference Worksheet)

Technology Analysis may be required, for which energy efficiency options may need to be considered.

> *Recommendation:*
> Incorporate renewable energy generation into the project as a cost-effective method to reduce project-related greenhouse gas emissions, and discuss this in the FEIS.

Air Quality

Stationary Source Emissions

The DEIS discusses EPA's Greenhouse Gas Reporting Rule (4.3-13) without describing its applicability to the alternatives. It does not discuss EPA's tailoring rule, but does describe EPA's Standards of Performance for Municipal Waste Landfills (p. 4.3-7). The DEIS also mentions EPA's deferral of carbon dioxide permitting requirements from biogenic sources (p. 4.3-82), without specifically mentioning that EPA's deferral does not apply to methane.

The DEIS includes an estimate of GHG emissions and net GHG emissions (Alternative GHG emissions minus GHG emissions under the no action alternative), but does not estimate GHG emissions for comparison to Clean Air Act thresholds. The DEIS estimates that only 75% of the gas emitted by the landfill would be captured by the landfill gas collection system (p. 4.3-46), consistent with the average collection efficiency outlined in EPA's AP-42. Additionally, the flaring system used to control landfill gas would allow the emission of small amount of untreated landfill gas: approximately 1% of the collected total (p. 4.3-46).

> *Recommendation:*
> Include in the FEIS an estimate of nonfugitive GHG emissions that identifies biogenic CO_2 emissions and landfill gas emissions, and compare nonfugitive landfill gas emissions to the thresholds for EPA's GHG Reporting Rule and Tailoring Rule and PSD, to determine the applicability of reporting and permitting requirements.

Mobile Source Emissions

All of the alternatives acknowledge significant impacts to air quality from mobile sources with a potential for disproportionately high and adverse impacts (e.g. nitrogen oxides and volatile organic compounds for the Applicant's Proposed Alternative – Gregory Canyon Landfill). The DEIS includes design features such as (1) Tier 2 non-road engines for construction, and (2) use the best available control technology or BACT to reduce diesel particulate emissions from on-site equipment (p. 4.3-54). While the BACT provision will ensure that the project uses the cleanest stationary construction equipment (e.g. generators), that term is not normally applied to mobile sources. Furthermore, Tier 2 does not represent the cleanest non-road engines available. Non-road construction equipment meeting EPA's Tier 3 standards are now available. Non-road equipment meeting EPA's Tier 4 standards are available for engines less than 75 horsepower, and provisionally available (being phased in from 2011 to 2014) for engines over 75 horsepower. The DEIS does not discuss design features or mitigation measures for applicant controlled on-road trucks, such as trucks

bringing recycled water to the site. CEQ guidance[1] clarified the obligation to discuss mitigation outside the jurisdiction outside the control of lead agencies.

Recommendations:

The FEIS should discuss potential mitigation of mobile source emissions, including:

- Leasing or purchasing new, clean equipment meeting the most stringent of applicable Federal[2] or State Standards[3] (e.g., 2010 model year standards compliant engines for on-road trucks, such as those delivering recycled water; Tier 3 or Tier 4 engines for non-road construction equipment, depending on the year of construction; or engines retrofitted with California Air Resources Board (CARB) and EPA approved emissions controls to meet these standards);
- Utilizing equipment with EPA or CARB verified retrofit technologies for older engines when equipment meeting most stringent emission standards isn't available;
- Reducing use, trips, and unnecessary idling from heavy equipment; and
- Maintaining and tuning engines per manufacturer's specifications to perform at California Air Resources Board (CARB) and/or EPA certification levels, where applicable, and to performing at verified standards applicable to retrofit technologies.

Self-Hauled Waste

The DEIS concludes that the Applicant's Proposed Alternative would have cumulatively significant traffic impacts in the near-term (p. 4.15-20-27), but not during build out (after roadway build-out). While the project proponent and the Corps cannot commit to road improvements, the project includes a Traffic Impact Fund. According to the DEIS, this fund would finance several improvements to State Route 76 that would reduce the impacts of traffic to less than significant, if implemented by Caltrans.

The DEIS does not appear to consider the impacts of self-hauled waste, nor does it appear to prohibit self-hauled waste. For example, Table 4.15-8 - Landfill Trip Generation includes a variety of activity types, but none that correspond to self-hauled waste. A CalRecycle Report[25] indicates that 13% of waste sent to landfills is self-hauled. The report breaks this down further to commercial self-haul vehicles (mainly roofers and landscapers) and residential self-haul, estimated to represent 10.5% and 2.6% of the waste total, respectively. While the percentage of self-hauled waste tonnage may be small relative to the total amount of waste delivered to the landfill, it may have a relatively larger impact on the number of total vehicles because the vehicles used to transport self-hauled waste are unlikely to have the capacity of 8-ton waste collection trucks. Another CalRecycle study[26] estimated that 76% of statewide self-hauled waste could be diverted from landfills.

Recommendation:

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[25] *Statewide Waste Characterization Study: Results and Final Report*, December 1999

Include, in the FEIS, a commitment to prohibit self-hauled waste for the action alternatives. If this is not feasible, the FEIS should explain why and discuss the impacts of self-hauled waste for each alternative.

Vector Control

The DEIS states that Gregory Canyon is home to "one of the western-most surviving nesting pairs of Golden Eagles" (4.4-18). It also mentions that the Vector Control and Management Plan would include the use of anticoagulants (p. 4.8-7 and 4.8.8). While the DEIS states that no significant impact will occur to the golden eagles (p. 4.4-63), it does not discuss the potential impacts of anti-coagulants. Rodenticides are known to pose significant risks to non-target wildlife, including birds, such as hawks and owls, and mammals, including raccoons, squirrels, skunks, deer, coyotes, foxes, mountain lions, and bobcats. Rodenticides applied as bait products pose risks to wildlife from primary exposure (direct consumption of rodenticide bait) and secondary exposure (predators or scavengers consuming prey with rodenticides present in body tissues). Other wildlife and domestic animals in the area may also be at risk of poisoning, either from direct or secondary poisoning. This includes dogs, which the DEIS proposes as a possible means to disperse rodents (p. 4.4-8).

Recommendations:

- Discuss, in the FEIS, the impacts of anti-coagulants on nesting golden eagles and other wildlife or domestic animals in the area.
- Include the frequent collection of rodent carcasses as a mitigation measure to minimize secondary poisoning.

Project Purpose

The only Purpose provided in the DEIS is the purpose of Applicant's Proposed Alternative, which is "to meet a portion (approximately 30 million tons) of San Diego County's long-term waste disposal needs by providing non-hazardous solid waste disposal capacity to *service waste generated in or near North County*" (*emphasis added*) (p. 2-7). Since waste management planning is generally conducted at the county level, it is not clear why the purpose is geographically limited in this manner, which is inconsistent with the analysis provided in the DEIS. The Needs Assessment of Appendix B evaluates waste disposal within the waste-shed, a six county area, and for all of San Diego County. While it considers transportation impacts for North County waste, the Needs Assessment does not distinctly evaluate waste generation in or near North County.

Recommendation:
Expand the focus of the DSEIS project purpose to be consistent with the countywide and six-county focus of the Needs Assessment.

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.