



Puente Hills Landfill  
Native Habitat Preservation Authority

DRAFT

1

2 July 14, 2011

3 Jeff Adams  
4 City of Whittier, Community Development  
5 13230 Penn Street  
6 Whittier, CA 90602-1772

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

9

10 Dear Mr. Adams:

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

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

27 **Habitat Authority Management of Whittier Open Space**

28 According to the Property Acquisition and Maintenance Agreement between Whittier, the  
29 Whittier Puente Hills Conservation Authority and the Habitat Authority dated August 1997,  
30 the Habitat Authority manages the City-owned open space including that upon which the  
31 Proposed Project is located. Overall, the Habitat Authority manages an almost 4,000-acre  
32 Preserve, of which 1,756 acres is owned by the City of Whittier. Additionally, the City and  
33 the Habitat Authority entered into an Agreement for Professional Services dated March 2008  
34 at the City's request, for the Habitat Authority staff to provide professional services required



35 to facilitate environmental surveys on the City property known as the former Chevron  
36 property.

37 **The Proposed Project**

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

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

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

63 **General Comments**

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

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

78 Overall, the Preserve ~~is~~represents a public investment of over \$48.5 million dollars, of which  
79 \$30.3 million was invested by the Habitat Authority; for acquisition (1,880 acres) for the  
80 purpose of biological preservation. The sustainability of the Habitat Authority-owned lands  
81 is biologically dependent on the nearby and adjacent open space lands owned by the City of  
82 Whittier. The Final EIR should address the importance of keeping the biological integrity of  
83 open space land within the Proposed Project area intact so it does not diminish the biological  
84 value of adjacent land owned by the Habitat Authority or other public agencies, such as other  
85 lands owned by the City of Whittier, County of Los Angeles or Sanitation Districts of Los  
86 Angeles County.

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

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

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

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96 Sincerely,

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99 Andrea Gullo  
100 Executive Director  
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102 Attachments:

103 Table A: Detailed Comments

104 C: Habitat Authority Board of Directors  
105 Habitat Authority Advisory Committee  
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**TABLE A**

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**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**

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**Section 2 Project Description**

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

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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, As such, please consider using naturally colored and environmentally-sensitive paving material alternatives, such as a polymer emulsion product on the North Access Road and along the Loop Trail (following pipeline construction) to reduce aesthetic impacts to recreational users on the Loop Trail and to reduce the potential for toxic materials to 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.

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**Section 4.1 Air Quality**

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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 CO<sub>2</sub>e (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 Canada-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.

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**Section 4.2 Biological Resources**

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

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

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

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

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

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

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

177 Given the timing of the DEIR review and potential approval, it is likely that the  
178 Proposed Project would not be initiated until the end of 2011 at the very earliest.  
179 Since the gnatcatcher breeding season starts in February, focused surveys for the  
180 gnatcatcher will need to be conducted again in 2011 to determine whether any  
181 additional coastal sage scrub habitat in the Proposed Project vicinity is occupied and  
182 may be affected by the Proposed Project. U.S. Fish and Wildlife Service Survey  
183 Guidelines for the gnatcatcher require that surveys must be current, within one year of  
184 Proposed Project initiation (i.e. the previous breeding season). Recent results,  
185 showing breeding gnatcatchers in the Proposed Project vicinity, demonstrate the  
186 viability of the habitat in this area for breeding, and increase the likelihood of  
187 possible additional breeding in the area. This ~~mitigation~~Mitigation measure-Measure

188 should require such surveys be conducted annually in the spring until Proposed  
189 Project initiation, and if any additional occupied habitat is found then impacts must be  
190 mitigated in accordance with the measures prescribed in the DEIR as well as through  
191 the consultation and Incidental Take Permit process with U.S. Fish and Wildlife  
192 Service. Although Mitigation Measure BIO-4e requires protocol surveys for  
193 gnatcatchers if construction or fuel modification occurs during the breeding season  
194 (February 15 through August 31), it does not account for the possible removal of any  
195 newfound occupied habitat outside of breeding season.

196 In addition, the analysis of residual impacts (following implementation of mitigation  
197 measures) from Project grading, vegetation clearance for fuel modification, and  
198 increased noise is inadequate and incomplete (p. 4.2-47). The discussion of road  
199 widening and fuel modification necessary for use of the North Access Road as the  
200 Project's primary off-site transport route states that, "The existing North Access Road  
201 already passes through habitat of the federally listed California gnatcatcher, and any  
202 improvement of the road would have negligible effect upon the local area's suitability  
203 for the continued occurrence of the gnatcatcher." (p.4.2-47) This fails to take into  
204 account the fact that currently the North Access Road experiences perhaps three trips  
205 per week by one Preserve Ranger's vehicle, whereas Phases 2 and 3 of the Proposed  
206 Project would put over 316 trips per day by large construction trucks on the North  
207 Access Road. Improvements will impact the North Access Road's use by animals,  
208 and the road improvement would be to allow increased vehicle traffic (both volume  
209 and size) which could affect the suitability of the area as gnatcatcher habitat.  
210 Mitigation at a 1:1 ratio for habitat is included for noise impacts resulting from  
211 construction and drilling at the oil facility; please consider similar mitigation for  
212 related noise impacts along the North Access Road where breeding gnatcatchers have  
213 been observed since none is proposed.

214 The Residual Impacts discussion states that impacts to sensitive nesting habitats from  
215 the increased noise generated by construction and drilling are "temporary" (p.4.2-47).  
216 Since testing, construction and drilling are expected to take over five years, and then  
217 re-drills and well workovers will potentially continue year-round, please provide a  
218 definition of "temporary." A definition will allow a more complete assessment of all  
219 the "temporary" impacts of the Proposed Project.

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

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

#### 225 ***4a. Core Habitat Impacts***

226 The revised DEIR does not adequately analyze impacts to the Core Habitat as it does  
227 not accurately evaluate the sensitivity of bobcats (an indicator species), particularly

228 female bobcats, from Proposed Project impacts and the resulting significance of  
229 impacts to native wildlife nursery sites.

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

#### 241 Bobcats are More Sensitive to Disturbance

242 The revised DEIR’s analysis of Proposed Project impacts to the Core Habitat states  
243 that impacts to the Core Habitat will be “adverse, but less than significant” with  
244 mitigation. However, this analysis uses incorrect information in its argument that  
245 wildlife, and specifically bobcats, would not be adversely affected by this increase in  
246 Proposed Project activity. For example, the revised DEIR incorrectly states that  
247 bobcat use of the Colima Service ~~tunnel~~-Tunnel remained high after being opened to  
248 human use in 2002; based on a current Habitat Authority study in 2009-2010, bobcat  
249 activity at the Service Tunnel has decreased by approximately one-third since it was  
250 opened to public use in 2002<sup>1</sup>. This study also showed that bobcat activity in the area  
251 around the Tunnel, including portions of the Proposed Project Area within and near  
252 Arroyo Pescadero, has decreased substantially since the late 1990’s, which was after  
253 oil activities had ceased in the area but before it was opened to recreational activity.  
254 The revised DEIR states that bobcats have only a “moderately negative response” to  
255 urbanization, and states that their response is similar to other wildlife species such as  
256 coyote, raccoon, and mule deer (p. 4.2-53). However, this is in direct conflict with  
257 the majority of scientific literature regarding bobcats<sup>2,3,4,5</sup>, including the study cited in  
258 the revised DEIR on page 4.2-37 (~~Ordenana~~Ordeñana, et. al. 2010) which shows that  
259 bobcats are one of only three species (with mountain lion and gray fox) that show a

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<sup>1</sup> 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.)

<sup>2</sup> 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.

<sup>3</sup> 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.

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

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

260 consistently negative response to urbanization while all other mammals in the study  
261 showed a positive response<sup>6</sup>.

262 Incorrect Use of Baseline Biological Conditions

263 The revised DEIR states that prior oil drilling activities did not result in significant,  
264 long-term, adverse effects on the local wildlife populations, and therefore the  
265 currently Proposed Project will not result in those impacts as well. It is inappropriate  
266 to use previous oil drilling activities as a baseline for conducting current impact  
267 analysis; per CEQA ~~guidelines~~Guidelines, the Proposed Project should be analyzed  
268 according to existing conditions for impact analysis<sup>7</sup>. Although the Proposed Project  
269 vicinity currently exhibits the highest bobcat activity in the entire Preserve, it does not  
270 mean that this was the case when previous oil drilling activities were occurring. The  
271 revised DEIR does not cite any data to confirm the assertion that previous oil  
272 activities didn't have an adverse effect on wildlife. It is unknown whether wildlife  
273 avoided the oil activity and instead persisted in other undeveloped habitats  
274 surrounding the oil drilling activities. –During previous oil drilling activities, there  
275 was more undeveloped habitat available in the region. In the past 50 years alone,  
276 areas totaling the approximate size of the entire Puente Hills Preserve (nearly 4,000  
277 acres) have been converted from natural habitat to developed areas (residential  
278 developments, golf courses, landfills, cemeteries) (Exhibit A), leaving what remains  
279 to be of vital importance to the persistence of native habitat and wildlife populations  
280 in the Puente Hills. In addition, during previous oil drilling activities there was less  
281 recreational activity in the Preserve than exists today, due to public access restrictions  
282 on lands that were previously privately owned (such as Rose Hills Cemetery  
283 property), meaning that there was less disturbance to wildlife on adjacent lands.

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287 Noise Impacts to Mammals Not Addressed

288 The revised DEIR did not include in its Core Habitat impact analysis any information  
289 about how noise from the Proposed Project could affect medium and large mammal  
290 species. Page 4.2-20 summarized noise issues related to wildlife, but focused only on  
291 birds and bats, and did not include evaluation of medium or large mammals.  
292 However, the revised DEIR did include a quote from a study stating that “the  
293 preponderance of evidence argues for immediate action to manage noise in protected  
294 natural areas” (p. 4.2-20). In addition, a study cited in the revised DEIR (Barber, et  
295 al., 2009) found that a one-decibel (dB) increase in existing sound level reduces the  
296 distance that an animal can detect something by 11 percent and reduces the area in  
297 which an animal can listen by 21 percent; increases of up to three dB can reduce the  
298 listening area for an animal by 50 percent<sup>8</sup>. This reduced area would impact an

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<sup>6</sup> 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.

<sup>7</sup> CEQA guidelines, Section 15126.2.

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

299 animal's ability to detect and avoid predators, and to detect and capture prey.  
300 Increased noise from the Proposed Project would compound existing noise levels  
301 present in the Preserve and impact wildlife, particularly during the Construction  
302 phase.

303  
304 Impacts to Native Wildlife Nursery Site Not Adequately Addressed

305 The revised DEIR also did not include in its Core Habitat impact analysis an  
306 acknowledgement that female bobcats have been shown to be especially sensitive to  
307 human disturbance and developed areas, and spend most of their time in natural  
308 habitat (as opposed to developed or altered habitat, such as golf courses or landscaped  
309 areas)<sup>9,10,11</sup>. In one study, the edge of the average female bobcat home range was  
310 approximately ~~1/2~~one-half mile from developed areas, and female bobcats avoided  
311 paved roads that received regular vehicle use, even near or within a park; other  
312 studies were noted regarding bobcat avoidance of paved roads as well<sup>12</sup>. Given this  
313 sensitivity to development and the avoidance buffer zones around such development,  
314 the area of a habitat preserve that effectively supports bobcat reproduction could  
315 actually be smaller than its jurisdictional boundaries<sup>13,14</sup>. The higher sensitivity of  
316 adult female bobcats in particular is important for bobcat population viability because  
317 lands that are inhospitable to females cannot produce new animals<sup>15</sup>. Given that the  
318 Proposed Project vicinity exhibits the highest bobcat activity in the entire Preserve,  
319 and that female bobcats are especially sensitive to development, the Proposed Project  
320 could have a significant adverse effect on the value of the Core Habitat as a native  
321 wildlife nursery site for this species. Proposed Project activities and associated edge  
322 effects could cause the currently undisturbed habitat to be considered unsuitable by  
323 female bobcats, causing them to avoid the area or forcing them to be subjected to  
324 additional stress and possibly shrink and overlap their home ranges, causing  
325 additional competition for limited resources.

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327 These significant adverse impacts to native wildlife nursery sites likely extend  
328 beyond bobcats, applying to the numerous other wildlife species present on the  
329 Preserve that are considered to be sensitive to human activity, including spotted  
330 skunks, long-tailed weasels and badgers<sup>16</sup>. However, bobcats are useful as an  
331 indicator species for potential impacts on other species. Bobcats are an especially  
332 useful indicator species in southern California regarding habitat connectivity, as they  
333 are sensitive to fragmentation and human disturbances, including roads<sup>17,18,19,20</sup> ~~and~~

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<sup>9</sup> Riley, S.P.D. 2006. *Ibid.*

<sup>10</sup> 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.

<sup>11</sup> Gehrt, et. al. 2010. *Ibid.*

<sup>12</sup> Riley, S.P.D. 2006. *Ibid.*

<sup>13</sup> *Ibid.*

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

<sup>15</sup> Riley, S.P.D., et. al. 2003. *Ibid.*

<sup>16</sup> Crooks, K. R. 2002. *Ibid.*

<sup>17</sup> *Ibid.*

334 spend the majority of their time in natural habitat<sup>21,22,23</sup>, and provide a method for  
335 protecting other species with less-demanding habitat needs<sup>24</sup>. Many wildlife species  
336 prefer to breed in areas that are buffered from perceived threats, such as development  
337 and human activity, to help insure the protection and survival of their young. The  
338 Core Habitat currently serves as the largest area of buffered habitat on the Preserve,  
339 and impacts to this area could significantly impact native wildlife nursery sites.  
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#### 342 ***4b. Vibration Impacts***

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

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

359 Page 4.2-53 states that bobcats would experience anxiety due to vibrations, and that  
360 data on wildlife response to vibration impacts are not well-documented. But it also  
361 notes that the “typical response observed by the EIR preparers for most wildlife to a  
362 short-term, infrequent event, is short-term avoidance, but if the abnormal condition  
363 (such as noise and vibration) ceases, wildlife species typically return to their normal  
364 behavior”. Please include a summary of the EIR preparers’ experience observing  
365 wildlife reactions to vibration impacts, including the species observed. This  
366 reasoning does not account for wildlife species that are known to be more sensitive to  
367 human activity, like bobcats, which may not react the same way as “most wildlife”.

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<sup>18</sup> *Ibid.*

<sup>19</sup> 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.

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

<sup>21</sup> Riley, S.P.D. 2006. *Ibid.*

<sup>22</sup> Lyren, L.M., et. al. 2008. *Ibid.*

<sup>23</sup> Gehrt, et. al. 2010. *Ibid.*

<sup>24</sup> Lyren, L.M., et. al. 2008. *Ibid.*

368 Also, given the frequency of new well drilling (up to once per month for ~~5~~five years),  
369 as well as re-drills (three times per year) and well workovers (52 per year, each  
370 lasting one to seven days; therefore, workovers could be continuous) over the ~~25~~to-  
371 30-year life of the Proposed Project (lease period), this would be more than a short-  
372 term impact.

373 ***4c. North Access Road Impacts***

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

379 The revised DEIR states that “The North Access Road is located in the Core Habitat  
380 of the Preserve, which currently has minimal disturbances. This access road would  
381 increase pressure on an already--constricted wildlife movement corridor and  
382 therefore, the overall effect would be an increase in impacts to biological resources”  
383 (p. 4.2-54). It also states that “increased levels of drilling operations and human  
384 activities in the Core Habitat, which currently has minimal disturbances, would result  
385 in substantial impacts to wildlife movement. The impacts would be most severe in  
386 those areas farthest away from existing human pressures”. The North Access Road  
387 would traverse through the entire Core Habitat, including the portions that are the  
388 farthest away and most insulated from existing human pressures. The Proposed  
389 Project would substantially increase traffic (and associated noise, vibration and  
390 human presence impacts) on this road from approximately one vehicle per day or less  
391 under current conditions to 24 trucks during the Operational Phase and ~~316~~564 trucks  
392 during the Construction Phase (Tables 4.7-14 and 4.7-15).

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

402 Additionally, there is no analysis in the revised DEIR regarding how this substantial  
403 increase in traffic would increase associated noise and vibration levels along the  
404 North Access Road which traverses through the entire Core Habitat. The Noise and  
405 Vibration section does state on page 4.5-22 that noise levels from trucks could range  
406 up to 62 dBA, which is a large increase from the existing baseline noise levels of 47.7  
407 dBA measured at the Deer Loop trail (and ~~could be~~is most likely even quieter in the  
408 middle of the Core Habitat). Vehicle noise may be further amplified by increased

409 noise levels due to the steep slope of the road and the speed limit, which could cause  
410 trucks to use loud “J-brakes” coming down the slope or to increase engine noise due  
411 to laboring up the slope; therefore, we strongly recommend prohibiting the use of  
412 such “J-brakes”. As noted on Page 4.5-27 of the DEIR, “trucks laboring uphill  
413 produce more noise than trucks on a level surface”. This section also states on page  
414 4.5-13 that large trucks produce detectable levels of vibration at 50 to 100 feet from  
415 Colima ~~road~~Road, but does not indicate what vibration levels are anticipated along  
416 the North Access Road, which could introduce a completely new impact to the Core  
417 Habitat, which currently does not support any large truck activity ~~which could with~~  
418 the potential to cause vibration impacts. –Please include an analysis of noise and  
419 vibration impacts along the North Access Road in the -Biological Resources section,  
420 and include additional mitigation measures for significant impacts.

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

#### 430 ***4d. Wildlife Travel Corridor Impacts***

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

#### 435 Impacts to Area Between Proposed Project and Colima Tunnel

436 The revised DEIR includes mitigation measure BIO-4n, closing the Colima Service  
437 Tunnel, thereby closing recreational access to the Arroyo San Miguel trail during  
438 drilling and construction activities. If drilling and construction activities could  
439 adversely affect wildlife movement at the Colima Service Tunnel, which is  
440 approximately 2,000 feet east of the Proposed Project, then it is logical that drilling  
441 and construction activities would also adversely affect all areas within 2,000 feet of  
442 the Proposed Project, including most of the Arroyo Pescadero area and public trails.  
443 For species that are sensitive to the Proposed Project activities and associated edge  
444 effects, there is the potential that they would avoid this area and may choose to head  
445 north, away from such disturbances. This may be especially true for species that are  
446 also sensitive to recreational activities, such as bobcats<sup>25,26,27</sup>, given the current level

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

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

447 of hiking and dog-walking on the adjacent Arroyo Pescadero Loop Trail and Deer  
448 Loop Trail. Unfortunately, this would direct them away from using the least-  
449 constrained path at the Service Tunnel, which allows for safe movement under  
450 Colima Road, and may direct them to cross Colima Road further north, where there is  
451 no such safe passage (as documented by the numerous large mammal roadkill at this  
452 location). Discussion of the wildlife travel corridor impacts on page 4.2-55 implies  
453 that animals “choosing to avoid the proposed drilling site by moving through the hills  
454 to the north” simply need to take one of two alternative roads that would bring them  
455 back south to the Service Tunnel, and therefore animals could easily avoid crossing  
456 Colima Road. This scenario is speculative. Animals diverted to the north by activity  
457 in the Core Habitat will most logically try to cross Colima Road to the north. This  
458 could lead to a significant impact to wildlife movement through the corridor, either by  
459 causing more roadkill and reducing wildlife populations, or by causing wildlife to  
460 avoid crossing Colima Road completely. Both of these situations could threaten the  
461 viability of the corridor, which, as noted in the DEIR, is necessary to (1) maintain  
462 genetic variability in populations needed for adaptation to environmental changes, (2)  
463 facilitate dispersal of juveniles, and (3) provide movement routes in response to  
464 emergency situations such as wildfires.

#### 465 Colima Tunnel Closure Mitigation Measure

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

#### 486 Significant Impacts

487 The revised DEIR includes mitigation measures (BIO-4a through 4n) to minimize

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<sup>27</sup> 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.

488 impacts to wildlife movement such as reducing the speed limit from 15 mph to 10  
489 mph, limiting nighttime use, and shielding lighting; however, they are not adequate to  
490 reduce impacts to less than significant. In addition, as acknowledged in the Land Use  
491 and Policy Consistency Analysis (Section 4.11), “although the Proposed Project could  
492 impact the existing natural habitat, the mitigation measures identified in Section 4.2,  
493 Biological Resources, would minimize these impacts; however, potential impacts to  
494 wildlife corridors would remain significant” (p. 4.11-37). Therefore, the Habitat  
495 Authority has recommended additional mitigation measures, including a wildlife  
496 overpass and additional recreation restrictions, that would further reduce impacts to  
497 wildlife movement ~~to less than significant~~ (see 4e below).

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499

#### 500 ***4e. Suggested Mitigation Measures***

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

506

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

524 This study would also help the Proposed Project to be more consistent with  
525 the City’s General Plan Environmental Resource Management Element Policy

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<sup>28</sup> Crooks, K.R. 2002. *Ibid.*

<sup>29</sup> Conservation Biology Institute. 2005. *Ibid.*

<sup>30</sup> Lyren, L., et. al. 2008. *Ibid.*

526 1.3, with which the Proposed Project has been found to be potentially  
527 inconsistent (p. 4.11-32). This Policy is to “Preserve adequate open space  
528 areas for major habitat types, so as to maintain ecosystems in a natural balance  
529 for recreation, scientific, economic, educational, and scenic purposes.” The  
530 results of this study would help to guide management of the preserved open  
531 space to insure that there is a balance between these multiple uses while  
532 maintaining viable habitat for wildlife populations.

533 B. **Construct a wildlife overpass or underpass at the north end of Colima**  
534 **Road.** This would provide for a second safe route for wildlife to move east  
535 and west through the corridor across Colima Road at a point where substantial  
536 numbers of large mammal roadkill have been identified. This route may be  
537 used more frequently as a result of the Proposed Project, which could cause  
538 wildlife to avoid the area in and around the Proposed Project. The revised  
539 DEIR noted on page 4.2-27 that the RMP recommended the construction of a  
540 wildlife overpass over Colima Road for wildlife corridor maintenance and  
541 improving wildlife movement opportunities across Colima Road in the  
542 Proposed Project vicinity.

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

559 Constructing an overpass, as opposed to an underpass, would also be  
560 beneficial to the coastal California gnatcatcher, as it could not only create new  
561 habitat on new land (as opposed to restoring existing degraded habitat), but  
562 would also help to facilitate movement of gnatcatchers from the largest  
563 population on the Preserve (located on the east side of Colima Road) to  
564 habitats further west of Colima Road (including to one of the largest and most  
565 contiguous patches of habitat just west of Colima Road) by increasing habitat  
566 connectivity (see Exhibit B). The U.S. Fish and Wildlife Service noted in

567 their Final Rule for the gnatcatcher critical habitat designation<sup>31</sup> that, “For  
568 relatively sedentary bird species such as the coastal California gnatcatcher,  
569 connectivity of habitat patches is probably the most important landscape  
570 feature for maintaining species diversity of native biota. Corridors counteract  
571 the effects of fragmentation, and should eliminate or minimize the attrition of  
572 species over time by facilitating dispersal and recolonization”. It also noted  
573 that generally the species disperses short distances through contiguous  
574 undisturbed habitat, and that habitat restoration to facilitate movement  
575 between populations is one example of an action that may be necessary to  
576 prevent further decline and loss of the species. During their identification of  
577 critical habitat areas, they included “satellite” patches of suitable habitat that  
578 were within 1,600 feet of larger core habitat areas as important for  
579 connectivity, as it is the distance a bird would have to travel across the  
580 landscape to reach a core area while avoiding developed areas. Consequently,  
581 the approximate location of a wildlife overpass over Colima Road would be  
582 approximately 1,600 feet from the largest patches of most suitable habitat on  
583 the east and west sides of Colima Road, and could serve as a “satellite” patch  
584 of connecting habitat.  
585

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

592 Core Habitat areas are critical to maintaining wildlife populations in  
593 fragmented habitat corridors. Habitat connections or movement corridors  
594 connecting reserves or larger “core areas” of habitat are thought to counter  
595 many adverse effects of isolation by fragmentation on species and ecological  
596 processes<sup>32</sup>. Large areas are more defensible and will contain larger  
597 populations that will be less vulnerable to extinction compared to smaller,  
598 fragmented habitats that experience effects from adjacent developed land<sup>33</sup>.  
599 In the absence of large Core Habitat areas, a corridor may merely serve as a  
600 “population sink” where animals enter the corridor from larger or higher-  
601 quality habitats, only to perish and not contribute to population  
602 regeneration<sup>34,35</sup>.

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

<sup>32</sup> Conservation Biology Institute. 2005. *Ibid.*

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

<sup>34</sup> Hilty, J.A., et. al., 2006. *Ibid.*

<sup>35</sup> Conservation Biology Institute. *Ibid.*

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

611 Consistent with that recommendation, the Habitat Authority, along with a  
612 panel of regional scientists and natural resource regulators, included a Core  
613 Habitat management zone in the Resource Management Plan<sup>37</sup>. The Core  
614 Habitat is the largest area of habitat within the Preserve that is undisturbed  
615 from human activity and is the most buffered from edge effects due to  
616 adjacent development (Exhibit C). There is no other comparably--sized area  
617 of habitat with the Preserve that is similarly undisturbed by human activity or  
618 edge effects. It also supports a diversity of habitat types, both native and non-  
619 native, similar to other areas of the Preserve. The Proposed Project facilities  
620 and roads would introduce new human disturbance and related edge effects  
621 into this currently--buffered habitat, and would force such buffers further  
622 inward, resulting in a smaller area of undisturbed habitat than **currently**  
623 **presently** exists (Exhibit D). This would effectively shrink, degrade, and  
624 fragment the existing Core Habitat, compromising its purpose and function.  
625 This would necessitate the creation of a new and/or expanded Core Habitat to  
626 serve as a large area (or several areas) that are closed to public access and  
627 regular human disturbance activities. This Core Habitat could either be in an  
628 existing portion of the Preserve, or on a newly--acquired parcel adjacent to the  
629 Preserve. The location of the new and/or expanded Core Habitat should be  
630 guided, in part, by scientific research resulting from the above-recommended  
631 Wildlife Movement Monitoring Study involving bobcats, as well as other  
632 factors noted above as being important to Core Habitat areas (large size,  
633 buffered from edge effects, habitat diversity, ease of prohibiting public access,  
634 etc.). In addition, a mitigation measure for a new and/or expanded Core  
635 Habitat should include funding to prepare an amended Habitat Authority  
636 Resource Management Plan which would not only include the new and/or  
637 expanded Core Habitat but would also address oil drilling activities within the  
638 Preserve.

639 A report prepared by the Conservation Biology Institute called Maintaining  
640 Ecological Connectivity Across the “Missing Middle” of the Puente-Chino  
641 Hills Wildlife Corridor<sup>38</sup> critically and thoroughly examines the viability of  
642 the entire corridor from the Chino Hills in the east to Sycamore Canyon in the

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

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

<sup>38</sup> Conservation Biology Institute. 2005. *Ibid.*

643 west. This report emphasizes not only the importance of the ~~corridor~~-Corridor  
644 in providing movement and dispersal opportunities for a range of wildlife  
645 species, but also providing core areas of larger habitat patches needed to  
646 provide sources for wildlife populations in the corridor. This report noted  
647 that the ability of western portions of the ~~corridor~~-Corridor to support species  
648 depends on having sufficient “live-in” habitat along the way to support  
649 populations that contribute dispersing individuals.

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651 Without large blocks of live-in habitat, the continued functionality of the  
652 ~~corridor~~-Corridor cannot be ensured by merely a long, narrow gauntlet of  
653 “move-through” habitat<sup>39</sup>. These live-in blocks of larger habitat patches are  
654 key to maintaining wildlife movement through a corridor, because movement  
655 not only refers to one-time or daily movement patterns, but generational or  
656 long-term movements in order to maintain the genetic integrity and diversity  
657 of a population, with some individuals residing and reproducing in live-in  
658 blocks for longer periods<sup>40</sup>

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660 **D.**

661 **D.—Close or limit public access to the Arroyo Pescadero and Arroyo San**  
662 **Miguel areas, including the Colima Service Tunnel, to recreation during**  
663 **test drilling and construction, as well as during any periods of drilling**  
664 **and re-drilling during the operations phase.** As stated previously, bobcats  
665 are more sensitive to urbanization and human activity than most other  
666 common medium and large mammals. In addition, the Arroyo Pescadero  
667 vicinity has been shown to have the highest bobcat activity of the entire  
668 Preserve. Restricting ~~of~~ human activity in this area has already been  
669 recommended in other studies<sup>41,42</sup>, and current data indicates a possible  
670 decline in wildlife usage due to increased human activity in the area<sup>43</sup>. In  
671 addition, several scientific studies have shown that bobcats are sensitive to  
672 recreational activities and are substantially more abundant in areas that are  
673 closed to recreation<sup>44,45,46</sup>. The revised DEIR has also determined that drilling  
674 and construction activities could adversely affect wildlife movement through  
675 the Colima Service Tunnel (and by extension, logically also affecting all areas  
676 in-between, which includes Arroyo Pescadero). Since the Proposed Project  
677 would cumulatively add to human disturbance in the area, a reduction of

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<sup>39</sup> Conservation Biology Institute. 2005. *Ibid.*

<sup>40</sup> Hilty, J.A., et. al., 2006. *Ibid.*

<sup>41</sup> Haas, C., and Crooks, K. 1999. *Ibid.*

<sup>42</sup> Conservation Biology Institute. 2005. *Ibid.*

<sup>43</sup> Puente Hills Habitat Authority, 2010. *Ibid.*

<sup>44</sup> George, S. L , and Crooks, K. R. 2006. *Ibid.*

<sup>45</sup> Reed, S.E., and Merenlender, A.M. 2008. *Ibid.*

<sup>46</sup> Reed, S.E., and Merenlender, A.M. 2011. *Ibid.*

678 recreational activity during the most active periods of the Proposed Project  
679 (construction and drilling) may help to mitigate adverse effects to wildlife in  
680 the area, particularly bobcats. This could also allow wildlife to have an area  
681 less impacted by human disturbance for movement through the area and help  
682 to maintain a safe approach to the Colima Service Tunnel for wildlife to move  
683 east and west through the corridor under Colima Road.

684 The Habitat Authority currently manages the Preserve in accordance with the  
685 RMP, which includes management tools to -balance recreation with protection  
686 of sensitive habitat areas and/or species. As such, this area will continue to be  
687 monitored to possibly ~~restrict-prohibit~~ dogs from the Arroyo Pescadero area in  
688 response to the Proposed Project, if not required as mitigation. Also, the area  
689 will be monitored to possibly close the Arroyo Pescadero and/or Deer Loop  
690 Trails to recreational use during this same period if indications ~~show-are~~ that  
691 bobcats are -adversely affected (such as by evaluating changes to territories,  
692 reproduction and/or movement), if not required as mitigation from this  
693 Proposed Project. Several scientific studies have suggested that the presence  
694 of domestic dogs on trails may have an adverse effect on wildlife, including  
695 bobcats<sup>47,48</sup>; ~~restricting-prohibiting~~ dogs should also help restrict the overall  
696 recreational use.

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

706 **F. Additional habitat mitigation to improve habitat quality in the vicinity**  
707 **of the North Access Road.** Mitigation Measure BIO-1a states that habitat will be  
708 restored at a 1:1 ratio for noise impacts to coastal sage scrub surrounding the  
709 Proposed oil facility. However, additional noise and associated edge effects will  
710 impact habitat surrounding the North Access Road. Improvement of the habitat  
711 quality in the vicinity of this road through habitat restoration may mitigate for the  
712 adverse effects to some species, such as avoidance of the area surrounding the  
713 North Access Road, and resulting impacts to wildlife movement and/or native  
714 wildlife nursery sites. Restoration could improve habitat complexity, resulting in  
715 ~~greater shielding from noise~~; increased areas for refuge and protection, and  
716 increased prey base.

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

<sup>48</sup> George, S.L., and Crooks, K.R. 2006. *Ibid.*

717 **4f. Residual Impacts**

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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.

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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 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.

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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, and 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 will may help mitigate for the Proposed Project’s contribution to the overall degradation of the Preserve and its essential functions.

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

763 The revised DEIR evaluated whether the Proposed Project would “conflict with local  
764 policies and ordinances protecting biological resources, such as a tree preservation  
765 policy or ordinance” (p. 4.2-61). This analysis states that Proposed Project  
766 implementation would conflict with various goals and objectives of the Habitat  
767 Authority’s Resource Management Plan (RMP), especially concerning activities  
768 identified as permissible within the Core Habitat zone of the Preserve. As  
769 acknowledged in the revised DEIR on page 4.2-35, the sole purpose of the Core  
770 Habitat zone is to provide undisturbed habitat for wildlife to contribute to sustaining  
771 the overall ecological health of the Habitat Authority’s jurisdiction. Permissible  
772 activities in the Core Habitat zone include authorized biological survey and some  
773 restoration and/or invasive species removal, but no unsupervised public access. It  
774 notes that the RMP is not consistent with the City of Whittier General Plan because  
775 ~~that document~~ the General Plan allows for oil and gas production on lands zoned as  
776 Open Space, if such production can be shown to be compatible with surrounding  
777 permitted uses (i.e., the Preserve). Regardless, the Proposed Project would conflict  
778 with the RMP, which serves as an approved, local policy document (adopted by the  
779 Habitat Authority Board of Directors on July 26, 2007), which would be a significant  
780 impact per the significance threshold. Although the City of Whittier did not adopt the  
781 RMP, the Habitat Authority manages the Preserve according to the policies contained  
782 in the RMP.

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

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

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

803 [Also, Mitigation Measure BIO-4e recommends conducting initial pad construction](#)  
804 [and annual fuel modification activity outside the breeding season of nesting](#)  
805 [songbirds, but such activity is not prohibited. This Mitigation Measure does require](#)  
806 [that surveys for nesting birds be conducted prior to any construction activity that](#)  
807 [would take place during breeding season, and if nesting birds are observed then a](#)  
808 [buffer would be established a minimum of 100 feet from the nest. The Project](#)  
809 [proponent is given the option to retain a biologist to monitor the nest and ensure that](#)  
810 [Project activities are conducted in accordance with State and federal law. The](#)  
811 [biologist monitor should be required in addition to establishment of the buffer area,](#)  
812 [and should be present during construction, drilling, re-drilling, road maintenance, or](#)  
813 [any other activity that has the potential to disturb nesting songbirds, bats or raptors.](#)  
814 [The biologist should also have the authority to stop Project-related activity if it is](#)  
815 [disturbing wildlife.](#)  
816

817

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

821 Mitigation Measure BIO-4g in the DEIR for special-status bats focuses only on direct  
822 impacts due to the removal of roosting trees. However, adverse noise and vibration  
823 impacts could occur during test drilling before construction, during initial drilling of  
824 up to the remaining 57 wells, and during re-drilling of these wells (three each year)  
825 over the life of the Proposed Project. Noise and vibration levels could cause bats to  
826 abandon maternity roosts, causing mortality of young and resulting in a significant  
827 impact to special-status bats. The feasibility of restricting ~~of~~ re-drilling activities to  
828 the non-breeding season should be explored as additional mitigation, [and please](#)  
829 [define and/or specify “drills” and “re-drills” in this mitigation measure so that any](#)  
830 [monitoring requirements during these activities are clear.](#) In addition, the Mitigation  
831 Measure does not account for general loss or degradation of habitat due to the  
832 increase in human activity and ambient lighting in the Proposed Project vicinity,  
833 which would occur on a 24-hour basis during drilling operations, could alter the bat  
834 community structure<sup>49</sup>, could cause bats to avoid noisy areas when foraging, and may  
835 result in habitat fragmentation<sup>50</sup>, resulting in possible impacts to the special status bat  
836 species documented in the Proposed Project vicinity (western mastiff bat, *Eumops*  
837 *perotis californicus*; hoary bat, *Lasiurus cinereus*; western red bat, *Lasiurus*  
838 *blossevillii*; and western yellow bat, *Lasiurus xanthinus*)<sup>51</sup>.

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

<sup>50</sup> Barber, J.R., et. al. 2009b. *Ibid.*

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

839 In addition, although Mitigation Measures BIO-1a and BIO-1b (pages 4.2-45 and 4.2-  
840 46) state that they would offset impacts to sensitive species, including bats, by  
841 requiring restoration of coastal sage scrub and revegetating graded slopes, this  
842 measure will not replace possible tree roosting habitat for sensitive bat species.  
843 Additional mitigation should include placing bat boxes in the Core Habitat, in areas  
844 located away from the proposed oil facilities and roads (and adjacent areas affected  
845 by edge effects), which could increase local bat populations<sup>52</sup>. The reference to “tract  
846 map area” at the end of the measure should also be deleted as it is not pertinent to this  
847 Proposed Project.

848 **8. The analysis of cumulative impacts is not adequate, and it is suggested that the**  
849 **final EIR consider more appropriate and relevant mitigation (Section 4.2.6; pg.**  
850 **4.2-63).**

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

876 The revised DEIR also notes that there would be a cumulatively significant impact to  
877 wildlife movement in the general area due to “increased infill of open areas, increased  
878 human presence, and temporary and permanent loss of habitat in the general area that  
879 is already under extreme pressure from surrounding residential and urban areas” (p.

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<sup>52</sup> *Ibid.*

880 4.2-65). However, the only mitigation measure prescribed for this impact is  
881 CUMULATIVE BIO-2, which states that drilling or construction associated with the  
882 Proposed Project would not occur at the same time as, or in the same watershed as,  
883 construction work on Southern California Edison’s Tehachapi Renewable  
884 Transmission Project. However, this ~~mitigation~~Mitigation measure~~Measure~~ would  
885 only address temporary impacts due to construction activities, and would not address  
886 the “increased infill of open areas”, “increased human presence”, and “permanent  
887 habitat loss” in an area under extreme pressure cited in the revised DEIR as reasons  
888 for the cumulatively significant impact to wildlife movement. The Habitat Authority  
889 suggests that additional mitigation, in the form of a wildlife overpass at upper Colima  
890 Road (see 4e above), be implemented to adequately mitigate for these cumulative  
891 impacts wildlife movement, as it would directly facilitate wildlife movement within  
892 the Preserve and Wildlife Corridor.

893 The long-term viability of the Puente-Chino Hills ~~wildlife~~Wildlife corridor~~Corridor~~  
894 is already threatened every day by edge effects from surrounding current and ongoing  
895 urban development, as well as the additional associated threats that come with such  
896 development, including increased wildfire danger, increased roadkill mortality,  
897 increased harm and mortality from pesticides (and especially rodenticides, which  
898 have been shown to harm bobcats and coyotes<sup>53</sup>), and increased mortality or  
899 displacement from “nuisance” wildlife trapping efforts. In addition, the already-  
900 narrow width of the ~~corridor~~Corridor remains threatened by the ever-present  
901 potential for further development of adjacent, non-preserved parcels supporting  
902 natural habitat. It is for these reasons that the Habitat Authority has continuously  
903 challenged other development Projects within and adjacent to the Preserve, including  
904 recent Projects such as the Pacific Heights Project in Rowland Heights (adjacent to  
905 Powder Canyon) and the Southern California Edison Tehachapi Renewable  
906 Transmission Project (running through the majority of the Preserve), both of which  
907 have been approved. The increased stress that the Proposed Project may cause to  
908 wildlife movement and population viability has the potential to adversely affect the  
909 long-term viability of the Corridor. The two best ways to combat these cumulative  
910 effects to the health of the Preserve ~~is~~are to improve movement opportunities  
911 (wildlife overpass) and provide areas which ~~are~~are protected from human disturbances  
912 (limit recreation, new and/or expanded Core Habitat).

913  
914 **9. Impacts in the Aesthetics and Visual Resources section (Section 4.6) regarding**  
915 **additional lighting on top of the drill rig, as well as increased ambient lighting,**  
916 **should be addressed in Biological Resources section.**

917 The Puente Hills are one of the few remaining open space areas in the region, and as  
918 part of the Pacific Flyover, likely serves as an important migratory stopover point for  
919 birds migrating through southern California twice a year. Most passerine birds  
920 migrate at night and have been found to be highly susceptible to lights placed on tall

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<sup>53</sup> 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.

921 towers, particularly steady-burning and red lights<sup>54,55,56</sup>. The birds are attracted to  
922 these lights, especially in poor visibility conditions, and become disoriented, causing  
923 them to collide with the towers, wires, or other birds. The DEIR notes that only  
924 structures taller than 200 feet are required to comply with Federal Aviation  
925 Administration (FAA) lighting requirements (page 4.6-25); since the 125-foot drill rig  
926 is ~~Projected~~projected to be well below that height, and since such lighting could  
927 result in adverse impacts to migrating birds, lighting should not be used on the drill  
928 rig. This potential impact must be addressed in the Biological Resources section of  
929 the DEIR.

## 930 **Section 4.5 Noise and Vibration**

### 931 **1. Mitigation Measures N-1c and N-4 require additional analysis and/or** 932 **clarification.**

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

### 943 **2. The Ranger residence should be considered for relocation.**

944 The residence is owned by the Mountains Recreation and Conservation Authority, a  
945 government park agency that the Habitat Authority contracts with for ranger services,  
946 and is occupied by two California Peace Officers. We understand that there will be  
947 noise-proofing of the Proposed Project, however the current location of the residence  
948 will be next to drilling, construction and operational activities of the Proposed  
949 Project. The revised DEIR does not include in the Noise and Vibration section a  
950 mitigation measure that would relocate the Ranger residence due to impacts from  
951 increased noise and vibration. However, page 4.11-20 of the Land Use and Policy  
952 Consistence Analysis section states that there is such a mitigation measure in the  
953 Noise and Vibration section and that it would reduce Land Use Impact LU.1 to less  
954 than significant. The revised DEIR states regarding noise increases that “although  
955 these noise levels would be within the General Plan limits, they would exceed the current

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

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

<sup>56</sup> 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.

956 baseline daytime levels by up to 18 dbA and would be clearly noticeable” (p. 4.5-22) and  
957 that although the Ranger residence is 1,000 feet from drilling, vibration levels would still  
958 likely be distinctly perceptible causing residential annoyance (Tables 4.5-4 and 4.5-3).  
959 Furthermore, the revised DEIR did not analyze impacts as a result of constant new  
960 activity, staging, parking and vehicle disturbance. Up to 120 daily vehicle trips will  
961 occur directly in front of the Ranger residence during test drilling (Table 4.7-13), up  
962 to 140 daily vehicle trips during the construction phase (Table 4.7-14), and up to 44  
963 daily vehicle trips during the operations phase (Table 4.7-15). These trips may  
964 increase if the workers left the site for lunch or for other errands. In addition,  
965 ~~mitigation-Mitigation measure-Measure~~ N1-c could relocate construction parking and  
966 staging north of the Ranger residence (p. 4.5-23), and the potential impacts to the Ranger  
967 residence from implementation of this ~~measure-Measure~~ have not been evaluated. The  
968 Proposed Project would increase daytime and nighttime noise and vibration levels,  
969 which would adversely affect the Ranger residence, and may affect the Ranger’s  
970 ability to effectively address emergency situations, such as a potential wildfire on the  
971 Preserve. Section 4.12, Fire Protection and Emergency Services, states that the  
972 Ranger at this residence is an existing resource to be used in case of fire or  
973 emergency, and ~~mitigation-Mitigation measures-Measures~~ FP-2a and FP-2b  
974 specifically reference use of the Ranger residence to mitigate for increased risk of  
975 wildfires (p. 4.12-20). Permanent relocation of the Ranger residence is recommended  
976 as mitigation for these impacts. Additionally, it is suggested that the Ranger ~~be~~  
977 ~~relocated,~~ possibly off-site, during the most active and intense activities associated  
978 with the Proposed Project.

### 979 **3. Noise Impacts Evaluated Using the Incorrect Land Use Category**

980 The revised DEIR places the Preserve in the same City General Plan Noise  
981 Guidelines land use category as playgrounds and neighborhood parks (p.4.5-20),  
982 where noise exposure up to 70 dBA is considered acceptable (Figure 4.5-3, p. 4.5-19).  
983 However, the Preserve is not a playground – there are no swing sets, sandboxes, or  
984 jungle gyms – and it is not a neighborhood park – no barbeque pits, softball fields,  
985 playgrounds, basketball courts, picnic tables or touch-football games. Visitors to the  
986 Preserve come to walk, hike, or ride the trails, catch a glimpse of the local wildlife,  
987 and enjoy the solitude. Utilizing Table 4.5.6 Exterior Noise Standards for Los  
988 Angeles County on page 4.5-14 of the revised DEIR, the Preserve should be in Noise  
989 Zone I as a noise-sensitive area, with an Exterior Noise Level of 45dBA. At the very  
990 highest, the Preserve should be on a par with Noise Zone II, which includes  
991 residential properties and has an Exterior Noise Level of 45-50 dBA. Because the  
992 higher dBA level is used, the revised DEIR inaccurately concludes that Project test  
993 drilling, drilling and operations would not exceed General Plan noise limits at six  
994 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,  
995 p. 4.5-46).

#### 996 **Residual Impacts**

997 The revised DEIR states that, “The noise reduction methods in the mitigation  
998 measures are established practices in the drilling industry that reduce noise levels in  
999 urban drilling situations.” (p.4.5-31) As the Preserve is not an urban drilling  
1000

1001 situation, the effectiveness of the revised DEIR mitigation measures in protecting  
1002 wildlife from significant unavoidable impacts cannot be evaluated and must be  
1003 discussed in the Final EIR.

1004  
1005 Within Section 2.0 Project Description, it is stated that, “During the grading process,  
1006 branches and leaves that are encountered would be collected, shredded, and turned  
1007 into mulch.” (p. 2-34) The shredding equipment is not listed in Table 2-7; impacts of  
1008 the emissions and noise from the shredding equipment must be evaluated in the Final  
1009 DEIR.

1010 See further discussion and explanation of noise and vibration impacts and proposed  
1011 mitigation in the Biological Resources and Comparison of Proposed Project Alternatives  
1012 sections of this letter.

### 1013 **Section 4.6 Aesthetics and Visual Resources**

1014 Mitigation ~~measure~~ Measure AE-1a for the Proposed Project states that native ~~-~~vegetation  
1015 landscaping shall be planted at the periphery of the property to beautify and screen the  
1016 operations from adjacent land uses, including recreation (p. 4.6-2). However, this ~~measure~~  
1017 Measure should be clarified to state that the planting will occur at the periphery of the  
1018 Proposed Project Site, as it is unknown which “property” is referred to in the existing  
1019 measure. Also, this ~~measure~~ Measure states that the Preserve and a certified landscape  
1020 architect shall implement and monitor compliance with the landscape plan. The Habitat  
1021 Authority will need to be compensated for implementing this ~~measure~~ Measure, including  
1022 hiring the landscape architect to implement it.

1023 Impacts AE.1, AE.2, and AE.2 state that views of the access roads and facility equipment  
1024 have impact to aesthetics; in the case of the drilling rig, significant and unavoidable impacts.  
1025 However, required fuel modification also has the potential to impact views from recreational  
1026 trails and public viewing locations, and should be evaluated in the Final EIR.

1027

### 1028 **Section 4.7 Transportation and Circulation**

1029  
1030 The revised DEIR notes that during the ~~construction~~ Construction phase, 312 daily truck trips  
1031 would be required for soil export (Table 4.7-14), in order to transport the approximately  
1032 149,000 cubic yards of soil offsite (p. 2-26). This increase in truck traffic along the North  
1033 Access Road would create a critically substantial increase in traffic along this road through  
1034 the Core Habitat, resulting in a tremendous increase in associated noise, human presence, and  
1035 vibration. The Habitat Authority strongly encourages any measures that would drastically  
1036 reduce these truck trips, perhaps by retaining some or all of the cut soil on-site or by reducing  
1037 the amount of cut material necessary. The previous DEIR noted that cut and fill for the  
1038 Consolidated Site Alternative (which is the Proposed Project in the revised DEIR) would be  
1039 similar to the originally Proposed Project, which would result in approximately 22,000 cubic  
1040 yards of excess soil. This is substantially less than the cut soil under the newly Proposed

1041 Project in the revised DEIR, which is likely a result of attempts to reduce visual impacts from  
1042 the drill rig by lowering the elevation of the drilling pads which requires massive grading.  
1043 However, as noted in the Aesthetic and Visual Resources section of the revised DEIR, visual  
1044 impacts from the drilling rig would still be significant and unavoidable despite additional  
1045 mitigation.

## 1046 **Section 4.8 Hydrology and Water Resources**

1048 Mitigation Measure WR-2a lists several measures that would be used to protect exposed soils  
1049 from erosion, control sedimentation, and stabilize soils. The measures listed include the use  
1050 of geotextiles, mulches, hydroseed, drainage swales, and straw wattles. These materials  
1051 should be certified to be free of invasive plants and seeds.

## 1052 **Section 4.11 Land Use and Policy Consistency Analysis**

### 1053 **1. The Proposed Project is inconsistent with the City's General Plan Policies.**

1054 The Proposed Project as currently presented is inconsistent with several of the City's General  
1055 Plan Policies. Because of reasons already explained in this letter they are not consistent with  
1056 Land Use Goal 4 Policy 4.1 which is to, "Encourage new industrial development to be  
1057 sensitive to adjacent or nearby properties and to be compatible with the environment." Also,  
1058 as acknowledged in the DEIR -the Proposed Project is not consistent with the following:  
1059 Environmental Resource Management Element (ERME) Goal 1 Policy 1.3, ERME Goal 3  
1060 Policy 3.1, ERME Goal 3 Policy 3.2, *and* ERME Goal 3 Policy 6.2; ERME Goal 7, Policy  
1061 7.1 and Policy 7.4.

### 1062 **2. The Proposed Project is inconsistent with the RMP's Policies.**

1063 The current Proposed Project ~~as proposed~~ is also inconsistent with the Habitat Authority's  
1064 Resource Management Plan (RMP), which was approved in 2007 to act as a comprehensive  
1065 long-term management plan for the Preserve. The areas of conflict as recognized in the DEIR  
1066 include RMP Goal BIO-3 and RMP Goal VISUAL-1. Other areas of conflict not recognized  
1067 in the DEIR are Goal BIO-3 Objectives 3.1 and 3.7, as well as Goal VISUAL-1 Objective 1.3  
1068 and Goal USE-1.

## 1069 **Section 4.14 Recreation**

1070 **1. The Final EIR should consider impacts to recreation, and compatibility with the**  
1071 **City's General Plan and the Habitat Authority's RMP policies as a result of closing the**  
1072 **Colima Service Tunnel and possibly limiting access at the Arroyo Pescadero trailhead**  
1073 **during drilling and construction activities.**

1074 As noted above, as mitigation for Proposed Project impacts to wildlife, the Habitat Authority  
1075 suggests limiting public access at the Arroyo Pescadero Trailhead and Arroyo San Miguel  
1076 Trail to the public during construction and drilling activities. Limiting public access at the  
1077 trailhead should be considered not only to help protect the biological integrity of the Preserve

1078 as described in the Biological Resources Section of this letter, but to mitigate for impacts to  
1079 visitor safety particularly during construction of the pipeline under the Arroyo Pescadero  
1080 Loop Trail. Speed bumps and speed limits should also be implemented along the Loop Trail  
1081 to ensure that future ongoing monitoring of the pipeline does not result in adverse impacts to  
1082 recreational users (10 mph was previously recommended as Mitigation Measure BIO-4c  
1083 mitigation-measure). As a result of this mitigation measure, it would cause a new  
1084 significant impact to recreation which must be mitigated. As mentioned in the Habitat  
1085 Authority's NOP comment letter, the Arroyo Pescadero Trailhead is the third-busiest  
1086 trailhead of the Preserve according to a visitor user survey conducted for the Habitat  
1087 Authority by USC<sup>57</sup>. This recreational use may be transferred to other local trailheads  
1088 (Hellman Park or Turnbull Canyon) in the City. Please consider enhancing recreational  
1089 experiences elsewhere at Whittier trailheads to mitigate for this significant recreational  
1090 impact.

1091 **2. The Final EIR should analyze impacts and potential mitigation to outdoor**  
1092 **educational programming.**

1093  
1094 A high percentage of Habitat Authority-sponsored interpretive (educational) programming  
1095 for children grades Kindergarten through sixth grade, as well as for adults, occurs at the  
1096 Arroyo Pescadero Trailhead because of its central location, bathroom facilities, and because  
1097 it has the only the outdoor seating area in the Preserve. Typical sizes for the youth groups are  
1098 50 to 150 children per visit. When looking at the timeframe between January 2010 and June  
1099 2010, about 38 percent of interpretive programming participation (1,045 individuals)  
1100 occurred at this trailhead. The suggested trail closures as described above, as well as other  
1101 impacts including noise and visual impacts, may affect the Habitat Authority's interpretive,  
1102 educational, and outreach efforts. The DEIR did not discuss impacts resulting from vehicle  
1103 trips (disturbance and noise) along the Arroyo Pescadero Loop Trail to large school groups.  
1104 ~~As requested by the Habitat Authority in response to the NOP, the~~ The DEIR did not analyze  
1105 potential negative impacts to outdoor educational programming and applicable mitigation, as  
1106 requested by the Habitat Authority in response to the NOP.

1107

1108 **Section 6. Comparison of Proposed Project Alternatives**

1109 The Habitat Authority supports consideration of any alternatives that would place the  
1110 Proposed Project outside of the Core Habitat, would minimize the overall edge effects  
1111 (including from use of roads within the Preserve), and would place the Proposed Project  
1112 along the edge of the Preserve where edge effects are already occurring due to adjacent land  
1113 use activities (as opposed to introducing new edge effects into habitat which is currently  
1114 more buffered from edge effects).

---

<sup>57</sup> 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.

1115 **1. Savage Canyon Landfill Alternative**

1116 As such, we support the Savage Canyon Landfill alternative, which would be located on  
1117 the very edge of the Core Habitat and on the edge of the Preserve, in an area already  
1118 subject to substantial disturbance and human activity. The revised DEIR states that this  
1119 alternative would have biological disadvantages as it would (1) place construction and  
1120 drilling disturbances closer to occupied gnatcatcher habitat, and (2) would place these  
1121 disturbances closer to “High Quality” habitat which could negatively affect wildlife  
1122 movement. However, the Biological Resources section of the revised DEIR suggests that  
1123 gnatcatchers are not adversely affected by construction activities (p. 4.2-21), thereby  
1124 negating this argument as a disadvantage for this alternative. In addition, the Proposed  
1125 Project would require direct removal of occupied gnatcatcher habitat along the North  
1126 Access Road and would route traffic immediately adjacent to occupied habitat, whereas  
1127 the Savage Canyon Landfill alternative would not. Also, the argument that this alternative  
1128 has a disadvantage over the Proposed Project due to its proximity to areas mapped as  
1129 high quality habitat is inappropriate. As acknowledged in the revised DEIR (p. 4.2-37),  
1130 these high quality habitat areas were identified based on their composition of native and  
1131 non-native plant species, and were not based on their potential to support wildlife  
1132 movement. The non-native composition of habitat is not the only factor dictating the  
1133 potential for an area to be used for wildlife movement; other important factors include  
1134 topography, habitat structure, species-specific habitat preferences, and human activity  
1135 and development. In fact, many studies of bobcat movement and activity consider only  
1136 the degree of existing development as a habitat variable, and not the percent of native or  
1137 non-native plant cover<sup>58,59,60,61</sup>. Protecting the Core Habitat from direct and indirect  
1138 Proposed Project impacts is much more important than protecting one or two much  
1139 smaller areas mapped as high quality habitat from indirect impacts. As discussed at  
1140 length above, Core Habitats are critical for providing wildlife habitat buffered from edge  
1141 effects; and ~~facilitates~~ facilitating movement through a corridor, and ~~has they have~~ higher  
1142 native carnivore abundances. In addition, the Proposed Project’s North Access Road  
1143 would put related edge effects much closer to several of these mapped high quality  
1144 habitat areas.

1145 The revised DEIR acknowledges that the Savage Canyon Landfill alternative would have  
1146 less impact to Biological Resources than the Proposed Project (p. 6-33 through 6-35), and  
1147 it would have the same amount of significant unavoidable impacts as the Proposed  
1148 Project (p. 6-54). The analysis of the Savage Canyon Landfill alternative states that it has  
1149 a significant unavoidable impact regarding land use because it is unclear if permits can be  
1150 obtained and they may take a long time to get; however, the feasibility and time frame for  
1151 permitting are unknown regardless of whether the Proposed Project or an alternative are  
1152 implemented. If the feasibility and time frame of permitting for this alternative were  
1153 truly a concern, then it would not have been evaluated as a viable alternative in the

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<sup>58</sup> Riley, S.P.D., et. al. 2003. *Ibid.*

<sup>59</sup> Riley, S.P.D. 2006. *Ibid.*

<sup>60</sup> Lyren, L.M., et. al. 2008. *Ibid.*

<sup>61</sup> 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.

1154 revised DEIR. Please include in the Final EIR a further discussion of ~~state~~State and  
1155 federal laws governing landfill operations, and why permitting for this alternative would  
1156 be infeasible. In addition, although the analysis in Section 6 states that this alternative  
1157 would reduce the life of the Landfill (p. 6-14), it also states that the ~~landfill~~Landfill will  
1158 be providing waste disposal to the City for the next 45 years; since the Proposed Project  
1159 (lease period) only has a lifespan of 25 years, it is possible that most of this area could  
1160 again be used for waste disposal following completion of the Proposed Project. In  
1161 addition, the royalty payments received by the City for the Project's oil production  
1162 operations could be used to transport waste to another landfill site, offsetting the potential  
1163 reduced life of the Landfill. As such, this impact may not be significant and unavoidable,  
1164 and would result in fewer significant and unavoidable impacts compared to the Proposed  
1165 Project.

1166 The revised DEIR states that drilling from the Landfill site would most likely reduce the  
1167 amount of oil the Project proponent could access; one of six project objectives for the  
1168 Project Proponent is to "Maximize oil and gas production from the field, thereby  
1169 maximizing royalty payments to the City of Whittier." However, CEQA Guidelines state  
1170 only that most project objectives should be satisfied by project alternatives, not all.

## 1171 2. North Site Alternative

1172 Similarly, ~~the~~The Habitat Authority also supports further analysis and consideration of the  
1173 North Site and associated Hadley Street Access (as discussed in Section 5). Although this  
1174 is less favorable than the Savage Canyon Landfill alternative, as it would require the  
1175 removal of native habitat, it would also place the Proposed Project outside of the Core  
1176 Habitat, it would be on the edge of the Preserve, and would have a much shorter road and  
1177 ~~less~~fewer associated edge effects.

## 1178 3. Loop Road Alternative

1179 The Habitat Authority does not support the Loop Road Alternative, as it could  
1180 significantly impact wildlife movement. Although this alternative would minimally  
1181 reduce the amount of sensitive habitat ~~removal~~removed, would reduce impacts to  
1182 gnatcatcher habitat, and would be located outside of the Core Habitat, it would be located  
1183 in an area that has been shown to have the highest bobcat activity levels in the entire  
1184 Preserve, and the substantial increase in noise and traffic in this area could ~~substantially~~  
1185 significantly affect wildlife movement through the area. And considering that the Loop  
1186 Trail serves as the primary route to the Colima Service Tunnel, ~~it~~this alternative could  
1187 severely limit use of the Tunnel, possibly forcing wildlife to cross Colima Road at the  
1188 upper portion where a large mammal roadkill hotspot has been identified. Although  
1189 limiting ~~access~~recreational use in this area ~~to recreational use~~and constructing a wildlife  
1190 overpass could help reduce this alternative's impacts, ~~it~~these mitigations are unlikely to  
1191 reduce ~~this~~impacts to less than significant levels as ~~it~~this alternative could severely  
1192 compromise the use of the Colima Service Tunnel and a documented high bobcat activity  
1193 area.

## 1194 4. Catalina Avenue Access Alternative

1195 The Habitat Authority ~~also~~ strongly supports further analysis and consideration of the  
1196 Catalina Avenue Access Alternative, ~~(as discussed in Section 5)~~. Use of Catalina Avenue  
1197 during the construction and/or operations phase would substantially reduce impacts to  
1198 Biological Resources, as it would be located on the edge of the Core Habitat and Preserve  
1199 where edge effects already occur, ~~it~~ would use a much shorter route resulting in reduced  
1200 edge effects, and ~~it~~ would not result in impacts to occupied gnatcatcher habitat. ~~It~~ This  
1201 alternative would substantially reduce impacts to gnatcatchers, wildlife movement and  
1202 native wildlife nursery sites. Even if this route is expanded into the ravine next to  
1203 Catalina Avenue, as suggested on page 5-16 of the revised DEIR, utilizing this route  
1204 would still result in reduced Biological Resource impacts, even though it may result in  
1205 impacts to an intermittent creek. The revised DEIR states that this sub-alternative would  
1206 result in more biological impacts than the Proposed Project, but does not provide any  
1207 analysis to support this statement, despite the fact that it would significantly reduce  
1208 impacts regarding wildlife movement, native nursery sites, and gnatcatchers. Catalina  
1209 Avenue should be used for the test drilling phase and the operations phase, as the revised  
1210 DEIR notes that traffic impacts during both of these phases could be mitigated (p. 5-16).  
1211 The Transportation and Circulation section notes that traffic impacts during the test  
1212 drilling phase could be reduce to less than significant with mitigation, and since traffic  
1213 levels during the operations phase would be less than the test drilling phase (Tables 4.7-  
1214 13 and 4.7-15), those impacts could similarly be reduced. This would eliminate long-  
1215 term impacts to the Core Habitat through use of the North Access road during the  
1216 operations phase, which could result in permanent impacts to wildlife movement and  
1217 native wildlife nursery sites due to substantial increases in trucks traffic and associated  
1218 effects (increased noise, human presence, vibration) over the 25-year life of the Proposed  
1219 Project (lease period), or longer if an extension is later approved. In addition, the Habitat  
1220 Authority would like the Final EIR to consider ways to reduce traffic impacts during the  
1221 construction phase such that Catalina Avenue could be used exclusively during this  
1222 phase, completely avoiding use of the North Access Road. For example, ~~mitigation~~  
1223 Mitigation measure-Measure T-1c requires limits on traffic on Catalina Avenue to  
1224 mitigate for traffic impacts during the test drilling phase, and it may be possible to  
1225 similarly limit traffic during the construction phase in order to mitigate for significant  
1226 impacts, even if it means prolonging the construction period in order to accommodate the  
1227 reduced number of vehicles.

## 1228 5. Consider Reduced Number of Wells as an Alternative

1229 Please consider including an alternative that would reduce to 30 the maximum  
1230 number of wells that can be drilled. This will limit the time the Preserve is exposed  
1231 to the adverse impacts of drilling, re-drills and workovers, perhaps prompting wildlife  
1232 with generational memory of the pre-drilling conditions to return to the Core Habitat  
1233 area.

1234

## 1235 Section 7. Other CEQA Mandated Sections

1236 **7.2 Growth Inducing Impacts, 7.2.3 Precedent Setting**

1237 Section 15126.2 (d) of CEQA Guidelines requires that the EIR discuss the characteristic of a  
1238 Project which may encourage and facilitate other activities that could significantly affect the  
1239 environment, either individually or cumulatively. The DEIR explains that the Proposed  
1240 Project is not precedent-setting because the Whittier Zoning Ordinance allows for the  
1241 proposed use with a conditional use permit. However, the land is currently regulated by Los  
1242 Angeles County Proposition A funds which allows for uses of this nature only with  
1243 compensatory actions. Should the County and City work out an agreement to allow this  
1244 Proposed Project, a precedent for this activity will be set. The City owns other open space  
1245 properties purchased with Proposition A funds and without a conservation easement, as  
1246 recommended, or other surface restrictions in place over them, this Proposed Project could be  
1247 replicated elsewhere in the hills of Whittier. Given that there are significant impacts with this  
1248 Proposed Project, another oil operation elsewhere in the hills would have significant effects and significant cumulative effects – as well.

1250

1251 **Additional Measures**

1252 Additionally, due to the complexity of the measures with a Project of this large scale,  
1253 consideration should be given to requiring that Matrix Oil hires qualified consultants  
1254 including a biological consultant with the expertise to administer the mitigation monitoring  
1255 plan to ensure that all timelines and criteria are met. This consultant should be familiar with  
1256 CEQA and have experience administering mitigation and monitoring programs.

1257 The Habitat Authority manages its member agencies' properties with the assumption that  
1258 they will remain as undisturbed open space by investing its general fund resources ~~that to~~  
1259 support restoration, biological studies, volunteer coordination, ranger patrol, outdoor  
1260 education, administration and other Projects. To maximize the efficiency and effectiveness  
1261 of the Habitat Authority's efforts and to avoid future impacts to the ecological functioning of  
1262 the Puente Hills Preserve and the Puente-Chino Hills Wildlife Corridor, please consider ways  
1263 to avoid future surface development of City open space properties by placing conservation  
1264 easements over City-owned parcels, either through the CEQA process, **Conditional**  
1265 conditional Use-use Permit-permit, specific plan, General Plan amendment, or through some  
1266 other process

1267

1268

1269 Exhibits:

1270 A. Historic Development Analysis

1271 B. Most Suitable California Gnatcatcher Habitat

1272 C. Preserve Internal Buffers

1273 D. Reduced Buffered Habitat From Proposed Project

1274

1275