

July 14, 2011

Jeff Adams
City of Whittier, Community Development
13230 Penn Street
Whittier, CA 90602-1772

Re: Comments on the Revised Draft Environmental Impact Report (DEIR) for the Whittier Main Oil Field Development Project

Dear Mr. Adams:

The Puente Hills Landfill Native Habitat Preservation Authority (Habitat Authority) appreciates the opportunity to comment on the Revised DEIR for the Whittier Main Oil Field Development Project. By an action taken at a meeting of the Habitat Authority's Board of Directors on July 14 the following comments are submitted for your consideration.

The Habitat Authority is a joint powers authority established pursuant to California Government Code Section 6500 et seq. with a Board of Directors consisting of the City of Whittier, County of Los Angeles, Sanitation Districts of Los Angeles County, and the Hacienda Heights Improvement Association. According to our mission, the Habitat Authority is dedicated to the acquisition, restoration, and management of open space in the Puente Hills for preservation of the land in perpetuity, with the primary purpose to protect the biological diversity. Additionally, the agency will endeavor to provide opportunities for outdoor education and low-impact recreation. The Habitat Authority's jurisdiction extends within eastern Los Angeles County approximately from the intersection of the 605 and 60 Freeways in the west to Harbor Boulevard in the east.

Habitat Authority Management of Whittier Open Space

According to the Property Acquisition and Maintenance Agreement between Whittier, the Whittier Puente Hills Conservation Authority and the Habitat Authority dated August 1997, the Habitat Authority manages the City-owned open space including that upon which the Proposed Project is located. Overall, the Habitat Authority manages an almost 4,000-acre Preserve, of which 1,756 acres is owned by the City of Whittier. Additionally, the City and the Habitat Authority entered into an Agreement for Professional Services dated March 2008 at the City's request, for the Habitat Authority staff to provide professional services required to facilitate environmental surveys on the City property known as the former Chevron property.



The Proposed Project

The *Proposed Project* site is described as being within 1,290 acres of the Whittier Main Oil Field, and is located within the Preserve. The Proposed Project involves development of an oil and gas production and processing facility within the lease area known as the Whittier Main Oil Field. The portion of the Proposed Project located within the Preserve involves one site consisting of oil drilling pads, processing facilities, and a truck loading facility (6.9 acres, within the Preserve's Core Habitat area), new oil and gas pipelines (2.8 miles, including a portion under the Arroyo Pescadero Loop Trail), realignment of 1,800 feet of existing roads, and construction of 700 feet of new roads (approximately three miles, most of which is located within the Preserve's Core Habitat area), temporary disturbance of an additional six acres for construction, and fire-safety-required fuel modification zones (30 feet around structures, 10 feet along roads) for a total disturbed area of nearly 31 acres. On-site earth moving activities involve construction of the North Access Road (six months), site grading (six months), construction of pipelines and utilities (one year), and subsequent construction of the oil and gas plant site (two years) (p. 2-38).

Following the eight-month test drilling phase of three wells, the construction phase will last for nearly three years, followed by five years of continuous drilling during the operations phase (if all remaining wells, up to 57 wells, are drilled consecutively). However, if the drilling of the remaining wells does not occur continuously, then the impacts from drilling could occur at any time during the remaining life of the 25-year Proposed Project (which is the lease period Matrix Oil holds with the City of Whittier). Once wells are drilled, annual redrilling of wells would occur during approximately three months per year, and well workovers would occur almost continuously during the life of the Proposed Project.

The Proposed Project was called the Consolidated Central Site Alternative (Consolidated Project) in the previous DEIR released in October of 2010; it was identified as *the environmentally superior alternative*.

General Comments

The Habitat Authority would like to primarily focus attention on its suggested mitigation measures regarding wildlife movement and native wildlife nursery sites that include, but are not limited to, implementing a bobcat study, building a wildlife overpass, supporting the designation of a new and/or expanded Core Habitat zone, and studying and managing for possible limitations on recreation. Also, the DEIR inadequately described impacts to the Core Habitat. As a result several necessary mitigation measures were not incorporated into the document to minimize or avoid significant biological impacts. This caused the Proposed Project to miss its goal to, "Minimize impacts to the functioning of the Core Habitat of the Preserve." This may have also caused the Proposed Project to miss its goal to, "Minimize environmental impacts from the Project on the Preserve" (p. 2-2). There are also other impacts that are significant including but not limited to Noise/Vibration, Aesthetics, Land Use, and Recreation.

The Habitat Authority supports consideration of any alternatives that would place the Proposed Project outside of the Core Habitat or along the edge of the Preserve, and urges further analysis and consideration of an alternative with exclusive Catalina Avenue Access.

July 14, 2011

Overall, the Preserve represents a public investment of over \$48.5 million dollars, of which \$30.3 million was invested by the Habitat Authority for acquisition (1,880 acres) for the purpose of biological preservation. The sustainability of the Habitat Authority-owned lands is biologically dependent on the nearby and adjacent open space lands owned by the City of Whittier. The Final EIR should address the importance of keeping the biological integrity of open space land within the Proposed Project area intact so it does not diminish the biological value of adjacent land owned by the Habitat Authority or other public agencies, such as other lands owned by the City of Whittier, County of Los Angeles or Sanitation Districts of Los Angeles County.

The Habitat Authority is concerned with the long-term viability of the functioning of the Core Habitat and consequently adjacent Habitat Authority-owned properties. Enacting the mitigation measures suggested or by supporting Project alternatives discussed in this letter will help to minimize negative impacts on the Preserve.

Detailed comments on the sections of the revised DEIR are attached as Table A.

Thank you for your consideration. Please do not hesitate to contact me or Ecologist Shannon Lucas at (562) 945-9003 for discussion.

Sincerely,

A handwritten signature in black ink, appearing to read "Andrea Gullo". The signature is fluid and cursive, with the first name being more prominent.

Andrea Gullo
Executive Director

Attachments:

Table A: Detailed Comments

C: Habitat Authority Board of Directors
Habitat Authority Advisory Committee

TABLE A

Puente Hills Landfill Native Habitat Preservation Authority (Habitat Authority) Detailed Comments on the Revised Draft Environmental Impact Report (DEIR) for the Whittier Main Oil Field Development Project

Section 2 Project Description

The Proposed Project Schedule in the revised DEIR (Figure 2-13) should also include specific timelines for Proposed Project permits and design.

Page 2-25 of the revised DEIR states that “all roads used within the Preserve would be paved during the Design and Construction Phase.” If the Arroyo Pescadero loop trail is proposed for paving, please consider using environmentally-sensitive paving alternatives, such as a polymer emulsion product (following pipeline construction) to reduce aesthetic impacts to recreational users on the Loop Trail and to reduce run off of these roads and into adjacent habitat and drainages which could impair water quality. Please also evaluate impacts to water quality due to runoff from paved roads within the Preserve and provide specific mitigation for significant impacts. The design of these improved roads should be environmentally sensitive through elimination of side-cast materials (excess dirt) and erosion potential.

Section 4.1 Air Quality

Mitigation measure AQ-4 requires that at least 500 trees be planted to mitigate for increases in greenhouse gas emissions, in coordination with the Habitat Authority. Please include analysis showing how this number of trees was calculated to fully mitigate for the Proposed Project’s contribution of 14,720 metric tons of CO₂e (Table 4.1-11), and if it does not, additional trees should be planted to fully mitigate for this impact. The feasibility of planting this many trees on the Preserve is currently unknown, given that trees native to this area generally only occur in drainages or north-facing slopes. However, any trees needed to fully mitigate for this impact that cannot be feasibly planted on the Preserve should still be planted off-site, preferably within the Puente-Chino Hills. Funds would need to be provided for maintenance and irrigation for any trees planted, generally for five to seven years. Planting of trees may also require removal of existing non-native plants or trees, such as planting sycamore or willow trees to restore La Cañada Verde creek, which would require the removal of non-native tamarisk and possibly removal of additional non-native pepper and eucalyptus trees. In addition, the revised DEIR should investigate the carbon sequestration capacity of other native habitat types, such as coastal sage scrub or chaparral, in addition to the carbon sequestration capacity of native trees.

Section 4.2 Biological Resources

1. **The thresholds of significance for impact analysis should be more conservative given the sensitivity of the Preserve.**

In the Habitat Authority's NOP comment letter, we suggested that more restrictive or conservative thresholds of significance would be appropriate for biological resource impacts. This would be consistent with language in the revised DEIR which notes that "loss and degradation of habitats at the Project Site could be expected to have greater adverse effects upon ecological processes and native wildlife populations than would occur in an area with comparable natural communities that does not occupy such a sensitive location within a natural Preserve" (p. 4.2-52).

2. Figures 4.2-1, 4.2-2, 4.2-5, and 4.2-10 need to be revised or clarified.

Figure 4.2-1, Plant Communities, needs to be revised to show the extent of the Proposed Project and associated impacts (including fuel modification and grading). This Figure, in addition to Figure 4.2-2, should also include a scale.

Figure 4.2-5, Trails, Oil Field Roads, and Wildlife Roadkill Data, needs to be revised to differentiate between old oil field roads (which are no longer used and have become heavily vegetated and nearly impassable), currently-used trails, and currently-non-public roads. However, since the old oil field roads and trails are not mentioned in the text, they should be considered for removal from this Figure.

Please clarify or explain what is depicted in Figure 4.2-10. In the text on page 4.2-54 it states that "Figure 4.2-10 shows the existing old oilfield roads that provide pathways for terrestrial wildlife crossing the Arroyo Pescadero and moving from there to and from the Service Tunnel". However, the title of Figure 4.2-10 states that it is showing "Proposed Actions Relative to Roadways Leading to the Service Tunnel", despite the fact that the Figure does not show any actions relevant to the Proposed Project.

3. Mitigation Measure BIO-1d requiring consultation with the U.S. Fish and Wildlife Service for impacts to coastal California gnatcatchers is not adequate as it should consider requiring focused surveys one year prior to construction or monitoring during construction (pg. 4.2-47).

Given the timing of the DEIR review and potential approval, it is likely that the Proposed Project would not be initiated until the end of 2011 at the very earliest. Since the gnatcatcher breeding season starts in February, focused surveys for the gnatcatcher will need to be conducted again in 2011 to determine whether any additional coastal sage scrub habitat in the Proposed Project vicinity is occupied and may be affected by the Proposed Project. U.S. Fish and Wildlife Service Survey Guidelines for the gnatcatcher require that surveys must be current, within one year of Proposed Project initiation (i.e. the previous breeding season). Recent results, showing breeding gnatcatchers in the Proposed Project vicinity, demonstrate the viability of the habitat in this area for breeding, and increase the likelihood of possible additional breeding in the area. This Mitigation Measure should require such surveys be conducted annually in the spring until Proposed Project initiation, and if any additional occupied habitat is found then impacts must be mitigated in accordance with the measures prescribed in the DEIR as well as through the

consultation and Incidental Take Permit process with U.S. Fish and Wildlife Service. Although Mitigation Measure BIO-4e requires protocol surveys for gnatcatchers if construction or fuel modification occur during the breeding season (February 15 through August 31), it does not account for the possible removal of any newfound occupied habitat outside of breeding season.

In addition, the analysis of residual impacts (following implementation of mitigation measures) from Project grading, vegetation clearance for fuel modification, and increased noise is inadequate and incomplete (p. 4.2-47). The discussion of road widening and fuel modification necessary for use of the North Access Road as the Project's primary off-site transport route states that, "The existing North Access Road already passes through habitat of the federally listed California gnatcatcher, and any improvement of the road would have negligible effect upon the local area's suitability for the continued occurrence of the gnatcatcher." (p.4.2-47) This fails to take into account the fact that currently the North Access Road experiences perhaps three trips per week by one Preserve Ranger's vehicle, whereas Phases 2 and 3 of the Proposed Project would put over 316 trips per day by large construction trucks on the North Access Road. Improvements will impact the North Access Road's use by animals, and the road improvement would be to allow increased vehicle traffic (both volume and size) which could affect the suitability of the area as gnatcatcher habitat. Mitigation at a 1:1 ratio for habitat is included for noise impacts resulting from construction and drilling at the oil facility; please consider similar mitigation for related noise impacts along the North Access Road where breeding gnatcatchers have been observed since none is proposed. The Residual Impacts discussion states that impacts to sensitive nesting habitats from the increased noise generated by construction and drilling are "temporary" (p.4.2-47). Since testing, construction and drilling are expected to take over five years, and then re-drills and well workovers will potentially continue year-round, please provide a definition of "temporary." A definition will allow a more complete assessment of all the "temporary" impacts of the Proposed Project.

4. **The analysis of impacts to wildlife movement and native wildlife nursery sites and associated mitigation measures are not adequate, and additional mitigation is suggested (Impact BIO.4; pg. 4.2-52 to 4.2-61).**

Please note that the comments presented below are organized in the same way that the impact and mitigation discussion is organized in the revised DEIR.

4a. Core Habitat Impacts

The revised DEIR does not adequately analyze impacts to the Core Habitat as it does not accurately evaluate the sensitivity of bobcats (an indicator species), particularly female bobcats, from Proposed Project impacts and the resulting significance of impacts to native wildlife nursery sites.

The revised DEIR acknowledges that the Core Habitat is "the largest contiguous area in the Preserve that is well-buffered from such 'edge effects' as lighting, noise, and

intrusions by humans and domestic animals” and that “it is an area that biologists characterize as a ‘native wildlife nursery site’ for such species as the mule deer and bobcat” (p. 4.2-53). The revised DEIR also notes that “during the 30-year life of the Project, levels of noise, light, human presence, and vehicle traffic would increase in all parts of the Project Site, including areas that serve as nursery sites and that have been purposefully set aside for the purpose of conservation of natural communities and their constituent species” (p. 4.2-53). Also please clarify whether the Proposed Project (lease period) is 25 years or 30 years, and discuss whether and for how long the lease could be extended or renewed.

Bobcats are More Sensitive to Disturbance

The revised DEIR’s analysis of Proposed Project impacts to the Core Habitat states that impacts to the Core Habitat will be “adverse, but less than significant” with mitigation. However, this analysis uses incorrect information in its argument that wildlife, and specifically bobcats, would not be adversely affected by this increase in Proposed Project activity. For example, the revised DEIR incorrectly states that bobcat use of the Colima Service Tunnel remained high after being opened to human use in 2002; based on a current Habitat Authority study in 2009-2010, bobcat activity at the Service Tunnel has decreased by approximately one-third since it was opened to public use in 2002¹. This study also showed that bobcat activity in the area around the Tunnel, including portions of the Proposed Project Area within and near Arroyo Pescadero, has decreased substantially since the late 1990’s, which was after oil activities had ceased in the area but before it was opened to recreational activity. The revised DEIR states that bobcats have only a “moderately negative response” to urbanization, and states that their response is similar to other wildlife species such as coyote, raccoon, and mule deer (p. 4.2-53). However, this is in direct conflict with the majority of scientific literature regarding bobcats^{2,3,4,5}, including the study cited in the revised DEIR on page 4.2-37 (Ordeñana, et. al. 2010) which shows that bobcats are one of only three species (with mountain lion and gray fox) that show a consistently negative response to urbanization while all other mammals in the study showed a positive response⁶.

¹ Puente Hills Habitat Authority, 2010. Changes in Large and Medium-bodied Mammal Activity Following Eight Years of Recreation and Other Activities: The Colima Road Underpass and Vicinity. (Attached for your reference.)

² Riley, S.P.D. 2006. Spatial Ecology of Bobcats and Gray Foxes in Urban and Rural Zones of a National Park. *The Journal of Wildlife Management*, 70(5), 1425-1435.

³ Riley, S.P.D., et. al. 2003. Effects of Urbanization and Habitat Fragmentation on Bobcats and Coyotes in Southern California. *Conservation Biology*, 17, 566-576.

⁴ Crooks, K.R. 2002. Relative Sensitivities of Mammalian Carnivores to Habitat Fragmentation. *Conservation Biology*, 16(2), 488-502.

⁵ Gehrt, S.D., et. al., ed. 2010. Urban Carnivores: Ecology, Conflict, and Conservation. Johns Hopkins University Press, Baltimore.

⁶ Ordeñana, M. A., K. R. Crooks, E. E. Boydston, R. N. Fisher, L. M. Lyren, S. Siudyla, C. Haas, S. Harris, S. A. Hathaway, G. M. Turschak, A. K. Miles, and D. H. Van Vuren. 2010. The effects of urbanization on carnivore species distribution and richness. *Journal of Mammalogy* 91:1322-1331.

Incorrect Use of Baseline Biological Conditions

The revised DEIR states that prior oil drilling activities did not result in significant, long-term, adverse effects on the local wildlife populations, and therefore the currently Proposed Project will not result in those impacts as well. It is inappropriate to use previous oil drilling activities as a baseline for conducting current impact analysis; per CEQA Guidelines, the Proposed Project should be analyzed according to existing conditions for impact analysis⁷. Although the Proposed Project vicinity currently exhibits the highest bobcat activity in the entire Preserve, it does not mean that this was the case when previous oil drilling activities were occurring. The revised DEIR does not cite any data to confirm the assertion that previous oil activities didn't have an adverse effect on wildlife. It is unknown whether wildlife avoided the oil activity and instead persisted in other undeveloped habitats surrounding the oil drilling activities. During previous oil drilling activities, there was more undeveloped habitat available in the region. In the past 50 years alone, areas totaling the approximate size of the entire Puente Hills Preserve (nearly 4,000 acres) have been converted from natural habitat to developed areas (residential developments, golf courses, landfills, cemeteries) (Exhibit A), leaving what remains to be of vital importance to the persistence of native habitat and wildlife populations in the Puente Hills. In addition, during previous oil drilling activities there was less recreational activity in the Preserve than exists today, due to public access restrictions on lands that were previously privately owned (such as Rose Hills Cemetery property), meaning that there was less disturbance to wildlife on adjacent lands.

Noise Impacts to Mammals Not Addressed

The revised DEIR did not include in its Core Habitat impact analysis any information about how noise from the Proposed Project could affect medium and large mammal species. Page 4.2-20 summarized noise issues related to wildlife, but focused only on birds and bats, and did not include evaluation of medium or large mammals. However, the revised DEIR did include a quote from a study stating that "the preponderance of evidence argues for immediate action to manage noise in protected natural areas" (p. 4.2-20). In addition, a study cited in the revised DEIR (Barber, et al., 2009) found that a one-decibel (dB) increase in existing sound level reduces the distance that an animal can detect something by 11 percent and reduces the area in which an animal can listen by 21 percent; increases of up to three dB can reduce the listening area for an animal by 50 percent⁸. This reduced area would impact an animal's ability to detect and avoid predators, and to detect and capture prey. Increased noise from the Proposed Project would compound existing noise levels present in the Preserve and impact wildlife, particularly during the Construction phase.

Impacts to Native Wildlife Nursery Site Not Adequately Addressed

The revised DEIR also did not include in its Core Habitat impact analysis an

⁷ CEQA guidelines, Section 15126.2.

⁸ Barber, J.R., et. al. 2009b. The Costs of Chronic Noise Exposure for Terrestrial Organisms. *Trends in Ecology and Evolution*, 25(3), 180-189.

acknowledgement that female bobcats have been shown to be especially sensitive to human disturbance and developed areas, and spend most of their time in natural habitat (as opposed to developed or altered habitat, such as golf courses or landscaped areas)^{9,10,11}. In one study, the edge of the average female bobcat home range was approximately one-half mile from developed areas, and female bobcats avoided paved roads that received regular vehicle use, even near or within a park; other studies were noted regarding bobcat avoidance of paved roads as well¹². Given this sensitivity to development and the avoidance buffer zones around such development, the area of a habitat preserve that effectively supports bobcat reproduction could actually be smaller than its jurisdictional boundaries^{13,14}. The higher sensitivity of adult female bobcats in particular is important for bobcat population viability because lands that are inhospitable to females cannot produce new animals¹⁵. Given that the Proposed Project vicinity exhibits the highest bobcat activity in the entire Preserve, and that female bobcats are especially sensitive to development, the Proposed Project could have a significant adverse effect on the value of the Core Habitat as a native wildlife nursery site for this species. Proposed Project activities and associated edge effects could cause the currently undisturbed habitat to be considered unsuitable by female bobcats, causing them to avoid the area or forcing them to be subjected to additional stress and possibly shrink and overlap their home ranges, causing additional competition for limited resources.

These significant adverse impacts to native wildlife nursery sites likely extend beyond bobcats, applying to the numerous other wildlife species present on the Preserve that are considered to be sensitive to human activity, including spotted skunks, long-tailed weasels and badgers¹⁶. However, bobcats are useful as an indicator species for potential impacts on other species. Bobcats are an especially useful indicator species in southern California regarding habitat connectivity, as they are sensitive to fragmentation and human disturbances, including roads^{17,18,19,20}, spend the majority of their time in natural habitat^{21,22,23}, and provide a method for protecting

⁹ Riley, S.P.D. 2006. *Ibid.*

¹⁰ Lyren, L.M., et. al. 2008. GPS Telemetry, Camera Trap, and Mortality Surveys of Bobcats in the San Joaquin Hills, Orange County, California. Prepared for U.S. Fish and Wildlife Service and The Nature Conservancy. Administrative Report.

¹¹ Gehrt, et. al. 2010. *Ibid.*

¹² Riley, S.P.D. 2006. *Ibid.*

¹³ *Ibid.*

¹⁴ Hilty, J.A., et. al., 2006. Corridor Ecology: The Science and Practice of Linking Landscapes for Biodiversity Conservation. Island Press, Washington D.C.

¹⁵ Riley, S.P.D., et. al. 2003. *Ibid.*

¹⁶ Crooks, K. R. 2002. *Ibid.*

¹⁷ *Ibid.*

¹⁸ *Ibid.*

¹⁹ Hunter, R., Fisher, R., and Crooks, K 2003. Landscape-level connectivity in coastal southern California, USA, as assessed through carnivore habitat suitability. *Natural Areas Journal*, 23, 302–314.

²⁰ Conservation Biology Institute. 2005. Maintaining Ecological Connectivity Across the “Missing Middle” of the Puente-Chino Hills Wildlife Corridor. July 2005.

²¹ Riley, S.P.D. 2006. *Ibid.*

²² Lyren, L.M., et. al. 2008. *Ibid.*

other species with less-demanding habitat needs²⁴. Many wildlife species prefer to breed in areas that are buffered from perceived threats, such as development and human activity, to help insure the protection and survival of their young. The Core Habitat currently serves as the largest area of buffered habitat on the Preserve, and impacts to this area could significantly impact native wildlife nursery sites.

4b. Vibration Impacts

The revised DEIR does not adequately evaluate Proposed Project impacts resulting from increased vibration, as it does not describe in detail vibration in relation to Proposed Project activities, including re-drills and well workovers, and it does not evaluate how more sensitive species may react to vibration increases.

In the revised DEIR, it states that “the highest vibration levels experienced by wildlife would most likely occur during the initial portion of drilling a well, during approximately the first 100 feet of drilling, and this would last a matter of hours when they are drilling close to the surface” (p. 4.2-53). However, this level of information regarding the duration of vibration impacts is not discussed in the Project Description or Noise and Vibration sections of the revised DEIR. Please include in the Final EIR a detailed description of exactly when, how long, and at what distance different vibration levels occur during the initial drilling of a well, as well as during re-drills and well workovers, which would occur continuously throughout the lifetime of the Proposed Project. This analysis should also include other situations which could cause additional vibration beyond anticipated levels, such as differences in types of rock encountered while drilling, or different types of equipment.

Page 4.2-53 states that bobcats would experience anxiety due to vibrations, and that data on wildlife response to vibration impacts are not well-documented. But it also notes that the “typical response observed by the EIR preparers for most wildlife to a short-term, infrequent event, is short-term avoidance, but if the abnormal condition (such as noise and vibration) ceases, wildlife species typically return to their normal behavior”. Please include a summary of the EIR preparers’ experience observing wildlife reactions to vibration impacts, including the species observed. This reasoning does not account for wildlife species that are known to be more sensitive to human activity, like bobcats, which may not react the same way as “most wildlife”. Also, given the frequency of new well drilling (up to once per month for five years), as well as re-drills (three times per year) and well workovers (52 per year, each lasting one to seven days; therefore, workovers could be continuous) over the 25-to-30-year life of the Proposed Project (lease period), this would be more than a short-term impact.

4c. North Access Road Impacts

²³ Gehrt, et. al. 2010. *Ibid.*

²⁴ Lyren, L.M., et. al. 2008. *Ibid.*

The revised DEIR does not adequately evaluate Proposed Project impacts from the North Access Road as it does not acknowledge the substantial change in traffic, associated noise and vibration from this increase in traffic, changes in the topography and vegetation, and changes brought about by the addition of the hardscape road surface.

The revised DEIR states that “The North Access Road is located in the Core Habitat of the Preserve, which currently has minimal disturbances. This access road would increase pressure on an already-constricted wildlife movement corridor and therefore, the overall effect would be an increase in impacts to biological resources” (p. 4.2-54). It also states that “increased levels of drilling operations and human activities in the Core Habitat, which currently has minimal disturbances, would result in substantial impacts to wildlife movement. The impacts would be most severe in those areas farthest away from existing human pressures”. The North Access Road would traverse through the entire Core Habitat, including the portions that are the farthest away and most insulated from existing human pressures. The Proposed Project would substantially increase traffic (and associated noise, vibration and human presence impacts) on this road from approximately one vehicle per day or less under current conditions to 24 truck trips during the Operational Phase and 316 truck trips during the Construction Phase (Tables 4.7-14 and 4.7-15).

Appendix A, Northerly Access Road Study Sheets 2 of 3 and 3 of 3 show that more than 1,160 feet of retaining walls from two to 10 feet in height will be constructed on the upslope side of the North Access Road, and show that K-rails will be installed along the downslope side of the Road. However, the revised DEIR does not analyze this aspect of the Project, and does not evaluate the impacts to wildlife of creating a concrete canyon that they may not be able to easily escape. In addition, the height and length of some retaining walls is not shown, and the total length of installed K-rails is not included. Delaying exposure of these details masks their environmental significance. Please include this information in the Final EIR.

Additionally, there is no analysis in the revised DEIR regarding how this substantial increase in traffic would increase associated noise and vibration levels along the North Access Road which traverses through the entire Core Habitat. The Noise and Vibration section does state on page 4.5-22 that noise levels from trucks could range up to 62 dBA, which is a large increase from the existing baseline noise levels of 47.7 dBA measured at the Deer Loop trail (and is most likely even quieter in the middle of the Core Habitat). Vehicle noise may be further amplified by increased noise levels due to the steep slope of the road and the speed limit, which could cause trucks to use loud “J-brakes” coming down the slope or to increase engine noise due to laboring up the slope; therefore, we strongly recommend prohibiting the use of such “J-brakes”. As noted on Page 4.5-27 of the DEIR, “trucks laboring uphill produce more noise than trucks on a level surface”. This section also states on page 4.5-13 that large trucks produce detectable levels of vibration at 50 to 100 feet from Colima Road, but does not indicate what vibration levels are anticipated along the North Access Road, which could introduce a completely new impact to the Core Habitat, which currently

does not support any large truck activity with the potential to cause vibration impacts. Please include an analysis of noise and vibration impacts along the North Access Road in the Biological Resources section, and include additional mitigation measures for significant impacts.

Mitigation measure BIO-4c states that all hauling activities shall be restricted to daylight hours. However, mitigation measure N-4, item 8, notes that traffic on the North Access Road would be limited to 7 a.m. and 7 p.m. Specifying operational hours will not ensure hauling activities would be restricted to daylight hours, as for many weeks of the year it is just becoming light at 7 a.m. and it is dark at 5:30 p.m. Also, this measure should be revised to state that all traffic on the North Access Road, not just hauling, should be restricted to daylight hours only, and should also avoid the periods within one hour after sunrise and one hour before sunset to avoid impacting species that are primarily crepuscular (those with most activity at sunrise and sunset).

4d. Wildlife Travel Corridor Impacts

The revised DEIR does not adequately evaluate impacts to wildlife movement from the Proposed Project as it does not acknowledge how impacts to areas surrounding the Project Site could cause animals to avoid the area and alter their movement patterns.

Impacts to Area Between Proposed Project and Colima Tunnel

The revised DEIR includes mitigation measure BIO-4n, closing the Colima Service Tunnel, thereby closing recreational access to the Arroyo San Miguel trail during drilling and construction activities. If drilling and construction activities could adversely affect wildlife movement at the Colima Service Tunnel, which is approximately 2,000 feet east of the Proposed Project, then it is logical that drilling and construction activities would also adversely affect all areas within 2,000 feet of the Proposed Project, including most of the Arroyo Pescadero area and public trails. For species that are sensitive to the Proposed Project activities and associated edge effects, there is the potential that they would avoid this area and may choose to head north, away from such disturbances. This may be especially true for species that are also sensitive to recreational activities, such as bobcats^{25,26,27}, given the current level of hiking and dog-walking on the adjacent Arroyo Pescadero Loop Trail and Deer Loop Trail. Unfortunately, this would direct them away from using the least-constrained path at the Service Tunnel, which allows for safe movement under Colima Road, and may direct them to cross Colima Road further north, where there is no such safe passage (as documented by the numerous large mammal roadkill at this location). Discussion of the wildlife travel corridor impacts on page 4.2-55 implies

²⁵ George, S. L., and Crooks, K. R. 2006. Recreation and large mammal activity in an urban nature reserve. *Biological Conservation*, 133, 107-177.

²⁶ Reed, S.E., and Merenlender, A.M. 2008. Quiet, nonconsumptive recreation reduces protected area effectiveness. *Conservation Letters*, 1: 146-154.

²⁷ Reed, S.E., and Merenlender, A.M. 2011. Effects of management of domestic dogs and recreation on carnivores in protected areas in Northern California. *Conservation Biology*, 25, 3: 504-513.

that animals “choosing to avoid the proposed drilling site by moving through the hills to the north” simply need to take one of two alternative roads that would bring them back south to the Service Tunnel, and therefore animals could easily avoid crossing Colima Road. This scenario is speculative. Animals diverted to the north by activity in the Core Habitat will most logically try to cross Colima Road to the north. This could lead to a significant impact to wildlife movement through the corridor, either by causing more roadkill and reducing wildlife populations, or by causing wildlife to avoid crossing Colima Road completely. Both of these situations could threaten the viability of the corridor, which, as noted in the DEIR, is necessary to (1) maintain genetic variability in populations needed for adaptation to environmental changes, (2) facilitate dispersal of juveniles, and (3) provide movement routes in response to emergency situations such as wildfires.

Colima Tunnel Closure Mitigation Measure

Mitigation measure BIO-4n states that “To continue providing access to the Arroyo San Miguel Trails, the Applicant shall develop additional recreation access, in coordination with the Habitat Authority, to the Arroyo San Miguel Trail by any of the following or equivalent: (1) enhancing the parking area on the east side of Colima Road; (2) developing the parking area along La Flore Drive, approximately one mile east of Colima Road, or; (3) developing pedestrian access along Colima Road from the Preserve parking area (on the west side of Colima Road) utilizing the new signalized intersection” (p. 4.2-60). The Habitat Authority does not believe that any additional recreational access is needed as a result of closing the Colima Service Tunnel, as access is already allowed at the eastern end of the Arroyo San Miguel Trail (near La Flore Drive). In addition, the Habitat Authority believes that the recreational use of the Preserve is most likely already at maximum capacity, and is concerned that providing additional access points may encourage more recreational use, degrading the habitat quality, particularly for species that are sensitive to human and recreational activity. We do not support the two access alternatives along Colima Road, as recreational users crossing Colima Road via the new signalized intersection or users parking in the lot on the east side of Colima would both follow a small feeder trail east to link up to the Arroyo San Miguel Trail. This would put them directly at the southern opening of the Tunnel, thereby negating the purpose of closing the Tunnel to recreational use.

Significant Impacts

The revised DEIR includes mitigation measures (BIO-4a through 4n) to minimize impacts to wildlife movement such as reducing the speed limit from 15 mph to 10 mph, limiting nighttime use, and shielding lighting; however, they are not adequate to reduce impacts to less than significant. In addition, as acknowledged in the Land Use and Policy Consistency Analysis (Section 4.11), “although the Proposed Project could impact the existing natural habitat, the mitigation measures identified in Section 4.2, Biological Resources, would minimize these impacts; however, potential impacts to wildlife corridors would remain significant” (p. 4.11-37). Therefore, the Habitat Authority has recommended additional mitigation measures, including a wildlife

overpass and additional recreation restrictions, that would further reduce impacts to wildlife movement (see 4e below).

4e. Suggested Mitigation Measures

In an effort to further avoid and minimize potential Proposed Project impacts to wildlife movement and native wildlife nursery sites (as described above in sections 4a through 4d), in combination with other cumulative threats to the Preserve and Corridor, the Habitat Authority requests that the following suggested additional mitigation measures be considered for implementation.

- A. **Wildlife Movement Monitoring Study.** A long-term scientific study is needed to determine the movement, core areas, population size, mortality causes, and reproductive success of key indicator wildlife species (such as bobcats) through the Proposed Project site and entire Preserve, and to monitor such movement at least several months before Phase I begins and during the Proposed Project. This study should be a long-term, multi-year study involving telemetry (GPS collars), motion-sensor cameras, and/or scent stations conducted by experienced wildlife research biologists. Bobcats are ideal as indicator species, given their sensitivity to human development and their large-scale habitat needs^{28, 29, 30}. Such a study will not only help to establish the efficacy of other mitigation measures to maintain wildlife movement, but may also help to identify key areas where further habitat enhancement is needed, where a new and/or expanded Core Habitat(s) should be created (either on or adjacent to the Preserve), and to help establish restrictions on recreational activities in the Arroyo Pescadero area. This study would also add to the scientific literature regarding wildlife reactions to construction and drilling activities to help evaluate impacts in other future EIRs.

This study would also help the Proposed Project to be more consistent with the City's General Plan Environmental Resource Management Element Policy 1.3, with which the Proposed Project has been found to be potentially inconsistent (p. 4.11-32). This Policy is to "Preserve adequate open space areas for major habitat types, so as to maintain ecosystems in a natural balance for recreation, scientific, economic, educational, and scenic purposes." The results of this study would help to guide management of the preserved open space to insure that there is a balance between these multiple uses while maintaining viable habitat for wildlife populations.

- B. **Construct a wildlife overpass or underpass at the north end of Colima Road.** This would provide for a second safe route for wildlife to move east and west through the corridor across Colima Road at a point where substantial

²⁸ Crooks, K.R. 2002. *Ibid.*

²⁹ Conservation Biology Institute. 2005. *Ibid.*

³⁰ Lyren, L., et. al. 2008. *Ibid.*

numbers of large mammal roadkill have been identified. This route may be used more frequently as a result of the Proposed Project, which could cause wildlife to avoid the area in and around the Proposed Project. The revised DEIR noted on page 4.2-27 that the RMP recommended the construction of a wildlife overpass over Colima Road for wildlife corridor maintenance and improving wildlife movement opportunities across Colima Road in the Proposed Project vicinity.

The revised DEIR noted that drilling and construction activities could adversely affect wildlife movement at the Colima Service Tunnel, which is approximately 2,000 feet east of the Proposed Project; therefore, it is logical that drilling and construction activities would also adversely affect all areas within 2,000 feet of the Proposed Project, including most of the Arroyo Pescadero area and public trails. For some species, especially those that are more sensitive to human activities such as bobcats, this could cause them to shift their movement further north and away from preferred routes leading to the Colima Service Tunnel, and to cross Colima Road at the roadkill "hot spot". This overpass or underpass should be constructed and operational prior to the construction and operations phase of the Proposed Project to avoid cumulative adverse impacts to wildlife in the area. The initial findings of a Wildlife Movement Monitoring Study (as recommended above) could help to determine the best location and/or type of crossing structure (overpass or underpass). In fact, the Study may suggest multiple structures to enhance the Corridor in this area.

Constructing an overpass, as opposed to an underpass, would also be beneficial to the coastal California gnatcatcher, as it could not only create new habitat on new land (as opposed to restoring existing degraded habitat), but would also help to facilitate movement of gnatcatchers from the largest population on the Preserve (located on the east side of Colima Road) to habitats further west of Colima Road (including to one of the largest and most contiguous patches of habitat just west of Colima Road) by increasing habitat connectivity (see Exhibit B). The U.S. Fish and Wildlife Service noted in their Final Rule for the gnatcatcher critical habitat designation³¹ that, "For relatively sedentary bird species such as the coastal California gnatcatcher, connectivity of habitat patches is probably the most important landscape feature for maintaining species diversity of native biota. Corridors counteract the effects of fragmentation, and should eliminate or minimize the attrition of species over time by facilitating dispersal and recolonization". It also noted that generally the species disperses short distances through contiguous undisturbed habitat, and that habitat restoration to facilitate movement between populations is one example of an action that may be necessary to

³¹ Federal Register. 2007. Final Rule: Endangered and Threatened Wildlife and Plants; Revised Designation of Critical Habitat for the Coastal California Gnatcatcher (*Poliopitila californica californica*). Vol. 72, No. 243. Wednesday, December 19, 2007.

prevent further decline and loss of the species. During their identification of critical habitat areas, they included “satellite” patches of suitable habitat that were within 1,600 feet of larger core habitat areas as important for connectivity, as it is the distance a bird would have to travel across the landscape to reach a core area while avoiding developed areas. Consequently, the approximate location of a wildlife overpass over Colima Road would be approximately 1,600 feet from the largest patches of most suitable habitat on the east and west sides of Colima Road, and could serve as a “satellite” patch of connecting habitat.

- C. **Establish New and/or Expanded Core Habitat.** As previously mentioned, the Proposed Project would shrink, degrade, and fragment the existing Core Habitat, compromising its purpose and function and significantly impacting native wildlife nursery sites and wildlife movement. Therefore, a new and/or expanded Core Habitat designation within or outside the current Preserve boundaries is needed to mitigate for these impacts.

Core Habitat areas are critical to maintaining wildlife populations in fragmented habitat corridors. Habitat connections or movement corridors connecting reserves or larger “core areas” of habitat are thought to counter many adverse effects of isolation by fragmentation on species and ecological processes³². Large areas are more defensible and will contain larger populations that will be less vulnerable to extinction compared to smaller, fragmented habitats that experience effects from adjacent developed land³³. In the absence of large Core Habitat areas, a corridor may merely serve as a “population sink” where animals enter the corridor from larger or higher-quality habitats, only to perish and not contribute to population regeneration^{34,35}.

A Los Angeles County report regarding an update to the SEAs noted that Core Habitats are defined as “large blocks of habitat conforming to a significant topographical feature such as a watershed, major river, butte, etc.” and are “more likely to encompass diverse habitat types and are more easily buffered from potential impacts from surrounding developed lands”³⁶. This report goes on to state that protecting natural open space within and adjacent to Core Habitats will protect larger wildlife populations and potentially generate a greater diversity of species and communities.

³² Conservation Biology Institute. 2005. *Ibid*.

³³ Noss, R.F. 1987. Protecting Natural Areas in Fragmented Landscapes. *Natural Areas Journal*, 7(1), 2-13.

³⁴ Hilty, J.A., et. al., 2006. *Ibid*.

³⁵ Conservation Biology Institute. *Ibid*.

³⁶ PCR. 2000a. Los Angeles County Significant Ecological Area Update Study 2000: Background Report. Los Angeles County, California. November 2000.

Consistent with that recommendation, the Habitat Authority, along with a panel of regional scientists and natural resource regulators, included a Core Habitat management zone in the Resource Management Plan³⁷. The Core Habitat is the largest area of habitat within the Preserve that is undisturbed from human activity and is the most buffered from edge effects due to adjacent development (Exhibit C). There is no other comparably-sized area of habitat within the Preserve that is similarly undisturbed by human activity or edge effects. It also supports a diversity of habitat types, both native and non-native, similar to other areas of the Preserve. The Proposed Project facilities and roads would introduce new human disturbance and related edge effects into this currently-buffered habitat, and would force such buffers further inward, resulting in a smaller area of undisturbed habitat than presently exists (Exhibit D). This would effectively shrink, degrade, and fragment the existing Core Habitat, compromising its purpose and function. This would necessitate the creation of a new and/or expanded Core Habitat to serve as a large area (or several areas) that are closed to public access and regular human disturbance activities. This Core Habitat could either be in an existing portion of the Preserve, or on a newly-acquired parcel adjacent to the Preserve. The location of the new and/or expanded Core Habitat should be guided, in part, by scientific research resulting from the above-recommended Wildlife Movement Monitoring Study involving bobcats, as well as other factors noted above as being important to Core Habitat areas (large size, buffered from edge effects, habitat diversity, ease of prohibiting public access, etc.). In addition, a mitigation measure for a new and/or expanded Core Habitat should include funding to prepare an amended Habitat Authority Resource Management Plan which would not only include the new and/or expanded Core Habitat but would also address oil drilling activities within the Preserve.

A report prepared by the Conservation Biology Institute called Maintaining Ecological Connectivity Across the “Missing Middle” of the Puente-Chino Hills Wildlife Corridor³⁸ critically and thoroughly examines the viability of the entire corridor from the Chino Hills in the east to Sycamore Canyon in the west. This report emphasizes not only the importance of the Corridor in providing movement and dispersal opportunities for a range of wildlife species, but also providing core areas of larger habitat patches needed to provide sources for wildlife populations in the corridor. This report noted that the ability of western portions of the Corridor to support species depends on having sufficient “live-in” habitat along the way to support populations that contribute dispersing individuals.

Without large blocks of live-in habitat, the continued functionality of the Corridor cannot be ensured by merely a long, narrow gauntlet of “move-

³⁷ LSA and Puente Hills Habitat Authority. 2007. Resource Management Plan. Adopted July 26, 2007.

³⁸ Conservation Biology Institute. 2005. *Ibid.*

through” habitat³⁹. These live-in blocks of larger habitat patches are key to maintaining wildlife movement through a corridor, because movement not only refers to one-time or daily movement patterns, but generational or long-term movements in order to maintain the genetic integrity and diversity of a population, with some individuals residing and reproducing in live-in blocks for longer periods⁴⁰.

D. Study the necessity of closing or limiting public access to the Arroyo Pescadero and Arroyo San Miguel areas, including the Colima Service Tunnel, to recreation during test drilling and construction, as well as during any periods of drilling and re-drilling during the operations phase. As stated previously, bobcats are more sensitive to urbanization and human activity than most other common medium and large mammals. In addition, the Arroyo Pescadero vicinity has been shown to have the highest bobcat activity of the entire Preserve. Restricting human activity in this area has already been recommended in other studies^{41,42}, and current data indicates a possible decline in wildlife usage due to increased human activity in the area⁴³. In addition, several scientific studies have shown that bobcats are sensitive to recreational activities and are substantially more abundant in areas that are closed to recreation^{44,45,46}. The revised DEIR has also determined that drilling and construction activities could adversely affect wildlife movement through the Colima Service Tunnel (and by extension, logically also affecting all areas in-between, which includes Arroyo Pescadero). Since the Proposed Project would cumulatively add to human disturbance in the area, a reduction of recreational activity during the most active periods of the Proposed Project (construction and drilling) may help to reduce adverse effects to wildlife in the area, particularly bobcats. This could also allow wildlife to have an area less impacted by human disturbance for movement through the area and help to maintain a safe approach to the Colima Service Tunnel for wildlife to move east and west through the corridor under Colima Road.

The Habitat Authority currently manages the Preserve in accordance with the RMP, which includes management tools to balance recreation with protection of sensitive habitat areas and/or species. As such, this area will continue to be studied and monitored to possibly prohibit dogs from the Arroyo Pescadero area in response to the Proposed Project, if not required as mitigation. Also, the area will be monitored to possibly close the Arroyo Pescadero and/or Deer Loop Trails to recreational use during this same period if indications are that

³⁹ Conservation Biology Institute. 2005. *Ibid.*

⁴⁰ Hilty, J.A., et. al., 2006. *Ibid.*

⁴¹ Haas, C., and Crooks, K. 1999. *Ibid.*

⁴² Conservation Biology Institute. 2005. *Ibid.*

⁴³ Puente Hills Habitat Authority, 2010. *Ibid.*

⁴⁴ George, S. L., and Crooks, K. R. 2006. *Ibid.*

⁴⁵ Reed, S.E., and Merenlender, A.M. 2008. *Ibid.*

⁴⁶ Reed, S.E., and Merenlender, A.M. 2011. *Ibid.*

bobcats are adversely affected (such as by evaluating changes to territories, reproduction and/or movement), if not required as mitigation from this Proposed Project. Several scientific studies have suggested that the presence of domestic dogs on trails may have an adverse effect on wildlife, including bobcats^{47,48}; prohibiting dogs should also help restrict the overall recreational use.

E. Implement a 2:1 mitigation ratio for temporarily-disturbed habitat.

Mitigation Measure BIO-1b in the revised DEIR states that all graded slopes outside of permanent impact areas shall be revegetated. However, due to the time lapse between habitat removal in this area and the maturation of the revegetated habitat, there will be a temporal loss of habitat during this time. In order to begin to compensate for this temporal loss of habitat as soon as possible, habitat of the same acreage should be restored elsewhere in the Core Habitat at the time test wells are drilled in addition to restoration of the temporarily-disturbed area, resulting in a total mitigation ratio of 2:1 for temporarily-disturbed habitat.

F. Additional habitat mitigation to improve habitat quality in the vicinity of the North Access Road.

Mitigation Measure BIO-1a states that habitat will be restored at a 1:1 ratio for noise impacts to coastal sage scrub surrounding the Proposed oil facility. However, additional noise and associated edge effects will impact habitat surrounding the North Access Road. Improvement of the habitat quality in the vicinity of this road through habitat restoration may mitigate for the adverse effects to some species, such as avoidance of the area surrounding the North Access Road, and resulting impacts to wildlife movement and/or native wildlife nursery sites. Restoration could improve habitat complexity, resulting in increased areas for refuge and protection, and increased prey base.

4f. Residual Impacts

The revised DEIR does not adequately address residual impacts from the Proposed Project following implementation of mitigation measures presented in the revised DEIR, as it uses inappropriate thresholds of significance and inappropriate information for baseline conditions.

On page 4.2-60, following the impact analysis and mitigation measures for wildlife movement and native wildlife nursery sites, it states that “impacts are not expected to be catastrophic, or lead to the loss of an entire species from the area”. However, that is not the significance threshold stated in the revised DEIR. The significance threshold asks whether the Proposed Project would result in “substantial interference with the movement of any native resident or migratory fish or wildlife species...or

⁴⁷ Lenth, B.E., and Knight, R.L. 2008. The effects of dogs on wildlife communities. *Natural Areas Journal*, 28(3), 218-227.

⁴⁸ George, S.L., and Crooks, K.R. 2006. *Ibid*.

interference with the use of native wildlife nursery sites.” The revised DEIR also acknowledges in the Land Use and Policy Consistency Analysis (Section 4.11) that “although the Proposed Project could impact the existing natural habitat, the mitigation measures identified in Section 4.2, Biological Resources, would minimize these impacts; however, potential impacts to wildlife corridors would remain significant” (p. 4.11-37). Without implementation of the above-recommended additional mitigation measures, and based on the above information, the Proposed Project could result in substantial interference with the movement of a native resident wildlife species or interference with the use of a native wildlife nursery site.

In addition, this section states that the Preserve has experienced years of previous oil development and is surrounded by populated residential area, but that wildlife still persist. While that may be true, as stated previously the DEIR did not provide evidence or data showing how wildlife reacted to previous oil activities. The Preserve has been recovering habitat for anywhere from 17 to 22 years (the DEIR states various years for when oil production ceased), during which time it would be expected that some habitat would recover and some animals return, and in addition the Habitat Authority has for a decade and a half been restoring habitat and implementing other measures to facilitate the return of wildlife. A residential development is not equivalent to an operating oil field or to the development of such an industrial use. In addition, the residential area does not operate within the Preserve; the oil field will take its impacts to the heart of the Core Habitat. And while wildlife do still persist on the Preserve, the mission of the Habitat Authority is to preserve land in perpetuity and protect biodiversity, which includes allowing wildlife to persist, but also allow it to thrive, reproduce, and move freely in order to help combat all of the many stressors resulting from the surrounding urban development, habitat loss, and climate change. The revised DEIR acknowledges that “ecological systems that are already under stress from surrounding intensive development exhibit a compromised capacity to rebound from disruptive processes, such as a fire and human intrusion” (p. 4.2-48). Implementation of the above-recommended additional mitigation measures may help mitigate for the Proposed Project’s contribution to the overall degradation of the Preserve and its essential functions.

5. The revised DEIR did not adequately mitigate for the Proposed Project conflict with a local policy regarding protection of biological resources.

The revised DEIR evaluated whether the Proposed Project would “conflict with local policies and ordinances protecting biological resources, such as a tree preservation policy or ordinance” (p. 4.2-61). This analysis states that Proposed Project implementation would conflict with various goals and objectives of the Habitat Authority’s Resource Management Plan (RMP), especially concerning activities identified as permissible within the Core Habitat zone of the Preserve. As acknowledged in the revised DEIR on page 4.2-35, the sole purpose of the Core Habitat zone is to provide undisturbed habitat for wildlife to contribute to sustaining the overall ecological health of the Habitat Authority’s jurisdiction. Permissible activities in the Core Habitat zone include authorized biological survey and some

restoration and/or invasive species removal, but no unsupervised public access. It notes that the RMP is not consistent with the City of Whittier General Plan because the General Plan allows for oil and gas production on lands zoned as Open Space, if such production can be shown to be compatible with surrounding permitted uses (i.e., the Preserve). Regardless, the Proposed Project would conflict with the RMP, which serves as an approved, local policy document (adopted by the Habitat Authority Board of Directors on July 26, 2007), which would be a significant impact per the significance threshold. Although the City of Whittier did not adopt the RMP, the Habitat Authority manages the Preserve according to the policies contained in the RMP.

Suggested mitigation for this conflict would be to designate a new and/or expanded Core Habitat zone and to prepare a revised RMP addressing the new and/or expanded Core Habitat as well as oil drilling activities (see 4eC above).

6. Mitigation for impacts to nesting birds should be included such that well re-drills occur outside of the nesting season, or if not, that nest surveys be conducted and nest avoidance buffers be established.

Mitigation Measures BIO-4e and BIO-4f state that surveys will be conducted for nesting birds prior to initial construction, drilling, and fuel modification activities. However, these measures do not account for subsequent drilling activities, such as well re-drills which will be similar to initial drilling and will occur at approximately three wells per year. Please define and/or specify “drills” and “re-drills” in this mitigation measure so that monitoring requirements during these activities are clear. These mitigation measures should include avoidance of the nesting season during well re-drills, which would mean that September through the end of November would be the best times for re-drills. If that is not feasible, then nest surveys and avoidance similar to that required in measures BIO-4e and BIO-4f should be implemented. Also, please clarify in these measures that orange construction fencing and signage will remain in place around nests until the nest is “naturally” abandoned, and not abandoned due to disturbance from Proposed Project activities, or the fencing and signage removed because a date on the calendar has passed.

Also, Mitigation Measure BIO-4e recommends conducting initial pad construction and annual fuel modification activity outside the breeding season of nesting songbirds, but such activity is not prohibited. This Mitigation Measure does require that surveys for nesting birds be conducted prior to any construction activity that would take place during breeding season, and if nesting birds are observed then a buffer would be established a minimum of 100 feet from the nest. The Project proponent is given the option to retain a biologist to monitor the nest and ensure that Project activities are conducted in accordance with State and federal law. The biologist monitor should be required in addition to establishment of the buffer area, and should be present during construction, drilling, re-drilling, road maintenance, or any other activity that has the potential to disturb nesting songbirds, bats or raptors.

The biologist should also have the authority to stop Project-related activity if it is disturbing wildlife.

7. The mitigation for impacts to special-status bats is not adequate and should consider accounting for the loss and degradation of habitat and should mitigate for impacts during drilling (BIO-4g; pg. 4.2-58 to 4.2-59).

Mitigation Measure BIO-4g in the DEIR for special-status bats focuses only on direct impacts due to the removal of roosting trees. However, adverse noise and vibration impacts could occur during test drilling before construction, during initial drilling of up to the remaining 57 wells, and during re-drilling of these wells (three each year) over the life of the Proposed Project. Noise and vibration levels could cause bats to abandon maternity roosts, causing mortality of young and resulting in a significant impact to special-status bats. The feasibility of restricting re-drilling activities to the non-breeding season should be explored as additional mitigation, and please define and/or specify “drills” and “re-drills” in this mitigation measure so that any monitoring requirements during these activities are clear. In addition, the Mitigation Measure does not account for general loss or degradation of habitat due to the increase in human activity and ambient lighting in the Proposed Project vicinity, which would occur on a 24-hour basis during drilling operations, could alter the bat community structure⁴⁹, could cause bats to avoid noisy areas when foraging, and may result in habitat fragmentation⁵⁰, resulting in possible impacts to the special status bat species documented in the Proposed Project vicinity (western mastiff bat, *Eumops perotis californicus*; hoary bat, *Lasiurus cinereus*; western red bat, *Lasiurus blossevillii*; and western yellow bat, *Lasiurus xanthinus*)⁵¹.

In addition, although Mitigation Measures BIO-1a and BIO-1b (pages 4.2-45 and 4.2-46) state that they would offset impacts to sensitive species, including bats, by requiring restoration of coastal sage scrub and revegetating graded slopes, this measure will not replace possible tree roosting habitat for sensitive bat species. Additional mitigation should include placing bat boxes in the Core Habitat, in areas located away from the proposed oil facilities and roads (and adjacent areas affected by edge effects), which could increase local bat populations⁵². The reference to “tract map area” at the end of the measure should also be deleted as it is not pertinent to this Proposed Project.

8. The analysis of cumulative impacts is not adequate, and it is suggested that the final EIR consider more appropriate and relevant mitigation (Section 4.2.6; pg. 4.2-63).

⁴⁹ Longcore, T., and Rich, C. 2004. Ecological light pollution. *Frontiers in Ecology and Environment*, 2(4), 191–198.

⁵⁰ Barber, J.R., et. al. 2009b. *Ibid.*

⁵¹ Remington, S. 2006. Bat Surveys of the Puente Hills. Conducted for the Puente Hills Landfill Native Habitat Preservation Authority. Final Report: July 14, 2006.

⁵² *Ibid.*

The revised DEIR notes that the Proposed Project, in combination with noise from existing land uses, would result in a cumulatively considerable increase in the level of noise in the Preserve. However, the mitigation measure (CUMULATIVE BIO-1, page. 4.2-65) prescribed to minimize this impact requires that existing Matrix Oil activities in Sycamore Canyon be demonstrated as complying with Los Angeles County exterior noise standards. However, there is no baseline noise information to determine whether the current Matrix Oil activities at Sycamore Canyon are in violation of these standards; if they are not, then this Mitigation Measure would not prove effective in reducing any noise and, therefore, would not minimize the cumulative impact to noise on the Preserve. Second, the Mitigation Measure only requires that the existing oil drilling activity achieve an exterior noise standard of 45 dBA at the Preserve's property boundary where it abuts "noise-sensitive areas and residential areas". ("Noise-sensitive areas" are not defined.) However, it is unclear what level of noise would result within the Preserve's boundary. The Habitat Authority suggests that a more appropriate and relevant mitigation measure to reduce cumulative impacts to noise within the Preserve would be to designate a new and/or expanded Core Habitat (see 4e above), which as noted in the RMP would have the sole purpose of providing undisturbed habitat for wildlife. This would provide a quiet refuge for wildlife species, especially those that are more sensitive to human activities that would help to mitigate for noise impacts from existing land uses as well as noise from the Proposed Project, which would degrade the current Core Habitat. Another relevant mitigation measure would be to limit recreational activity in the immediate vicinity of the Proposed Project, which would reduce overall disturbance especially during peak noise levels associated with drilling and construction activities (see 4e above).

The revised DEIR also notes that there would be a cumulatively significant impact to wildlife movement in the general area due to "increased infill of open areas, increased human presence, and temporary and permanent loss of habitat in the general area that is already under extreme pressure from surrounding residential and urban areas" (p. 4.2-65). However, the only mitigation measure prescribed for this impact is CUMULATIVE BIO-2, which states that drilling or construction associated with the Proposed Project would not occur at the same time as, or in the same watershed as, construction work on Southern California Edison's Tehachapi Renewable Transmission Project. However, this Mitigation Measure would only address temporary impacts due to construction activities, and would not address the "increased infill of open areas", "increased human presence", and "permanent habitat loss" in an area under extreme pressure cited in the revised DEIR as reasons for the cumulatively significant impact to wildlife movement. The Habitat Authority suggests that additional mitigation, in the form of a wildlife overpass at upper Colima Road (see 4e above), be implemented to adequately mitigate for these cumulative impacts wildlife movement, as it would directly facilitate wildlife movement within the Preserve and Wildlife Corridor.

The long-term viability of the Puente-Chino Hills Wildlife Corridor is already threatened every day by edge effects from surrounding current and ongoing urban

development, as well as the additional associated threats that come with such development, including increased wildfire danger, increased roadkill mortality, increased harm and mortality from pesticides (and especially rodenticides, which have been shown to harm bobcats and coyotes⁵³), and increased mortality or displacement from “nuisance” wildlife trapping efforts. In addition, the already-narrow width of the Corridor remains threatened by the ever-present potential for further development of adjacent, non-preserved parcels supporting natural habitat. It is for these reasons that the Habitat Authority has continuously challenged other development Projects within and adjacent to the Preserve, including recent Projects such as the Pacific Heights Project in Rowland Heights (adjacent to Powder Canyon) and the Southern California Edison Tehachapi Renewable Transmission Project (running through the majority of the Preserve), both of which have been approved. The increased stress that the Proposed Project may cause to wildlife movement and population viability has the potential to adversely affect the long-term viability of the Corridor. The two best ways to combat these cumulative effects to the health of the Preserve are to improve movement opportunities (wildlife overpass) and provide areas which are protected from human disturbances (limit recreation, new and/or expanded Core Habitat).

9. Impacts in the Aesthetics and Visual Resources section (Section 4.6) regarding additional lighting on top of the drill rig, as well as increased ambient lighting, should be addressed in Biological Resources section.

The Puente Hills are one of the few remaining open space areas in the region, and as part of the Pacific Flyover, likely serves as an important migratory stopover point for birds migrating through southern California twice a year. Most passerine birds migrate at night and have been found to be highly susceptible to lights placed on tall towers, particularly steady-burning and red lights^{54,55,56}. The birds are attracted to these lights, especially in poor visibility conditions, and become disoriented, causing them to collide with the towers, wires, or other birds. The DEIR notes that only structures taller than 200 feet are required to comply with Federal Aviation Administration (FAA) lighting requirements (page 4.6-25); since the 125-foot drill rig is projected to be well below that height, and since such lighting could result in adverse impacts to migrating birds, lighting should not be used on the drill rig. This potential impact must be addressed in the Biological Resources section of the DEIR.

Section 4.5 Noise and Vibration

⁵³ Riley, S.P.D. et. al. 2007. Anticoagulant Exposure and Notoedric Mange in Bobcats and Mountain Lions in Urban Southern California. *Journal of Wildlife Management*, 71, 1874-1884.

⁵⁴ Rich, C., and Longcore, T., eds. 2006. *Ecological Consequences of Artificial Night Lighting*. Island Press, Washington D.C.

⁵⁵ Longcore, T., C. Rich, and S.A. Gauthreaux. 2008. Height, guy wires, and steady-burning lights increase hazard of communication towers to nocturnal migrants: a review and meta-analysis. *The Auk*, 125(2):483-492.

⁵⁶ Gehring, J., P. Kerlinger, and A.M. Manville. 2009. Communication towers, lights, and birds: successful methods of reducing the frequency of avian collisions. *Ecological Applications*, 19(2), pp. 505-514.

1. Mitigation Measures N-1c and N-4 require additional analysis and/or clarification.

Mitigation Measure N-1c –states that construction parking and staging will be relocated north of the Ranger residence or to an equivalent area further from the school and residences on Catalina Avenue (p. 4.5-23). Any impacts associated with this relocation, including impacts to habitat and the Ranger residence, must be evaluated in the Final EIR to insure they do not create additional significant impacts; this means that the new site must be identified in the Final EIR. Mitigation Measure N-4, item 6, states that a secondary 16-foot-tall sound wall will be installed on the south, west and north sides of the gas plant. Please explain why a wall would not also be installed along the east side of the gas plant to minimize noise impacts to the adjacent habitat and recreational trail.

2. The Ranger residence should be considered for relocation.

The residence is owned by the Mountains Recreation and Conservation Authority, a government park agency that the Habitat Authority contracts with for ranger services, and is occupied by two California Peace Officers. We understand that there will be noise-proofing of the Proposed Project, however the current location of the residence will be next to drilling, construction and operational activities of the Proposed Project. The revised DEIR does not include in the Noise and Vibration section a mitigation measure that would relocate the Ranger residence due to impacts from increased noise and vibration. However, page 4.11-20 of the Land Use and Policy Consistence Analysis section states that there is such a mitigation measure in the Noise and Vibration section and that it would reduce Land Use Impact LU.1 to less than significant. The revised DEIR states regarding noise increases that “although these noise levels would be within the General Plan limits, they would exceed the current baseline daytime levels by up to 18 dbA and would be clearly noticeable” (p. 4.5-22) and that although the Ranger residence is 1,000 feet from drilling, vibration levels would still likely be distinctly perceptible causing residential annoyance (Tables 4.5-4 and 4.5-3). Furthermore, the revised DEIR did not analyze impacts as a result of constant new activity, staging, parking and vehicle disturbance. Up to 120 daily vehicle trips will occur directly in front of the Ranger residence during test drilling (Table 4.7-13), up to 140 daily vehicle trips during the construction phase (Table 4.7-14), and up to 44 daily vehicle trips during the operations phase (Table 4.7-15). These trips may increase if the workers left the site for lunch or for other errands. In addition, Mitigation Measure N1-c could relocate construction parking and staging north of the Ranger residence (p. 4.5-23), and the potential impacts to the Ranger residence from implementation of this Measure have not been evaluated. The Proposed Project would increase daytime and nighttime noise and vibration levels, which would adversely affect the Ranger residence, and may affect the Ranger’s ability to effectively address emergency situations, such as a potential wildfire on the Preserve. Section 4.12, Fire Protection and Emergency Services, states that the Ranger at this residence is an existing resource to be used in case of fire or emergency, and Mitigation Measures FP-2a and FP-2b specifically reference use of the Ranger residence to mitigate for

increased risk of wildfires (p. 4.12-20). Permanent relocation of the Ranger residence is recommended as mitigation for these impacts. Additionally, it is suggested that the Ranger be relocated, possibly off-site, during the most active and intense activities associated with the Proposed Project.

3. Noise Impacts Evaluated Using the Incorrect Land Use Category

The revised DEIR places the Preserve in the same City General Plan Noise Guidelines land use category as playgrounds and neighborhood parks (p.4.5-20), where noise exposure up to 70 dBA is considered acceptable (Figure 4.5-3, p. 4.5-19). However, the Preserve is not a playground – there are no swing sets, sandboxes, or jungle gyms – and it is not a neighborhood park – no barbeque pits, softball fields, playgrounds, basketball courts, picnic tables or touch-football games. Visitors to the Preserve come to walk, hike, or ride the trails, catch a glimpse of the local wildlife, and enjoy the solitude. Utilizing Table 4.5.6 Exterior Noise Standards for Los Angeles County on page 4.5-14 of the revised DEIR, the Preserve should be in Noise Zone I as a noise-sensitive area, with an Exterior Noise Level of 45dBA. At the very highest, the Preserve should be on a par with Noise Zone II, which includes residential properties and has an Exterior Noise Level of 45-50 dBA. Because the higher dBA level is used, the revised DEIR inaccurately concludes that Project test drilling, drilling and operations would not exceed General Plan noise limits at six Preserve locations (Tables 4.5-9, p. 4.5-29; 4.5-10, p.4.5-35; 4.5-12, p. 4.5-40, 4.5-14, p. 4.5-46).

Residual Impacts

The revised DEIR states that, “The noise reduction methods in the mitigation measures are established practices in the drilling industry that reduce noise levels in urban drilling situations.” (p.4.5-31) As the Preserve is not an urban drilling situation, the effectiveness of the revised DEIR mitigation measures in protecting wildlife from significant unavoidable impacts cannot be evaluated and must be discussed in the Final EIR.

Within Section 2.0 Project Description, it is stated that, “During the grading process, branches and leaves that are encountered would be collected, shredded, and turned into mulch.” (p. 2-34) The shredding equipment is not listed in Table 2-7; impacts of the emissions and noise from the shredding equipment must be evaluated in the Final DEIR.

See further discussion and explanation of noise and vibration impacts and proposed mitigation in the Biological Resources and Comparison of Proposed Project Alternatives sections of this letter.

Section 4.6 Aesthetics and Visual Resources

Mitigation Measure AE-1a for the Proposed Project states that native-vegetation landscaping shall be planted at the periphery of the property to beautify and screen the operations from

adjacent land uses, including recreation (p. 4.6-2). However, this Measure should be clarified to state that the planting will occur at the periphery of the Proposed Project Site, as it is unknown which “property” is referred to in the existing measure. Also, this Measure states that the Preserve and a certified landscape architect shall implement and monitor compliance with the landscape plan. The Habitat Authority will need to be compensated for implementing this Measure, including hiring the landscape architect to implement it.

Impacts AE.1, AE.2, and AE.2 state that views of the access roads and facility equipment have impact to aesthetics; in the case of the drilling rig, significant and unavoidable impacts. However, required fuel modification also has the potential to impact views from recreational trails and public viewing locations, and should be evaluated in the Final EIR.

Section 4.7 Transportation and Circulation

The revised DEIR notes that during the Construction phase, 312 daily truck trips would be required for soil export (Table 4.7-14), in order to transport the approximately 149,000 cubic yards of soil offsite (p. 2-26). This increase in truck traffic along the North Access Road would create a critically substantial increase in traffic along this road through the Core Habitat, resulting in a tremendous increase in associated noise, human presence, and vibration. The Habitat Authority strongly encourages any measures that would drastically reduce these truck trips, perhaps by retaining some or all of the cut soil on-site or by reducing the amount of cut material necessary. The previous DEIR noted that cut and fill for the Consolidated Site Alternative (which is the Proposed Project in the revised DEIR) would be similar to the originally Proposed Project, which would result in approximately 22,000 cubic yards of excess soil. This is substantially less than the cut soil under the newly Proposed Project in the revised DEIR, which is likely a result of attempts to reduce visual impacts from the drill rig by lowering the elevation of the drilling pads which requires massive grading. However, as noted in the Aesthetic and Visual Resources section of the revised DEIR, visual impacts from the drilling rig would still be significant and unavoidable despite additional mitigation.

Section 4.8 Hydrology and Water Resources

Mitigation Measure WR-2a lists several measures that would be used to protect exposed soils from erosion, control sedimentation, and stabilize soils. The measures listed include the use of geotextiles, mulches, hydroseed, drainage swales, and straw wattles. These materials should be certified to be free of invasive plants and seeds.

Section 4.11 Land Use and Policy Consistency Analysis

1. The Proposed Project is inconsistent with the City’s General Plan Policies.

The Proposed Project as currently presented is inconsistent with several of the City’s General Plan Policies. Because of reasons already explained in this letter they are not consistent with Land Use Goal 4 Policy 4.1 which is to, “Encourage new industrial development to be sensitive to adjacent or nearby properties and to be compatible with the environment.” Also,

as acknowledged in the DEIR the Proposed Project is not consistent with the following: Environmental Resource Management Element (ERME) Goal 1 Policy 1.3, ERME Goal 3 Policy 3.1, ERME Goal 3 Policy 3.2, *and* ERME Goal 3 Policy 6.2; ERME Goal 7, Policy 7.1 and Policy 7.4.

2. The Proposed Project is inconsistent with the RMP's Policies.

The current Proposed Project is also inconsistent with the Habitat Authority's Resource Management Plan (RMP), which was approved in 2007 to act as a comprehensive long-term management plan for the Preserve. The areas of conflict as recognized in the DEIR include RMP Goal BIO-3 and RMP Goal VISUAL-1. Other areas of conflict not recognized in the DEIR are Goal BIO-3 Objectives 3.1 and 3.7, as well as Goal VISUAL-1 Objective 1.3 and Goal USE-1.

Section 4.14 Recreation

1. The Final EIR should consider impacts to recreation, and compatibility with the City's General Plan and the Habitat Authority's RMP policies as a result of closing the Colima Service Tunnel and possibly limiting access at the Arroyo Pescadero trailhead during drilling and construction activities.

As noted above, as mitigation for Proposed Project impacts to wildlife, the Habitat Authority suggests limiting public access at the Arroyo Pescadero Trailhead and Arroyo San Miguel Trail to the public during construction and drilling activities. Limiting public access at the trailhead should be considered not only to help protect the biological integrity of the Preserve as described in the Biological Resources Section of this letter, but to mitigate for impacts to visitor safety particularly during construction of the pipeline under the Arroyo Pescadero Loop Trail. Speed bumps and speed limits should also be implemented along the Loop Trail to ensure that future ongoing monitoring of the pipeline does not result in adverse impacts to recreational users (10 mph was previously recommended as Mitigation Measure BIO-4c.). As a result of this mitigation measure, it would cause a new significant impact to recreation which must be mitigated. As mentioned in the Habitat Authority's NOP comment letter, the Arroyo Pescadero Trailhead is the third-busiest trailhead of the Preserve according to a visitor user survey conducted for the Habitat Authority by USC⁵⁷. This recreational use may be transferred to other local trailheads (Hellman Park or Turnbull Canyon) in the City. Please consider enhancing recreational experiences elsewhere at Whittier trailheads to mitigate for this significant recreational impact.

2. The Final EIR should analyze impacts and potential mitigation to outdoor educational programming.

⁵⁷ Martino, D., T. Longcore, and J. Wolch. 2006. *Park Visitor User Survey for the Puente Hills Landfill Native Habitat Preservation Authority*. University of Southern California, Center for Sustainable Cities, Los Angeles, California.

A high percentage of Habitat Authority-sponsored interpretive (educational) programming for children grades Kindergarten through sixth grade, as well as for adults, occurs at the Arroyo Pescadero Trailhead because of its central location, bathroom facilities, and because it has the only the outdoor seating area in the Preserve. Typical sizes for the youth groups are 50 to 150 children per visit. When looking at the timeframe between January 2010 and June 2010, about 38 percent of interpretive programming participation (1,045 individuals) occurred at this trailhead. The suggested trail closures as described above, as well as other impacts including noise and visual impacts, may affect the Habitat Authority's interpretive, educational, and outreach efforts. The DEIR did not discuss impacts resulting from vehicle trips (disturbance and noise) along the Arroyo Pescadero Loop Trail to large school groups. The DEIR did not analyze potential negative impacts to outdoor educational programming and applicable mitigation, as requested by the Habitat Authority in response to the NOP.

Section 6. Comparison of Proposed Project Alternatives

The Habitat Authority supports consideration of any alternatives that would place the Proposed Project outside of the Core Habitat, would minimize the overall edge effects (including from use of roads within the Preserve), and would place the Proposed Project along the edge of the Preserve where edge effects are already occurring due to adjacent land use activities (as opposed to introducing new edge effects into habitat which is currently more buffered from edge effects).

1. Savage Canyon Landfill Alternative

As such, we support the Savage Canyon Landfill alternative, which would be located on the very edge of the Core Habitat and on the edge of the Preserve, in an area already subject to substantial disturbance and human activity. The revised DEIR states that this alternative would have biological disadvantages as it would (1) place construction and drilling disturbances closer to occupied gnatcatcher habitat, and (2) would place these disturbances closer to "High Quality" habitat which could negatively affect wildlife movement. However, the Biological Resources section of the revised DEIR suggests that gnatcatchers are not adversely affected by construction activities (p. 4.2-21), thereby negating this argument as a disadvantage for this alternative. In addition, the Proposed Project would require direct removal of occupied gnatcatcher habitat along the North Access Road and would route traffic immediately adjacent to occupied habitat, whereas the Savage Canyon Landfill alternative would not. Also, the argument that this alternative has a disadvantage over the Proposed Project due to its proximity to areas mapped as high quality habitat is inappropriate. As acknowledged in the revised DEIR (p. 4.2-37), these high quality habitat areas were identified based on their composition of native and non-native plant species, and were not based on their potential to support wildlife movement. The non-native composition of habitat is not the only factor dictating the potential for an area to be used for wildlife movement; other important factors include topography, habitat structure, species-specific habitat preferences, and human activity and development. In fact, many studies of bobcat movement and activity consider only the degree of existing development as a habitat variable, and not the percent of native or

non-native plant cover^{58,59,60,61}. Protecting the Core Habitat from direct and indirect Proposed Project impacts is much more important than protecting one or two much smaller areas mapped as high quality habitat from indirect impacts. As discussed at length above, Core Habitats are critical for providing wildlife habitat buffered from edge effects and facilitating movement through a corridor, and they have higher native carnivore abundances. In addition, the Proposed Project's North Access Road would put related edge effects much closer to several of these mapped high quality habitat areas.

The revised DEIR acknowledges that the Savage Canyon Landfill alternative would have less impact to Biological Resources than the Proposed Project (p. 6-33 through 6-35), and it would have the same amount of significant unavoidable impacts as the Proposed Project (p. 6-54). The analysis of the Savage Canyon Landfill alternative states that it has a significant unavoidable impact regarding land use because it is unclear if permits can be obtained and they may take a long time to get; however, the feasibility and time frame for permitting are unknown regardless of whether the Proposed Project or an alternative are implemented. If the feasibility and time frame of permitting for this alternative were truly a concern, then it would not have been evaluated as a viable alternative in the revised DEIR. Please include in the Final EIR a further discussion of State and federal laws governing landfill operations, and why permitting for this alternative would be infeasible. In addition, although the analysis in Section 6 states that this alternative would reduce the life of the Landfill (p. 6-14), it also states that the Landfill will be providing waste disposal to the City for the next 45 years; since the Proposed Project (lease period) only has a lifespan of 25 years, it is possible that most of this area could again be used for waste disposal following completion of the Proposed Project. In addition, the royalty payments received by the City for the Project's oil production operations could be used to transport waste to another landfill site, offsetting the potential reduced life of the Landfill. As such, this impact may not be significant and unavoidable, and would result in fewer significant and unavoidable impacts compared to the Proposed Project.

The revised DEIR states that drilling from the Landfill site would most likely reduce the amount of oil the Project proponent could access; one of six project objectives for the Project Proponent is to "Maximize oil and gas production from the field, thereby maximizing royalty payments to the City of Whittier." However, CEQA Guidelines state only that most project objectives should be satisfied by project alternatives, not all.

2. North Site Alternative

The Habitat Authority also supports further analysis and consideration of the North Site and associated Hadley Street Access (as discussed in Section 5). Although this is less favorable than the Savage Canyon Landfill alternative, as it would require the removal of native habitat, it would also place the Proposed Project outside of the Core Habitat, it

⁵⁸ Riley, S.P.D., et. al. 2003. *Ibid.*

⁵⁹ Riley, S.P.D. 2006. *Ibid.*

⁶⁰ Lyren, L.M., et. al. 2008. *Ibid.*

⁶¹ Tigas, L.A., Van Vuren, D.H., and Sauvajot, R.M. 2002. Behavioral responses of bobcats and coyotes to habitat fragmentation and corridors in an urban environment. *Biological Conservation*, 108, 299-306.

would be on the edge of the Preserve, and would have a much shorter road and fewer associated edge effects.

3. Loop Road Alternative

The Habitat Authority does not support the Loop Road Alternative, as it could significantly impact wildlife movement. Although this alternative would minimally reduce the amount of sensitive habitat removed, would reduce impacts to gnatcatcher habitat, and would be located outside of the Core Habitat, it would be located in an area that has been shown to have the highest bobcat activity levels in the entire Preserve, and the substantial increase in noise and traffic in this area could significantly affect wildlife movement through the area. And considering that the Loop Trail serves as the primary route to the Colima Service Tunnel, this alternative could severely limit use of the Tunnel, possibly forcing wildlife to cross Colima Road at the upper portion where a large mammal roadkill hotspot has been identified. Although limiting recreational use in this area and constructing a wildlife overpass could help reduce this alternative's impacts, these mitigations are unlikely to reduce impacts to less than significant levels as this alternative could severely compromise the use of the Colima Service Tunnel and a documented high bobcat activity area.

4. Catalina Avenue Access Alternative

The Habitat Authority strongly supports further analysis and consideration of the Catalina Avenue Access Alternative, as discussed in Section 5. Use of Catalina Avenue during the construction and/or operations phase would substantially reduce impacts to Biological Resources, as it would be located on the edge of the Core Habitat and Preserve where edge effects already occur, would use a much shorter route resulting in reduced edge effects, and would not result in impacts to occupied gnatcatcher habitat. This alternative would substantially reduce impacts to gnatcatchers, wildlife movement and native wildlife nursery sites. Even if this route is expanded into the ravine next to Catalina Avenue, as suggested on page 5-16 of the revised DEIR, utilizing this route would still result in reduced Biological Resource impacts, even though it may result in impacts to an intermittent creek. The revised DEIR states that this sub-alternative would result in more biological impacts than the Proposed Project, but does not provide any analysis to support this statement, despite the fact that it would significantly reduce impacts regarding wildlife movement, native nursery sites, and gnatcatchers. Catalina Avenue should be used for the test drilling phase and the operations phase, as the revised DEIR notes that traffic impacts during both of these phases could be mitigated (p. 5-16). The Transportation and Circulation section notes that traffic impacts during the test drilling phase could be reduced to less than significant with mitigation, and since traffic levels during the operations phase would be less than the test drilling phase (Tables 4.7-13 and 4.7-15), those impacts could similarly be reduced. This would eliminate long-term impacts to the Core Habitat through use of the North Access road during the operations phase, which could result in permanent impacts to wildlife movement and native wildlife nursery sites due to substantial increases in truck traffic and associated effects (increased noise, human presence, vibration) over the 25- year life of the Proposed Project (lease

period), or longer if an extension is later approved. In addition, the Habitat Authority would like the Final EIR to consider ways to reduce traffic impacts during the construction phase such that Catalina Avenue could be used exclusively during this phase, completely avoiding use of the North Access Road. For example, Mitigation Measure T-1c requires limits on traffic on Catalina Avenue to mitigate for traffic impacts during the test drilling phase, and it may be possible to similarly limit traffic during the construction phase in order to mitigate for significant impacts, even if it means prolonging the construction period in order to accommodate the reduced number of vehicles.

5. Consider Reduced Number of Wells as an Alternative

Please consider including an alternative that would reduce to 30 the maximum number of wells that can be drilled. This will limit the time the Preserve is exposed to the adverse impacts of drilling, re-drills and workovers, perhaps prompting wildlife with generational memory of the pre-drilling conditions to return to the Core Habitat area.

Section 7. Other CEQA Mandated Sections

7.2 Growth Inducing Impacts, 7.2.3 Precedent Setting

Section 15126.2 (d) of CEQA Guidelines requires that the EIR discuss the characteristic of a Project which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. The DEIR explains that the Proposed Project is not precedent-setting because the Whittier Zoning Ordinance allows for the proposed use with a conditional use permit. However, the land is currently regulated by Los Angeles County Proposition A funds which allows for uses of this nature only with compensatory actions. Should the County and City work out an agreement to allow this Proposed Project, a precedent for this activity will be set. The City owns other open space properties purchased with Proposition A funds and without a conservation easement, as recommended, or other surface restrictions in place over them, this Proposed Project could be replicated elsewhere in the hills of Whittier. Given that there are significant impacts with this Proposed Project, another oil operation elsewhere in the hills would have significant effects – and significant cumulative effects – as well.

Additional Measures

Additionally, due to the complexity of the measures with a Project of this large scale, consideration should be given to requiring that Matrix Oil hire qualified consultants including a biological consultant with the expertise to administer the mitigation monitoring plan to ensure that all timelines and criteria are met. This consultant should be familiar with CEQA and have experience administering mitigation and monitoring programs.

The Habitat Authority manages its member agencies' properties with the assumption that they will remain as undisturbed open space by investing its general fund resources to support restoration, biological studies, volunteer coordination, ranger patrol, outdoor education, administration and other Projects. To maximize the efficiency and effectiveness of the

Habitat Authority's efforts and to avoid future impacts to the ecological functioning of the Puente Hills Preserve and the Puente-Chino Hills Wildlife Corridor, please consider ways to avoid future surface development of City open space properties by placing conservation easements over City-owned parcels, either through the CEQA process, conditional use permit, specific plan, General Plan amendment, or through some other process

Exhibits:

- A. Historic Development Analysis
- B. Most Suitable California Gnatcatcher Habitat
- C. Preserve Internal Buffers
- D. Reduced Buffered Habitat From Proposed Project