

## 4.2 Thematic Responses to Comments

The following thematic responses provide detailed information on specific environmental topics related to the proposed project and EIR. Thematic responses were prepared for topics frequently commented on during the 45-day public review period. The individual responses to comment letters provided in Section 4.3, Side-by-Side Responses to Comments, refer to the thematic responses in this section.

Thematic topics include the following:

- Coastal California Gnatcatcher
- Hermes Copper Butterfly
- Mountain Lion
- Quino Checkerspot Butterfly
- Santee MSCP Subarea Plan
- Western Spadefoot
- Wildlife Movement and Habitat Connectivity
- 2017 Scoping Plan
- Evacuation
- Fire Ignition and Risk
- Fire Protection and Safety
- Northern California Contrast

### 4.2.1 Coastal California Gnatcatcher

This thematic response addresses comments to the EIR regarding coastal California gnatcatcher (*Polioptila californica californica*), including the assessment of on-site habitat and populations, analysis of proposed project-related impacts, including impacts to U.S. Fish and Wildlife Service (USFWS)-designated Critical Habitat for this species, both direct and indirect/edge effects, and recommended mitigation measures.

#### **Status of Coastal California Gnatcatcher and the Draft Santee MSCP Subarea Plan**

Coastal California gnatcatcher is a federally threatened species, a California Species of Special Concern and a Draft Santee Multiple Species Conservation Program (MSCP) Covered Species. The City of Santee (City) is no longer a participant in the Natural Community Conservation Planning (NCCP) interim 4(d) process because they have already permitted disturbance of all of their allotted coastal sage scrub interim loss acres.

The majority of the project site is located within USFWS-designated Critical Habitat for coastal California gnatcatcher in the South San Diego County Unit, which consists of approximately

20,935 acres. The federal Endangered Species Act (FESA) provides for designation of Critical Habitat, defined in FESA Section 3(5)(A) as specific areas within the geographical range occupied by a species where physical or biological features “essential to the conservation of the species” are found and that “may require special management considerations or protection.” Critical Habitat may also include areas outside the current geographical area occupied by the species that are nonetheless “essential for the conservation of the species.” These designations are not precise and include both suitable habitat and unsuitable habitat and must be ground-truthed to verify the actual extent of suitable habitat to support both impact and conservation analyses. Coastal California gnatcatcher-occupied areas occur in suitable coastal sage scrub habitat throughout the Draft Santee MSCP Subarea Plan area, including a substantial population to be conserved in the southern portion of the Fanita Ranch Subunit of the Draft Santee MSCP Subarea Plan.

### **Focused Surveys and Modeled Habitat**

Focused presence and absence coastal California gnatcatcher surveys were conducted in 2005 and 2016 on the project site according to the USFWS’s Coastal California Gnatcatcher (*Polioptila californica californica*) Presence/Absence Survey Protocol (USFWS 1997), using the breeding season survey methods. Comments express concerns that the survey data are out of date. There is no CEQA requirement that places a time limit or expiration on data that can be used in a technical analysis to support a CEQA analysis, only that the best available information be used. In fact, having a dataset from 15 years and 4 years ago provides valuable baseline information for the status of species in a given location and can inform an impact analysis. Also please refer to the discussion of the impact analysis approach below under Impacts and Mitigation. During the 2016 focused survey, 39 coastal California gnatcatcher Use Areas were detected, with the majority located in the southern portion of the project site. The Biological Resources Technical Report (Appendix D) defines a coastal California gnatcatcher Use Area as a specific area of habitat that each coastal California gnatcatcher pair was observed utilizing (i.e., nesting and/or foraging in). As stated in Table 3-2, Suitable Habitat Models for Special-Status Wildlife Species Present or with Moderate Potential to Occur within the Project Area (including Off-site Areas), in the Biological Resources Technical Report, modeled habitat is based on the following vegetation communities: Diegan coastal sage scrub (including valley needlegrass grassland, baccharis-dominated, disturbed, non-native grassland, and fire recovered varieties). There are a total of 2,407.40 acres of USFWS-designated Critical Habitat for coastal California gnatcatcher on the project site. Approximately 1,471.40 acres of suitable coastal scrub habitat for coastal California gnatcatcher were identified in the focused field surveys.

### **Impacts and Mitigation**

Comments express concerns that off-site impacts to USFWS-designated Critical Habitat for coastal California gnatcatcher were not evaluated. In response to this comment, Biological Resources Technical Report Figure 2-1, USFWS-designated and proposed Critical Habitat within the Project

Area, has been revised to show the location of the surrounding USFWS-designated Critical Habitat within a 1-mile buffer around the project site. The impact analysis is primarily based on modeled habitat suitability rather than numbers of pairs or individuals, including California gnatcatcher Use Areas (that may not always be occupied from year-to-year). This was true for on-site and off-site impacts. Though it was not feasible to survey off-site parcels due to access issues, using a habitat-based approach, where all suitable habitat is assumed to be potentially occupied, is appropriate and does not alter the conclusions. All mitigation measures outlined to mitigate for California gnatcatcher impacts would apply to both on-site and off-site areas.

Because of the habitat-based approach, temporal changes in vegetation communities are actually more relevant to the impact analysis than numbers of individuals or pairs of a species in any given year. As noted in Appendix D, Biological Resources Technical Report, the most recent fire on the project site was the 2003 Cedar Fire, allowing the major upland communities on site, including scrub, chaparral, and grasslands (see EIR Table 4.3-1, Existing Vegetation Communities and Land Cover Types on the Project Site and Off-Site Improvement Areas), to fully recover since the original 2004 vegetation mapping following the 2003 fire. The breadth of the study period has allowed a pre-fire/post-fire/recovery perspective on the resources on site.

EIR Section 4.3.5, Project Impacts and Mitigation Measures, addresses both direct and indirect impacts to special-status wildlife species and to sensitive natural communities. Specifically, EIR Mitigation Measure BIO-1 (Preserve Management Plan) would provide in-perpetuity management of the Critical Habitat for coastal California gnatcatcher included in the Habitat Preserve and help assist in the conservation and recovery of this species. Furthermore, preconstruction surveys would be conducted prior to construction to ensure that direct impacts to this species would be avoided (see EIR Mitigation Measure BIO-14, Nesting Bird Survey). If the species is observed, restrictions would be implemented. As stated in EIR Table 4.3-20, Multiple Species Conservation Program Consistency Analysis, all clearing of suitable habitat would be outside of the nesting period as identified in the MSCP Plan area-specific management directives. EIR Mitigation Measure BIO-6, Land Use Adjacency Guidelines, would provide mitigation for potential permanent indirect impacts to species such as coastal California gnatcatcher through the use of noise-reducing berms or walls that would be constructed adjacent to commercial areas and any other uses that may introduce noise that could affect or interfere with wildlife utilization of the Habitat Preserve. Therefore, the mitigation provided in the EIR for direct and indirect impacts to special-status wildlife species and sensitive natural communities would also reduce impacts to the surrounding Critical Habitat areas to a less than significant level.

A comment states that the EIR fails to acknowledge that although the coastal California gnatcatcher prefers coastal sage scrub, they may also occur in other nearby plant communities. While it is accurate to say that the species may occur in other nearby plant communities, it is generally accepted that coastal California gnatcatcher are closely tied to coastal sage scrub

communities to meet their life history needs, especially for reproduction (USFWS 2010). Therefore, it is appropriate that the impact analysis focuses on coastal sage scrub at the primary habitat for the species. EIR Section 4.3.5.1, states that direct impacts to coastal California gnatcatcher would occur to 427.85 acres of suitable habitat and 14 Use Areas. Also stated in the EIR are the proposed project impacts occurring within Critical Habitat for coastal California gnatcatcher which total 987.58 acres. The EIR also states that only 399.19 acres of the Critical Habitat would be considered suitable habitat (i.e., coastal sage scrub and varieties) for this species. Impact determinations and mitigation are typically not strictly based on impacts to Critical Habitat as a whole because, due the large mapping scale for most Critical Habitat designations, not all designated Critical Habitat is actually suitable for, or occupied by, the species (as indicated by conducting protocol surveys, for example). Therefore, the EIR impact analysis for coastal California gnatcatcher included both Use Areas and suitable modeled habitat which are based on field surveys conducted specifically for this project and applied to the project site as a whole and to designated Critical Habitat. Furthermore, in response to the comment that coastal California gnatcatcher may also occur in other nearby plant communities, all impacts to sensitive upland and wetland vegetation communities would be mitigated to less than significant based on EIR Mitigation Measure BIO-1 (Preserve Management Plan) and Mitigation Measure BIO-15 (Wetlands Mitigation Plan). The mitigation provided by Mitigation Measure BIO-1, which would conserve 1,017.61 acres of existing suitable modeled habitat, 1,372.74 acres of coastal California gnatcatcher Critical Habitat, and 25 Use Areas, would provide other, non-coastal sage scrub habitat types for use by coastal California gnatcatcher.

A comment correctly states that several Use Areas do not occur within the suitable modeled habitat, as shown on Figure 5-5b in the Biological Resources Technical Report, Appendix D to the EIR. Figure 5-5b contained an error (i.e., a GIS query was left on, which filtered out some of the suitable modeled habitat shown on Figure 3-4) that has been revised to correctly show the suitable habitat areas on the project site. The error revision on Figure 5-5b of the Biological Resources Technical Report does not change any conclusions of the CEQA analysis.

A comment states that the EIR fails to use the best available science to analyze the ecological impacts of removing and fragmenting designated Critical Habitat for the coastal California gnatcatcher. The EIR acknowledges that there will be permanent habitat loss and some fragmentation to the designated Critical Habitat on the project site. However, the EIR describes how the proposed mitigation strategy would maintain the functions of both the existing suitable habitat included in the Habitat Preserve through a combination of preservation of existing resources (including 1,107.61 acres of suitable habitat for coastal California gnatcatcher), restoration and enhancement of currently unsuitable habitat, and long-term monitoring and adaptive management of resources, as well as habitat connectivity consistent with the generally accepted principles of wildlife movement and the Draft Santee MSCP Subarea Plan Guidelines.

As described in the Thematic Response – Wildlife Movement and Habitat Connectivity, studies conducted by Soulé and colleagues in the 1990s suggest that an intact 900-acre habitat block would be large enough to sustain commonly occurring species in the coastal San Diego region, even if habitat connectivity to off-site habitat areas were severely constrained. Supporting this, a Montebello Hills site is less than 500 acres and supports a thriving population of over 50 coastal California gnatcatcher pairs. Likewise, the West Coyote Hills site in Fullerton is around 600 acres and supports up to 70 pairs of coastal California gnatcatcher. Both sites are completely surrounded by dense urban landscapes and, unlike the project site, are effectively isolated habitat islands. Avian species, in particular, would have no trouble accessing the area due to the nearby large off-site open space areas, only needing to cross the Fanita Parkway and Cuyamaca Street extensions. Furthermore, the 900-acre habitat block would remain contiguous open space connected to other preserves within the vicinity. Please refer to Thematic Response – Wildlife Movement and Habitat Connectivity for further details. The in-perpetuity and active management of the Habitat Preserve, including the 900-acre habitat block, outlined in Appendix P, Preserve Management Plan, to the Biological Resources Technical Report (Appendix D) would prevent degradation of the 900-acre habitat block from edge effects.

Indirect impacts to coastal California gnatcatcher and other special-status wildlife species, including human activities from traffic, lighting, noise, domestic pets, pollutants, invasive weeds and increased fire frequency are addressed in the EIR and would be reduced to less than significant through Mitigation Measure BIO-1 (Preserve Management Plan), Mitigation Measure BIO-6 (Land Use Adjacency Guideline), Mitigation Measure BIO-7 (Stormwater Pollution Prevention Plan), Mitigation Measure BIO-9 (Habitat Preserve Protection), Mitigation Measure BIO-10 (Weed Control Treatment), Mitigation Measure BIO-20 (Wildlife Protection), Mitigation Measure BIO-21 (Fire Protection Plan, Appendix P1 of the EIR), and Mitigation Measure BIO-22 (Wildlife Corridor). A comment cites studies that found that bird species were negatively affected from road and traffic noise. However, as discussed in Dooling and Popper (2007), noise impacts on birds is highly species-specific, so it is difficult to generalize impacts to a particular bird species from studies on other species. It should also be noted that according to CEQA requirements, an evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible. With respect to domestic pets, Section 4.2.4, Predator/Pest Control, of the Preserve Management Plan (Appendix P to the Biological Resources Technical Report [Appendix D]) includes management strategies conducted by the Habitat Preserve manager for domestic animal control within the Habitat Preserve, thereby reducing impacts from free-roaming dogs and cats on the wildlife species, including coastal California gnatcatcher, within the Habitat Preserve.

Comments were received regarding an increase in fire frequency due to the proposed project. Fire frequency is expected to decrease with project implementation (see the Fire Protection Plan, Appendix P1 of the EIR). Additionally, Section 4.6 of the Preserve Management Plan (Appendix P to the Biological Resources Technical Report [Appendix D]) includes adaptive management

strategies for revegetation of the Habitat Preserve after a fire, including suitable coastal California gnatcatcher habitat.

## References

Dooling, R. J., and A. N. Popper. 2007. The Effects of Highway Noise on Birds. Prepared for The California Department of Transportation Division of Environmental Analysis. ResearchGate Pub. 228381219. October 2007.

USFWS (U.S. Fish and Wildlife Service). 1997. Coastal California Gnatcatcher (*Polioptila californica californica*) Presence/Absence Survey Protocol. July 28.

USFWS. 2010. Coastal California Gnatcatcher (*Polioptila californica californica*) 5-year Review: Summary and Evaluation. U.S. Fish and Wildlife Service, Carlsbad Fish and Wildlife Office, September 29.

### 4.2.2 Hermes Copper Butterfly

This thematic response addresses comments to the EIR regarding Hermes copper butterfly (*Lycaena hermes*), including the assessment of on-site habitat and populations, analysis of proposed project-related impacts, both direct and indirect/edge effects, and recommended mitigation measures.

#### Status of Hermes Copper Butterfly and the Draft Santee MSCP Subarea Plan

Hermes copper butterfly is a federal Candidate species for listing and is proposed as a Covered Species under the Draft Santee MSCP Subarea Plan; it is not covered under the MSCP Plan (City of San Diego 1998). In January 2020, after issuance of the Notice of Preparation of the EIR for the proposed project (November 2018), the USFWS proposed to list the Hermes copper butterfly as a threatened species under the FESA and to designate 35,211 acres of Critical Habitat in San Diego County (County) essential to the survival and recovery of this species (85 FR 1018–1050).

The project's mitigation program would include preservation of existing resources, restoration and enhancement of currently unsuitable habitat, and long-term monitoring and adaptive management of resources, including threat reduction which would result in the long-term persistence of this species within the Habitat Preserve. This mitigation is independent of, and will apply whether the Draft Santee MSCP Subarea Plan is approved or not. If that plan is not approved, the proposed project will comply with the federal ESA under Section 7 or Section 10.

#### Habitat Assessments and Focused Surveys

Comments state that the Draft EIR underestimates the impacts to Hermes copper butterfly and its proposed Critical Habitat. The Biological Resources Technical Report (Appendix D) states that a total of 2,426.06 acres of proposed USFWS Critical Habitat for Hermes copper butterfly occurs

on the project site. However, Critical Habitat designations may be imprecise due to the typically large mapping scales and usually include both suitable habitat and unsuitable habitat that, without ground-truthing, can overestimate the actual suitable habitat within an area, including many acres of unsuitable habitat (e.g., for Hermes copper butterfly, areas where the host plants redberry buckthorn [*Rhamnus crocea*] and/or California buckwheat [*Eriogonum fasciculatum*] are not present). As discussed in Section 3.2.12 of the Biological Resources Technical Report, the impact analysis included a breakdown of suitability within the proposed USFWS Critical Habitat mapping based on field surveys for the Hermes copper butterfly host plant species conducted specifically for this project. This method was based on focused surveys in 2004 and protocol focused surveys in 2014 and 2016 using the only available protocol (County Guidelines for Hermes Copper Butterfly [*Lycaena hermes*]; 2010). Within the project boundaries, all redberry buckthorn within 15 feet of California buckwheat was mapped as potential habitat and surveyed (California buckwheat itself is ubiquitous in coastal sage scrub and alone is not a useful parameter for mapping potential habitat). Based on the habitat assessment, approximately 148 acres of the project site were determined to contain potential habitat for Hermes copper butterfly and surveys were initiated. However, due to discussions with USFWS staff regarding drought conditions, and the general lack of a 2014 butterfly flight season, protocol-level adult surveys were not completed in 2014. Surveys were conducted in 2016 and consisted of four rounds of surveys from May to July, conducted per the County guidelines. To increase the likelihood of observing Hermes copper butterfly, surveys were conducted when perennial species were showing new growth (i.e., redberry buckthorn) and in bloom (i.e., California buckwheat). Surveys were again performed in spring 2020 using the same County survey guidelines (2010) and covering the same mapped habitat areas. In total, there have been over 87 person-days spent surveying for Hermes copper butterfly.

Hermes copper butterfly was incidentally observed on the project site in 2003 and 2005, and observed during a protocol survey in 2004, but the 2016 and 2020 protocol surveys yielded negative results, with no observations of the species (see Biological Resources Technical Report, Section 3.1.12, Hermes Copper Butterfly). The City therefore believes that Hermes copper has been extirpated from the project site based on the two current, negative focused protocol surveys for the species. Host and nectar plants are perennial shrubs and exhibited growth, flowering, and fruiting in both 2016 and 2020 so it is presumed that weather and drought did not affect their ability to support the butterfly. It is likely that the 2003 Cedar Fire had a pronounced effect on the species, or some other unknown factor, such as disease, is affecting the species as a whole. The USFWS has indicated that focused survey results across the region have been poor over the last few years despite apparently good rainfall and growth patterns for their host plants, suggesting a more regional decline and broader threat to the species than just local habitat loss. Regardless, 2 years of negative surveys reduces the site's value as Critical Habitat, and certainly does not support designation of the entire site as proposed.

## Impacts and Mitigation

There would be 974.11 acres of total impacts within the proposed Critical Habitat for Hermes copper butterfly, of which 52.98 acres would be considered potentially suitable habitat for this species based on the presence of redberry buckthorn. These 52.98 acres would be impacted by proposed development; however, it is noted in Table 5-4a in the Biological Resources Technical Report (Appendix D) that there is a total of 148.44 acres of suitable habitat on the project site, of which 95.46 acres of suitable habitat would not be impacted, and of which 94.77 acres would be preserved under Mitigation Measure BIO-1 (Preserve Management Plan). The City disagrees with the comments that the project underestimates the impacts to the species, to suitable habitat, or to proposed Critical Habitat.

Comments state that the mitigation proposed is not adequate. Mitigation is described in Table 5-8 and Section 6.3 of the Biological Resources Technical Report. The primary mitigation strategy includes Mitigation Measure BIO-1 (Preserve Management Plan) and Mitigation Measure BIO-18 (Restoration of Suitable Habitat for Quino Checkerspot Butterfly and Hermes Copper Butterfly). Other mitigation measures would be implemented that more generally would enhance and protect habitat for any future Hermes copper butterfly populations from the effects of fragmentation, potential project edge effects, and recreational activities, including Mitigation Measure BIO-6 (Land Use Adjacency Guidelines), Mitigation Measure BIO-9 (Habitat Preserve Protection), Mitigation Measure BIO-10 (Weed Control Treatments), and Mitigation Measure BIO-11 (Argentine Ant Control and Monitoring). Preserved and managed habitat within the Habitat Preserve would be connected to each other by patches of suitable habitat and host plant species. This network would occur within the 900-acre Habitat Preserve block in the southern portion of the project site, through the central corridor (Primary 2 shown on EIR Figure 4.3-9, Local Wildlife Corridors), and along the western and northern corridors which bolster and buffer preserved open space to the north and west. Please refer to Thematic Response – Wildlife Movement and Habitat Connectivity for further details.

Comments state that the project will increase wildlife frequency. Fire is a noted threat issue discussed in the Hermes copper butterfly listing proposal. The species' larvae diapauses within the structure of the larval host plant so when there is a fire, it burns both the plant and larvae, and it can take many years for Hermes copper butterfly to recolonize burned areas. While it has been 17 years since the 2003 Cedar Fire and the host plants have recovered, the two recent protocol surveys in 2014 and 2016 failed to detect the species.

EIR Section 4.18.5.2, Threshold 2: Pollutant Concentrations, states that when properly implemented on an ongoing basis, the fire protection strategies proposed in the proposed project's Fire Protection Plan, Appendix P1 of the EIR, would significantly reduce the potential fire threat to the development. The provided fire modification zones (FMZs) are designed to not only minimize wildfire encroaching upon the community, but to minimize the likelihood that an ignition from on-site spreads into the Habitat Preserve. The FMZs would provide a buffer of reduced fuel densities, lack of fuel continuity,



and a reduction in the receptiveness of the landscape to ignition and fire spread. In addition, a Fire Protection Plan (Mitigation Measure BIO-21, Appendix P1 of the EIR) would be implemented and would reduce the chance of a severe fire on the scale of the 2003 Cedar Fire. The City therefore disagrees with the comment that the project will increase wildfire frequency and severity.

Comments question the reliance on a multi-species preserve for Hermes copper butterfly, such as would occur with implementation of the Preserve Management Plan (Mitigation Measure BIO-1). The City disagrees with this assertion. Because of the large suite and diversity of species present on site and the diverse vegetation communities present, a multi-species preserve is appropriate. Healthy habitats support a diverse assemblage of species. The proposed project would meet or exceed the required mitigation needs for each species and would implement restoration, enhancements, and management as discussed previously to increase the value of the overall Habitat Preserve.

## References

- County of San Diego. 2010. “Attachment B, County of San Diego Guidelines for Hermes Copper (*Lycaena hermes*).” Report Format and Content Requirements, Biological Resources.
- U.S. Fish and Wildlife Service (USFWS). 2020. Endangered and Threatened Wildlife and Plants: Threatened Status for the Hermes Copper Butterfly With 4(d) Rule and Designation of Critical Habitat; Proposed Rule. 85 FR 1018-1050.

### 4.2.3 Mountain Lion

This thematic response addresses comments to the EIR regarding the mountain lion (*Puma concolor*), including the assessment of potential on-site foraging habitat, occurrence on the project site, analysis of proposed project-related impacts, and recommended mitigation measures.

Comments state that the EIR inadequately analyzes and mitigates for impacts to the mountain lion, that there have been mountain lion sightings in the County, that the Biological Resources Technical Report (Appendix D) does not identify mountain lion as a special-status species, and that this species is protected under the California Endangered Species Act (CESA).

With the passage of Proposition 117 in 1990, mountain lion became a “specially protected mammal” under the California Fish and Game Code making mountain lion hunting illegal in California. This status and other statutes prohibit CDFW from recommending a hunting season for lions, and it is illegal to take, injure, possess, transport, import, or sell any mountain lion or part of a mountain lion. Mountain lions may be killed only (1) if a depredation permit is issued to take a specific lion killing livestock or pets, (2) to preserve public safety, or (3) to protect listed bighorn sheep. Therefore, if a project is planned in an area that mountain lion occurs, an applicant must design the project to avoid take. Although mountain lion was recorded on the project site based on

sign (i.e., scat and no individuals were observed during the wildlife corridor camera study), take directly attributable to the proposed project is not anticipated with project implementation.

The Habitat Preserve design would facilitate continued movement by wildlife through the project site, including occasional mountain lions, and maintain connectivity to surrounding preserves. While mountain lions may occasionally hunt on the project site, the site is not considered to support major or critical populations of this species, nor does it support suitable denning habitat. Foraging habitat for this species (i.e., habitat supporting mule deer [*Odocoileus hemionus*]) would be protected within the Habitat Preserve through the Preserve Management Plan (Appendix P to the Biological Resources Technical Report). As stated in Section 5.4 of the Biological Resources Technical Report, cumulative impacts to this species would be reduced to a less than significant level due to the project-specific mitigation program providing wildlife movement corridors (Mitigation Measure BIO-22) and through establishment of the Habitat Preserve (Mitigation Measure BIO-1), which would conserve suitable habitat in a configuration that preserves genetic exchange and species viability.

Please refer to Thematic Response – Wildlife Movement and Habitat Connectivity for further discussion.

In addition to its "specially protected mammal" status under the California Fish and Game Code, mountain lion was petitioned for listing on July 16, 2019 under CESA. The filing of that petition only initiates a CDFW review process to determine if there is enough evidence to warrant elevation to the next step of review. The species was designated as a Candidate on April 21, 2020, meaning that it satisfied criteria for additional review, thus providing it with the same interim protections as a listed species until a decision is made. These dates were after the issuance of the Notice of Preparation (NOP) for the EIR, which was issued on November 10, 2018. Therefore, the EIR did not consider mountain lion as a Candidate species. However, as noted above, the status of mountain lion as a "specially protected mammal" was addressed in the EIR, including measures that mitigate any impacts and that also provide take avoidance.

A July 19, 2020 review of the CDFW Special Animals List reveals that only the Yuma mountain lion is considered a Species of Special Concern (CDFW 2020; <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109406&inline>) and a review of the CDFW Mountain Lion web page (CDFW 2018; <https://wildlife.ca.gov/Conservation/Mammals/Mountain-Lion/FAQ#359951240-are-mountains-lions-listed-as-a-threatened-or-endangered-species>) FAQ page states, "Mountain lions are not threatened nor endangered in California. In fact, the lion population is relatively high in California and their numbers appear to be stable. Mountain lions are legally classified as 'specially protected species.' This has nothing to do with their relative abundance and does not imply that they are rare." That said, a revised Figure 5-8 in the Biological Resources Technical Report shows a representative male lion territory of around 73,000 acres. Females have home ranges that are about half of that. A project the size of the proposed project is small by

comparison to the home range of either gender. Even considering the female's home range, the proposed project would only cover approximately 2.6 percent of a female territory. As a result, because of the population abundance of this species, small area of impact, only occasional occurrence on site, and no denning opportunities, impacts would be less than significant.

## References

CDFW (California Department of Fish and Wildlife). 2018. "Commonly Asked Questions About Mountain Lions." Wildlife Investigations Lab. Rancho Cordova, California. July.

CDFW. 2020. "Special Animals List." Sacramento, California: CDFW, Biogeographic Data Branch. July 2017. Accessed August 2020. <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109406&inline>.

### 4.2.4 Quino Checkerspot Butterfly

This thematic response addresses comments to the EIR regarding Quino checkerspot butterfly, including the assessment of on-site habitat and populations, analysis of proposed project-related impacts, both direct and indirect/edge effects, and recommended mitigation measures.

#### Status of Quino Checkerspot Butterfly and the Draft Santee MSCP Subarea Plan

In January 1997, the USFWS issued a final rule listing the Quino checkerspot butterfly as an endangered species. Quino checkerspot butterfly is considered a Covered Species under the Draft Santee MSCP Subarea Plan but is not covered under the MSCP Plan (City of San Diego 1998). On June 29, 2020, a petition to list the Quino checkerspot butterfly was submitted to the California Fish and Game Commission (Commission) for consideration. If the Commission agrees that there is enough support within the petition to warrant consideration, then it will be elevated to Candidate status, enjoying listed species protections, while CDFW reviews and provides their input. Once they provide their input, the Commission then votes to determine final status—either granting it listed species status as threatened or endangered or denying protected status. This process is estimated to take around 2 years to complete.

Impacts to Quino checkerspot butterfly will either be covered through the Draft Santee MSCP Subarea Plan, or if the proposed project precedes the Draft Santee MSCP Subarea Plan, take for a state and/or federal listed species will utilize standard state and federal incidental take permit processes as applicable. The proposed project's mitigation program would include preservation of existing resources, restoration and enhancement of currently unsuitable habitat, and long-term monitoring and adaptive management of resources, including threat reduction which would result in the long-term persistence of this species within the Habitat Preserve. This mitigation is independent of, and will apply whether the Draft Santee MSCP Subarea Plan is approved or not.

## Habitat Assessments and Focused Surveys

A comment suggests that drought conditions years prior to and in 2016 may have precluded detections of Quino checkerspot butterfly and that subsequent surveys, if positive, could have demonstrated the species' ability to both recolonize and utilize the project site. The comment suggests this could indicate the site's suitability as important, connected, and likely core habitat for Quino checkerspot butterfly.

Section 3.2.7 of the Biological Resources Technical Report states that focused surveys for Quino checkerspot butterfly were conducted in 2004, 2005, and 2016, in accordance with the USFWS 2002 and modified and approved 2016 protocols and host plant mapping occurred in 2004, 2005, 2016 and 2017 according to the USFWS 2002 and 2014 protocol. In total, over 413 person-days were spent searching for Quino checkerspot butterfly. Section 4.5.3.4 of the Biological Resources Technical Report (Appendix D) states that the 2004 survey failed to detect Quino checkerspot butterfly, but the 2005 survey resulted in a single Quino checkerspot butterfly observation for approximately 30 seconds. This observation was made on March 18, 2005, at the top of a knoll toward the center of the project site. This observation was made under windy Santa Ana conditions while a number of butterfly species were flying northeast to southwest. Only that one Quino checkerspot butterfly was detected on site in 2005 despite repeated extra visits to the observation location and other high potential locations in the vicinity. No Quino checkerspot butterfly have been observed on the project site since 2005. Focused surveys were conducted for the project site in 2016 and resulted in no sightings of Quino checkerspot butterfly. The habitat assessments also did not result in the detection of any Quino checkerspot butterfly individuals.

The project applicant asked the USFWS if surveys should be performed in 2017 and received a response indicating that the USFWS had no recommendations for additional studies in 2017 (Goebel, pers. comm. 2017). It is assumed that if the USFWS thought that the 2016 year was poor for adequate surveys at that time, then they would have recommended surveys in 2017X-a high rainfall year. Furthermore, the 2016 flight season survey was approved by the USFWS based on the review of the USFWS website reporting observations of Quino checkerspot butterfly in other locations in the County and on the observation of other co-occurring butterfly species; the conditions and timing therefore were considered appropriate for the survey. Additionally, the annual precipitation in 2016 was 13.32 inches, which was above average of 12.11 inches calculated as an annual average from 1971 to 2000 in San Diego (MCAS Miramar Station) (NRCS 2020). Further, although surveys at the project site were negative in 2016, there were other Quino checkerspot butterfly observations throughout its range in 2016 which suggests that 2016 was an adequate year for Quino checkerspot butterfly surveys (see Thematic Response Figure 1, USFWS Quino Checkerspot Butterfly 2016 Observations). These locations include the San Vicente Reservoir shoreline approximately 2.5 miles to the northeast, a number of locations in the Lower Otay Lake area, Lake Riverside vicinity, and a few locations on the Cahuilla Indian Reservation

in Riverside County (see Thematic Response Figure 1). Therefore, based on the negative survey results in 2016 on the project site, but positive results elsewhere, the City disagrees with the premise of the comment that the absence of Quino checkerspot butterfly individuals on the project site in 2016 could have been due to drought conditions. The absence of the species in 2016 is consistent with the results of the 2004 and 2005 surveys with the exception of one transient detection in 2005.

## Impacts and Mitigation

Despite the generally negative surveys results in 2004, 2005, and 2016, the proposed project nonetheless would mitigate for impacts to suitable habitat for Quino checkerspot butterfly. In addition to Mitigation Measure BIO-1 (Preserve Management Plan), a key component of the mitigation strategy, would be implemented along with Mitigation Measure BIO-18 (Restoration of Suitable Habitat For Quino Checkerspot Butterfly and Hermes Copper Butterfly) which would enhance existing suitable habitat within the Habitat Preserve and establish additional suitable habitat so that Quino checkerspot butterfly may occupy the Habitat Preserve in the future. The mitigation strategy for Quino checkerspot butterfly is described in more detail below.

The City disagrees that the proposed project is a Core Quino checkerspot butterfly population, as suggested in a comment, and as stated in the 2020 Center for Biological Diversity petition, based on the lack of USFWS-designated Critical Habitat for this species on the project site (USFWS 2009), being outside a Final Recovery Unit (USFWS 2003), due to negative focused surveys within the proposed project conducted in 2004 and 2016, the current poor quality of habitat and declining state without management, and only the single transient observation on a single day in 2005. The area is described as the “Fanita (39)” Non-Core Occurrence Complex on Figure 4, Table 1 of the March 2019 Draft Amendment Recovery Plan for Quino checkerspot butterfly (*Euphydryas editha quino*). The Draft Amendment Recovery Plan defines “Core Occurrence Complexes,” thus, “the largest ones are termed “Core Occurrence Complexes” and [are believed to] represent current [or former] population density centers. Occurrence complexes represent current short-term documented local occupancy, probably within the greater distribution of extant metapopulations. Occurrence complexes are mapped using 1 km (0.6 mi) movement radii. Occurrences within approximately 2 km (1.2 mi) of each other are considered part of the same complex . . .” There is no definition provided for “Non-Core” so it must be presumed that Non-Core areas do not meet the Core definition, though the importance of these areas for recovery is not known. Based on USFWS-provided GIS data and Figure 4 of the Draft Recovery Amendment (USFWS 2019), a 1 kilometer buffer applied to the 2005 Fanita Quino checkerspot butterfly location does not overlap with any other Quino checkerspot butterfly and only partially overlaps the closest location’s 1 kilometer buffer on MCAS Miramar, meaning that the 2005 location is almost 2 kilometers from the nearest location and thus would not meet the USFWS’ definition of a Core Occurrence Area. Delisting Recovery Criteria hinges in part on at least 80 percent of the

Non-Core Occurrence Complexes among Core Occurrence Complexes supporting populations that demonstrate reproduction in the field for at least 4 years prior to delisting. So, it appears that the driver in identifying the Fanita Non-Core Occurrence Complex is not defined and is a hopeful pathway forward to delisting, based on a single occurrence record. Miramar (40) Occurrence Complex is the closest “Core” area to Fanita (39) and the closest record within that complex to Fanita is at least 4.5 kilometers to the west. The entire comment hinges on the presence of one sighting in the last 15 years, despite over 400 person-days of survey effort, within an undefined Non-Core area that is at least 4.5 kilometers from the closest Core area record.

The final revised Critical Habitat rule (USFWS 2009; 74 FR 28776), defines a Core Occurrence Complex as an area where at least two of the following criteria apply: (1) 50 or more adults have been observed during a single survey; (2) immature life stages have been recorded; and (3) the geographic area within the occurrence complex (i.e., within 0.6 mile (1 kilometer) of subspecies occurrences) is greater than 1,290 acres (522 hectares). The City disagrees that the proposed project is a Core Occurrence Complex as defined by USFWS, or a Core butterfly population as stated in a comment, due to the following: 50 or more adults were not reported during a single survey at least once (or in aggregate); immature life history stages were not recorded; only one single-day transient observation was made in 2005, while survey results were negative in 2004 and 2016; and we would not consider the geographic area to be within a metapopulation.

With regard to adjacent habitat/connectivity, per Mitigation Measure BIO-22 (Wildlife Corridor), the project design provides for a primary wildlife corridor in the Habitat Preserve through the north-central portion, northern boundary, and western boundary of the proposed project, with a minimum width of 1,150 feet (Figure 5-7a of the Biological Resources Technical Report). The interior and perimeter wildlife corridors are adequately sized to convey Quino checkerspot butterfly. In addition, the perimeter wildlife corridor areas abut adjacent suitable and protected habitat that would be considered occupiable and, indeed, is occupied north and west of the project site. The Habitat Preserve provides additional habitat to bolster these off-site preserved areas and as a buffer between the development and those preserved areas. Quino checkerspot butterflies are capable of flying across roadways, vegetation, and buildings to get from one habitat patch to another. It was noted that when Quino checkerspot butterflies were plentiful, they would often be seen flying en masse across large roadways in southern San Diego County. Therefore, the landscape-scale habitat connections for regional wildlife movement would not be substantially affected. Please refer to Thematic Response – Wildlife Movement and Habitat Connectivity for further details.

With respect to commenter’s concerns about potential habitat fragmentation of Quino checkerspot butterfly habitat, any development within a natural landscape causes fragmentation. However, in order for there to be fragmentation of a species’ habitat you first need to determine that it is present. Practically, the City considers the project site to be unoccupied due to the extent of non-native

grasses and other weeds and a thick duff layer that hides host plants over much of the site. Nonetheless, due to continued concerns of the wildlife agencies, the project assumes that there is potential for Quino checkerspot butterfly to occur on site in the future and balances development with a large 900-acre block of habitat in the southern portion of the project site which includes potentially suitable habitat for Quino checkerspot butterfly. Wildlife corridors are provided throughout the project site and along the edges that are capable of conveying and providing live-in habitat and bolster and buffer existing preserved lands to the north and west, as described above.

Lands proposed for the Habitat Preserve currently include 35 miles of trails that receive much illegal hiking, free-range pet walking, biking, motorcycle, and vehicle off-road access and new trail pioneering despite the applicant's attempts to dissuade these activities. Once the project is approved, these trails will be reduced to select trails that remove duplicates and pull trails off of key ridgelines and hilltops potentially suitable for Quino checkerspot butterfly. The final project design includes 10.52 acres of trails (4.52 of existing trails and 6 acres of created trails) within the Habitat Preserve, and closes and restores 34.31 acres of existing trails (see Chapter 5 of the Biological Resources Technical Report for more analysis of indirect effects). Access to trails within the Habitat Preserve would only occur during the day, lighting would be directed to the development areas and away from the Habitat Preserve, and lighting along Streets "V" and "W" would be limited to emergency push-button and timed lighting. In addition, potentially suitable habitat for Quino checkerspot butterfly would be enhanced through long-term, in-perpetuity management and would be capable of supporting Quino checkerspot butterfly populations in the future. Mitigation Measure BIO-18 (Restoration of Suitable Habitat For Quino Checkerspot Butterfly and Hermes Copper Butterfly) includes a combination of in-perpetuity management of the Habitat Preserve that would focus on removal of non-native grasses, weedy material, and duff layers and the supplemental planting of host plant species so that habitat is more suitable for Quino checkerspot butterfly. In addition to Mitigation Measure BIO-1 (Preserve Management Plan) and Mitigation Measure BIO-18, other mitigation measures would be implemented that would more generally enhance and protect habitat for future Quino checkerspot butterfly populations from the effects of fragmentation, potential project edge effects, and recreational activities, including Mitigation Measure BIO-6 (Land Use Adjacency Guidelines), Mitigation Measure BIO-9 (Habitat Preserve Protection), Mitigation Measure BIO-10 (Weed Control Treatments), and Mitigation Measure BIO-11 (Argentine Ant Control and Monitoring).

A comment noted that there is no evidence that restoration efforts on such disturbed lands will be effective in sustaining Quino checkerspot butterfly occupancy. The lands on the project site meet USFWS Survey protocol criteria for surveyable habitat in their current state; however, project biologists have observed that over the past nearly 17 years since the devastating 2003 Cedar Fire on site, the vegetation communities have regenerated, but are still considerably weedy. Where abundant Quino checkerspot butterfly host plants were once apparent, they are now mostly hidden by dense non-native grasses, weeds, and a thick mat of duff. There is comparatively little new

restoration proposed, and where it would occur is on temporary impact areas, restored trails, and disturbed and ruderal areas. Most of the habitat enhancement efforts would involve restoring vernal pools including the interstitial mound areas, systematically removing weedy growth and thick duff layers, and seeding with appropriate larval host plant species. The goal is to return the habitat to suitable Quino checkerspot butterfly habitat so that it functions as the USFWS Recovery Plan desires if the species colonizes the site in the future. More detail is provided in Appendix P (Preserve Management Plan), Appendix Q (Upland Restoration Plan), and Appendix R (Vernal Pool Restoration Plan) of the Biological Resources Technical Report (Appendix D).

Commenters question the ability for corridors to convey Quino checkerspot as they are inhibited by barriers, such as high walls, highways, and extensive patches of housing and adult Quino checkerspot butterfly dispersing into inappropriate habitat, such as built environments. The points that are raised are the opinion of the referenced individuals regarding another project and do not reference the EIR for the proposed project. With respect to regional landscape-scale habitat connectivity and movement, please refer to the discussion above. Also, please refer to Thematic Response – Wildlife Movement and Habitat Connectivity for further details. With respect to potential internal or local barriers to movement or dispersal, the Biological Resources Technical Report does analyze effects to butterflies, stating “Adult butterflies also would be at risk of habitat fragmentation and isolation, and of vehicle collisions when dispersing” (see Section 5.2.3, Special-Status Wildlife Species of the Biological Resources Technical Report). There are no highways, walls, or extensive patches of inappropriate habitat (not defined in the comment) that Quino checkerspot butterflies would have to cross to use the Habitat Preserve wildlife corridors. The corridors include clear and direct broad paths through the development and along the western and northern boundaries of the project site where they abut protected open space, as described above. Streets “V” and “W,” which would bisect the central wildlife corridor (Primary 2 in EIR Figure 4.3.-9, Local Wildlife Corridors), would include road signs, a 25 mph speed limit, speed bumps, or other traffic-calming devices to allow wildlife to cross more safely (Mitigation Measure BIO-20). Further, there is direct connectivity for a winged species such the butterfly to the 900-acre Habitat Preserve block that is connected to lands to the west by flying over the proposed Fanita Parkway extension and Santee Lakes settling ponds. As noted above, Quino checkerspot butterflies are capable of flying across roadways to get from one habitat patch to another.

Road signs, speed bumps, or other traffic-calming devices shall be employed along the north-central collector road to allow these species to cross more safely (Mitigation Measure BIO-20). Finally, comments question the ability of wildlife overpasses to convey butterflies. The analysis of impacts to this species do not rely upon wildlife overpasses to convey butterflies.

Comments question the reliance on a multi-species preserve for Quino checkerspot butterfly, such as would occur with implementation of the Preserve Management Plan (Mitigation Measure BIO-1). The City disagrees with this assertion. Because of the large suite and diversity of species present

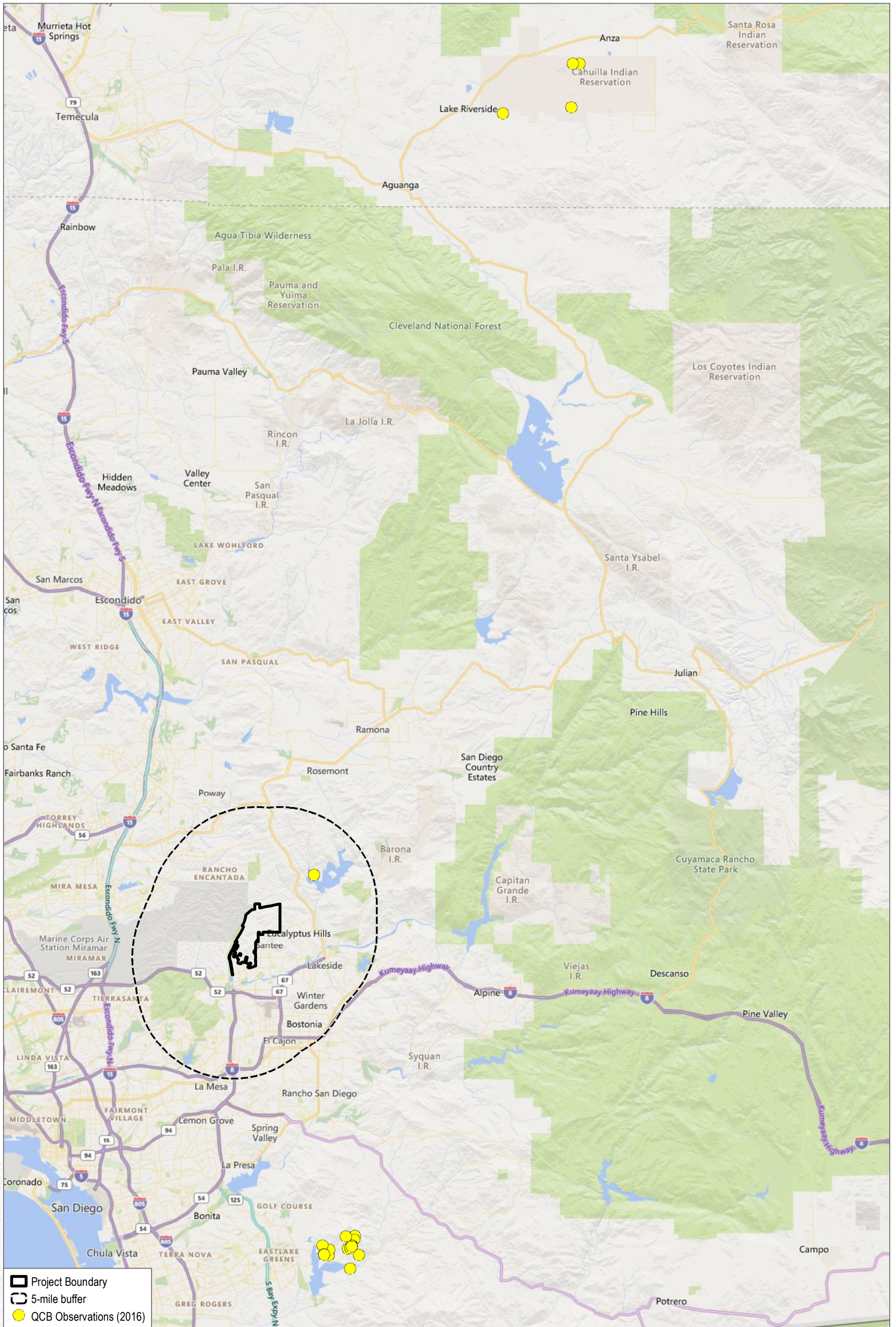


on site and the diverse vegetation communities present, a multi-species preserve is appropriate. Healthy habitats support a diverse assemblage of species. The proposed project would meet or exceed the required mitigation needs for each species and would implement restoration, enhancements, and management as discussed previously to increase the value of the overall Habitat Preserve.

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SOURCE: USFWS 2020; SANGIS 2020

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#### 4.2.5 Santee MSCP Subarea Plan

This thematic response addresses comments to the EIR regarding the MSCP as it relates to the permitting and project design of the proposed project. The Draft Santee MSCP Subarea Plan is referred to in the EIR numerous times, and generated questions and comments regarding how the project will obtain authorizations to impact state- or federally listed species and their habitats without an approved final Santee MSCP Subarea Plan. Therefore, a discussion of the conservation planning history of the proposed project is provided for context. This thematic response also addresses comments expressing concern that the EIR relies on a flawed statement of project objectives because compliance with the Draft Santee MSCP Subarea Plan is one of the objectives. And lastly, this thematic response includes an explanation of the project's consistency with the overarching MSCP Plan and the identification of project-specific mitigation measures for impacts to covered and not covered species under the MSCP Plan (i.e., western spadefoot [*Spea hammondi*], Quino checkerspot butterfly, and Hermes copper butterfly).

#### Origin and Status of Draft Santee MSCP Subarea Plan

The MSCP Plan is a regional habitat conservation plan encompassing cities and unincorporated San Diego County. It was developed from 1993 to 1998, initially to address the listing of the coastal California gnatcatcher, and was expanded to protect a total of 85 species. The MSCP Plan and associated EIR/EIS were approved in August 1998 and outlined a comprehensive regional habitat preserve system that established minimum conservation and management requirements for identified species. The geographical area of the MSCP includes the southern half of the County west of the mountains, including the unincorporated area and the Cities of San Diego, Chula Vista, Santee, El Cajon, and La Mesa. The MSCP was developed pursuant to and consistent with the State of California Natural Community Conservation Planning (NCCP) Act Process Guidelines (California Fish and Game Code, Sections 2800 et seq.), as well as the USFWS Habitat Conservation Plan (HCP) Manual (ESA Section 10). The NCCP requires a "Conservation Standard" versus merely mitigating significant effects, meaning that jurisdictions with NCCP plans must work to actively conserve Covered Species to the point that protection would not be needed, as opposed to a lesser standard of "avoiding extinction."

The MSCP Plan (1998) included the proposed project site as a hardline (its development and open space footprint were pre-authorized), and since then, subsequent owners of the property have proposed their own projects while largely adhering to the original hardline.

Concurrently, the City of Santee amended its General Plan to require that future development within the City be consistent with the MSCP Plan and the Draft Santee MSCP Subarea Plan. The development bubbles included in the Multi-Habitat Planning Area (MHPA) map that is part of the 1998 MSCP Plan impacted approximately 1,224 acres, including 1,140 acres of habitat, 18 coastal California gnatcatcher pairs, 22 western spadefoot locations, 58 acres of Hermes copper butterfly

habitat, and 53 vernal pools and road ruts, 43 of which supported San Diego fairy shrimp (*Branchinecta sandiegonensis*). Therefore, the proposed project footprint is less impactful and the Habitat Preserve is more conservative than the development bubbles shown in the original 1998 MHPA map.

The Habitat Preserve, provided under EIR Mitigation Measure BIO-1, was designed to meet or exceed CDFW's Natural Communities Conservation Planning program and federal Habitat Conservation Plan (NCCP/HCP) conservation standard and is consistent with the Design Criteria for Linkages and Corridors (Attachment H) in the approved South County MSCP Subarea Plan Biological Mitigation Ordinance (BMO). The BMO Design Criteria for Linkages and Corridors contains discrete standards for the length and width of wildlife movement areas, as well as other required features to protect the biological value of linkages and corridors such as maintaining lines of sight and vegetative cover. The Habitat Preserve design is also consistent with the criteria listed in the MSCP General Preserve Design "a through e" (City of San Diego 1998). The Habitat Preserve design process was informed by wildlife movement field studies intended to ensure ease of movement for wide-ranging species, such as mule deer, and would contain an approximately 900-acre unfragmented habitat block, connected to other preserves and managed open space within the vicinity, generally by habitat linkages 1,000 feet or more in width.

### **Critical Habitat and Habitat Conservation Planning**

Comments have been raised about USFWS-designed Critical Habitat for species known to occur, historically and currently, on the project site. The federal Endangered Species Act (FESA) provides for designation of Critical Habitat, defined in FESA Section 3(5)(A) as specific areas within the geographical range occupied by a species where physical or biological features "essential to the conservation of the species" are found and that "may require special management considerations or protection." If species are adequately conserved by such mechanisms as HCPs (which once approved the Draft Santee MSCP Subarea Plan would qualify as an HCP), USFWS-designated Critical Habitat is normally considered adequately protected, and Section 7 Consultations result in No Jeopardy or Adverse Modification findings.

The majority of the project site is within USFWS-designated Critical Habitat for coastal California gnatcatcher in the South San Diego County Unit, which consists of approximately 20,935 acres designated after the approval of the 1998 MSCP Plan. Critical Habitat may also include areas outside the current geographical area occupied by the species that are nonetheless "essential for the conservation of the species." Importantly, these designations are not precise and can be over inclusive, including both suitable habitat and unsuitable habitat and must be ground-truthed, through field surveys, to verify the actual extent of suitable habitat to support both impact and conservation analyses. On the project site, ground-truthing through field surveying (non-modeling) deemed portions of the site unsuitable (i.e., not considered a Primary Constituent Element) for the coastal California gnatcatcher, such as in the northeastern area.

A comment states that the EIR fails to use the best available science to analyze the ecological impacts of removing and fragmenting USFWS-designated Critical Habitat for the coastal California gnatcatcher. The EIR acknowledges that there will be permanent habitat loss and some fragmentation to the designated Critical Habitat on the project site. However, a substantial portion (1,372.74 acres) of the USFWS-designated Critical Habitat would be included in the Habitat Preserve for conservation and in-perpetuity management. The EIR describes how the proposed mitigation strategy, provided under EIR Mitigation Measure BIO-1 (Preserve Management Plan), would maintain the functions of both the existing suitable habitat included in the Habitat Preserve through a combination of preservation of existing resources (including 1,107.61 acres of suitable habitat for coastal California gnatcatcher), restoration and enhancement of currently unsuitable and marginal habitat, and long-term monitoring and adaptive management of resources, threat reduction, as well as habitat connectivity consistent with the generally accepted principles of wildlife movement and the Draft Santee MSCP Subarea Plan Guidelines. Please see Thematic Responses – Coastal California Gnatcatcher and Wildlife Movement and Habitat Connectivity for further details.

The majority of the project site is also located within USFWS-proposed Critical Habitat for the Hermes copper butterfly, which has been proposed for Threatened listing under the FESA and is also proposed to be added for coverage under the Draft Santee MSCP Subarea Plan. The survey and habitat assessment conducted for this species indicated that the area on the project site that would meet the requirements to be designated as Critical Habitat is much smaller than proposed by USFWS. The City commented to that effect during the public review period for the proposed listing. The survey and habitat assessment constitute the best available scientific information for the project site and will need to be taken into account by USFWS during the final listing decision. It is expected, based on that information, that the size of the Critical Habitat designation will be substantially reduced. The EIR treats Hermes copper butterfly as if it were already listed and is subject to a species-specific mitigation strategy, provided under EIR Mitigation Measure BIO-1 (Preserve Management Plan), that would maintain the functions of both the existing suitable habitat included in the Habitat Preserve through a combination of preservation of existing resources, restoration and enhancement of currently unsuitable habitat, and long-term monitoring and adaptive management of resources, as well as habitat connectivity consistent with the generally accepted principles of wildlife movement. Please see Thematic Response – Hermes Copper Butterfly for further details.

It should also be noted that the northwestern boundary of the project site contains USFWS-designated Critical Habitat for willowy monardella (*Monardella viminea*), a federally and state-endangered plant species that is proposed for coverage under the Draft Santee MSCP Subarea Plan. Impacts to this species would be avoided, except for one individual out of a total of 1,622 individuals occurring on the project site. The proposed project's mitigation program, provided under EIR Mitigation Measure BIO-1 (Preserve Management Plan), would include preservation

of existing resources, restoration and enhancement of currently unsuitable habitat, and long-term monitoring and adaptive management of resources, including threat reduction which would result in the long-term persistence of this species within the Habitat Preserve.

### **Relationship between Section 7 and Section 10 Approvals**

Some commenters expressed concern that the project was somehow reliant on approval of the Draft Santee MSCP Subarea Plan and questions were raised as to how the EIR would be certified if the Draft Santee MSCP Subarea Plan was not completed prior to the conclusion of the City's entitlement process. The proposed project's mitigation is not reliant on the completion of the Draft Santee MSCP Subarea Plan and adoption of the Draft Santee MSCP Subarea Plan is not assumed or required for the approvals of the proposed project. While demonstrating consistency with a draft local plan is not a requirement under CEQA because such plans are not adopted and may not be adopted, nevertheless the proposed project is consistent with the Draft Santee MSCP Subarea Plan.

The EIR provides mitigation to reduce impacts to a less than significant level in accordance with CEQA requirements. Although the Draft Santee MSCP Subarea Plan has not yet been approved or permitted, it is still used as the guidance document for projects occurring within the City of Santee. Therefore, the EIR is also consistent with the Draft Santee MSCP Subarea Plan, which would serve as an HCP pursuant to Section 10(a)(1)(B) of FESA, and as an NCCP pursuant to the California NCCP Act of 1991. However, because the Santee MSCP Subarea Plan is still draft and not complete, the EIR cannot rely upon the protections of the plan and does not assume that areas outside of the proposed project would receive the protections and conservation benefits set out in the Santee MSCP Subarea Plan for those areas in the City.

The proposed project is required to go through the Section 7 Consultation with the U.S. Army Corps of Engineers whether or not the Draft Santee MSCP Subarea Plan is finalized and approved, per the requirements of FESA Section 7, which requires any federal action agency to consult with the USFWS to ensure that that federal action and is not likely to jeopardize the continued existence of listed species or destroy or adversely modify designated Critical Habitat. As stated above, the proposed project has been designed to meet or exceed the CDFW NCCP/HCP Conservation Standard. The Conservation Standard would be conditioned by the City in its approvals. Thus, the higher standard would be assured with or without the finalization and approval of the Draft Santee MSCP Subarea Plan.

### **Rationale for the Project Design**

Comments were received about the proposed project's footprint within the central and northeastern parts of the site. Table 6-2, Summary of Impacts for Alternatives Compared to the Proposed Project, in EIR Section 6.3, Environmentally Superior Alternative, summarizes all EIR alternatives compared to the proposed project. Although most of the project alternatives would have less overall biological impacts than the proposed project, they would also meet fewer project objectives



as outlined in EIR Section 3.2. The southern portion of the project site was removed as an impact area from the 2007 design and included within the Habitat Preserve, creating a 900-acre habitat block that reduced impacts to occupied habitat for coastal California gnatcatcher and other species that use coastal sage scrub. Additionally, having a 900-acre block of habitat would be self-sustaining for the vast majority of species using, or potentially using the area (i.e., providing for all critical life history needs). See Thematic Response – Wildlife Movement and Habitat Connectivity for details.

Input received from the wildlife agencies has not rejected the idea of development along the lines of the proposed project. There are at least three footprints that the wildlife agencies have said can work from a biological resources perspective. These wildlife agency acceptable project designs include the 1998 MSCP Plan Fanita Ranch hardlined project, and two proposed designs by the wildlife agencies in more recent discussions with the project applicant. One of the more recent designs is evaluated in EIR Section 6.2.2.2, Modified Development Footprint Alternative, and also referenced in response to comment F1-4 in Comment Letter F1 (U.S. Fish and Wildlife Service, July 13, 2020). The other more recent design is referred to as the March 18, 2020, USFWS revised site plan, which is referenced in response to comment S1-11 in Comment Letter S1 (California Department of Fish and Wildlife, July 13, 2020). Two of those three footprints deemed acceptable by the wildlife agencies (i.e., the 1998 MSCP hardlined design and the March 18, 2020, USFWS revised site plan), show development in the same areas as the proposed project (i.e., in the central and northeastern areas) indicating that the proposed project is also an acceptable approach.

It is important to note that the project site has been subject to environmental review and land use planning for the past 40 years and there are many factors that enter into development planning of a project—choices are made based on meeting several, sometimes conflicting, objectives. In the case of the project before the City Council for approval, the project applicant balanced biological priorities, such as preserving one of the largest coastal California gnatcatcher populations in the region (an NCCP focal species), preserving special-status plant species, and providing suitable, albeit unoccupied, habitat for Quino checkerspot butterfly and Hermes copper butterfly within the Habitat Preserve, with a myriad non-biological goals. The non-biological goals include the following: some of the soils on the proposed southern 900-acre habitat block are less appropriate for development, objections from southern neighbors that development abutting their homes was not desired, and fire safety for residents was also critical, as was protecting the Habitat Preserve from too-frequent wildfires. Given that the 900-acre block within the southern portion of the site would be included in the Habitat Preserve, and that some of the highest quality habitat in the central and northeastern areas of the project site would also be preserved, it was appropriate to focus the planning on those areas. While competing development considerations certainly were considered in planning the proposed project, it is important to note that the EIR, prepared based upon a Biological Resources Technical Report (Appendix D) prepared by expert biologists, extensively analyzed the proposed project and

concluded that the proposed project, with mitigation, would result in less than significant impacts across all biological resource considerations.

### **Consistency with the Draft Santee MSCP Subarea Plan as a Project Objective**

This discussion provides a response to the comments suggesting that EIR Project Objective 1 is an improper objective because it requires project consistency with Draft Santee MSCP Subarea Plan. The full text of Project Objective 1 is:

1. Create a new community with clustered development that provides residential, commercial, mixed-use, agricultural, and recreation land uses while preserving large blocks of significant natural open space areas as a habitat preserve dedicated to the City of Santee's Draft Multiple Species Conservation Program Subarea Plan for permanent preservation and management.

The project design creates clustered development areas of residential, commercial, mixed-use, agricultural, and recreation land uses, with balanced cut and fill in geologically stable soils, and minimized cultural and tribal cultural resources impacts, while preserving large blocks of natural open space areas as a perpetual Habitat Preserve consistent with the Draft Santee MSCP Subarea Plan. Project implementation would result in the dedication of a Habitat Preserve, subject to in-perpetuity management, and designed in accordance with the MSCP Plan (1998) preserve design criteria informed by current best available scientific information through the San Diego Management and Monitoring Program, which was established to provide a County-wide, coordinated and scientific approach, to biological management and monitoring of conserved lands. These are the key points that apply to this comment:

1. The EIR provides mitigation to reduce impacts to a less than significant level in accordance with CEQA requirements.
2. The proposed project does not rely on approval of Santee's Draft Multiple Species Conservation Program Subarea Plan.
3. Nonetheless, the City has the authority to require that the proposed project meet the conservation criteria set forth in the 2018 Draft Santee MSCP Subarea Plan so as not to compromise the future implementation of the Subarea Plan.
4. Although CEQA does not require that the proposed project be consistent with a draft local plan, the proposed project meets all criteria set forth in the Draft Santee MSCP Subarea Plan and is therefore consistent with this draft plan.
5. The project site is a key part of the City's participation in the MSCP Plan (City of San Diego 1998).
6. The City is still enrolled in the MSCP Subarea Plan process and is diligently working on revisions to the 2018 Draft Santee MSCP Subarea Plan in close coordination with the wildlife agencies and anticipates that a public review draft will be ready by the end of 2020.

To elaborate, the proposed project does not include adoption of the Draft Santee MSCP Subarea Plan as one comment suggests. Section 3.12, Discretionary Actions, lists the proposed and future discretionary actions required to implement the proposed project. Demonstrating consistency with a draft local plan is not a requirement under CEQA because such plans are not adopted and may not become adopted. Regardless, developing a project that is consistent with a draft local plan in no way violates CEQA or impairs the CEQA process. The proposed project is consistent with the Draft Santee MSCP Subarea Plan. EIR Section 4.3.5.6, Threshold 6: Habitat Conservation Plan, and Section 4.3.6.6, Cumulative Threshold 6: Habitat Conservation Plans, analyzed the proposed project's consistency with the Draft Santee MSCP Subarea Plan and determined that "implementation of the current project design would be consistent with the Draft Santee MSCP Subarea Plan and would not compromise future implementation of the MSCP Subarea Plan because [it] meets all requirements and provides a greater level of conservation than required for the Santee MSCP Subarea Plan pursuant to the MSCP Plan."

Finally, a commenter stated that they were not able to find the 2018 Draft Santee MSCP Subarea Plan. This is because it has not been released for public review and only the wildlife agencies (i.e., CDFW and USFWS) have received the draft. It is noted the 2018 Draft Santee MSCP Subarea Plan is included in the Administrative Record and has been posted on the City of Santee's website as part of the EIR public review process ([http://sntbberry.cityofsanteeca.gov/sites/FanitaRanch/Public/Remainder%20of%20the%20Record/\(2\)%20Reference%20Documents%20from%20EIR%20&%20Technical%20Reports/Tab%20492%20-%202018-12%20Santee%20SAP%20Wildlife%20Agency%20Review%20Draft%20Dec18v2.pdf](http://sntbberry.cityofsanteeca.gov/sites/FanitaRanch/Public/Remainder%20of%20the%20Record/(2)%20Reference%20Documents%20from%20EIR%20&%20Technical%20Reports/Tab%20492%20-%202018-12%20Santee%20SAP%20Wildlife%20Agency%20Review%20Draft%20Dec18v2.pdf)).

#### **4.2.6 Western Spadefoot**

This thematic response addresses comments to the EIR regarding western spadefoot, including the assessment of on-site habitat and populations, analysis of proposed project impacts, both direct and indirect/edge effects, and recommended mitigation measures.

#### **Status of Western Spadefoot and the Draft Santee MSCP Subarea Plan**

Western spadefoot is a California Species of Special Concern and a Draft Santee MSCP Covered Species. It has also been petitioned for listing under FESA. In addition to the focused surveys conducted on-site by Dudek for this species, the City requested that U.S. Geological Survey (USGS) scientists provide independent scientific input on western spadefoot as required for the completion of an NCCP Subarea Plan. USGS did conduct fieldwork and provided its recommendations in a report, discussed below.

#### **Focused Surveys and Modeled Habitat**

As stated in Section 3.2.13 of the Biological Resources Technical Report (Appendix D), western spadefoot egg masses, tadpoles, and metamorphs were observed in a few areas while conducting

focused surveys for vernal pool fairy shrimp during 2004 and 2005. In order to provide a better understanding of the species' breeding distribution within and adjacent to the project site, focused surveys were conducted in March 2017 during the winter rain season. Western spadefoot was observed in a total of 38 individual features observed during vernal pool branchiopod surveys in 2004, 2005, and 2016 and during the 2017 focused surveys.

In addition, USGS reviewed the 2004 and 2005 positive identification locations and collected genetic samples from tadpoles within 10 different occupied pools during a site visit on March 13, 2017. The goal was to determine if the populations and ponds on the project site are genetically connected or not for the purposes of management and corridor design between populations (Rochester et al. 2017). To conserve western spadefoot burrows within upland habitat, CDFW suggests a buffer around breeding habitat of 76 meters and USFWS suggests a buffer of 368 meters (Baumberger et al. 2019). The USGS recommends buffers between 200 meters and 400 meters around breeding habitat (Rochester et al. 2017).

As stated in Table 3-2, Suitable Habitat Models for Special-Status Wildlife Species Present or with Moderate Potential to Occur within the Project Area (including Off-site Areas), in the Biological Resources Technical Report (Appendix D), a 300-meter buffer around occupied pools was used for the western spadefoot suitable habitat model. A comment raised the issue that the 300-meter buffer is “insufficient to fully capture the potential travel distance of spadefoots from breeding pools; accordingly, the Project could be impacting a much greater area of spadefoot habitat needed for the entire life cycle and metapopulation dynamics.”

The model parameter of 300 meters is based on the best available movement and habitat selection data for western spadefoot in the Southern California region based on Baumberger et al. (2019), which was cited in the Biological Resources Technical Report (Appendix D), and which satisfies CEQA requirements for best available data. The 300-meter parameter is consistent with the general recommendations of USFWS and USGS cited above. Although the comment cites data for other spadefoot species of longer distance movements than the longest distance movement by a western spadefoot of 262 meters in Baumberger et al. in an Orange County study, the species-specific western spadefoot data, as the best available data, should be the primary data source for the habitat model used in the analysis despite its limitations noted in the comments. More importantly, the habitat model was not intended to capture 100 percent of the area that may ever be used by western spadefoot during long-distance dispersal to, or between, breeding pools. Also, while it is likely that western spadefoots are capable of dispersing much longer distances than the 262 meters (e.g., the 1,000 meters cited in the comment for western spadefoot and farther distances for other spadefoot species), the mean distance moved in Baumberger et al. (2019) was 40 meters (131 feet), indicating that most individuals are moving much less than 262 meters from the breeding pool. The goal of the model was to estimate the area of suitable habitat around breeding pools considered necessary to support upland habitat requirements for foraging and aestivation near the natal

breeding pools. The comment is also speculative as to how critical such long-distance movements are for supporting the full lifecycle and metapopulation dynamics of western spadefoot. For example, what proportion of a local population typically makes long-distance movements beyond the 300 meters used in the model, what is the biological function of the long-distance movement (e.g., finding suitable aestivation habitat around the natal breeding site versus migration to a new, distant breeding site), and are such long-distance movements rare or frequent events? Adequate habitat to support upland activities around a breeding pool is not equivalent to adequate habitat for long-distance movements between breeding pools. Further, Semlitsch and Bodie (2003) found for several amphibian species that the average maximum core terrestrial area from wetland breeding sites was 290 meters. Therefore, based on studies such as Baumberger et al. (2019) and Semlitsch and Bodie (2003), while the 230 acres of impacted modeled habitat, based on a 300-meter buffer, likely does not fully capture 100 percent of the habitat that could be used by western spadefoot on the project site, the literature supports the conclusion that this buffer sufficiently captures the core upland habitat that supports the large majority of western spadefoot on site, and the habitat most critical for maintaining the viability of the local breeding sites.

### **Impacts and Mitigation**

Various comments assert that the proposed mitigation does not mitigate impacts to western spadefoot to a less than significant level, including that the mitigation measures are not based on the best available science; the mitigation measures rely on a “mish-mash” of compensatory measures including preservation, restored and created habitat, without specifying mitigation ratios for impacts to occupied and modeled spadefoot habitat. Moreover, comments assert that the mitigation measures do not incorporate the best available science and are insufficient, including lacking an extensive discussion of mitigation ratios, to reduce impacts to less than significant.

Under EIR Section 4.3.5.1, Threshold 1: Candidate, Sensitive, or Special-Status Species, the significance threshold is having a substantial adverse effect, either directly or through habitat modification. In order for the proposed mitigation to reduce the substantial adverse effect to a less than significant level, the mitigation strategy must result in the long-term persistence of the western spadefoot on the project site Habitat Preserve, including measures to protect preserved pools from indirect effects and predation by non-native predators, such as African clawed frog which can decimate spadefoot populations. That is, an effect may remain adverse even with mitigation (i.e., a net loss of area of occupied pools and suitable upland habitat), but would fall below the threshold of substantially adverse if the mitigation is effective in preserving adequate breeding and upland habitat to support a persistent population and reducing serious threats such as the African clawed frog. Further, CEQA does not specify required mitigation ratios that must be met to reduce impacts to a level less than significant. Rather than just focusing on mitigation ratios (which are identified below), the mitigation strategy should be taken as a whole; that is, a combination of preservation

of existing resources, restoration and enhancement of currently unsuitable habitat, and long-term monitoring and adaptive management of resources, including threat reduction.

To mitigate for loss and fragmentation of occupied pools and modeled suitable habitat, the Vernal Pool Mitigation Plan (Appendix R to the Biological Resources Technical Report [Appendix D]) will increase suitable vernal pool habitat within the Habitat Preserve and through restoration of 29.75 acres of watershed (shown on Figure 4 in Appendix R, Vernal Pool Mitigation Plan), which includes the upland habitat surrounding vernal pools.

The mitigation strategy for western spadefoot specifically includes the following:

- Impacts to the natural vernal pools and road ruts occupied by western spadefoot would be mitigated in accordance with Table 6-4 in Section 6.1 of the Biological Resources Technical Report (Appendix D). Pools would be mitigated between a 2:1 and 4:1 ratio depending on pool type.
- The Vernal Pool Mitigation Plan outlines the enhancement, creation, and restoration of suitable vernal pool habitat within the Habitat Preserve by a minimum of 0.50 acre and up to 2.92 acres, with an additional 29.75 acres of watershed, which includes upland habitat surrounding vernal pool restoration that would occur within the Habitat Preserve. A minimum of 0.50 acre and up to 2.92 acres of vernal pool mitigation would provide up to an 8:1 mitigation ratio for areal extent of suitable western spadefoot breeding habitat.
- The natural vernal pools on the project site were alluvial terrace type pools, and were generally more shallow/shorter inundation type pools. With the vehicle/off-road activity, the roads have deepened some pools so they now hold water much longer than they would have naturally. With this artificial change, they actually now support species such as fairy shrimp and amphibians better than they would have naturally. The goal of the restoration/mitigation is to enhance the naturally existing vernal pools, improve the disturbed (often deeper) pools so those disturbed pools will better support the sensitive species now found in them, and develop new pools that mimic both the natural shallow pools and the deeper pools. To accomplish this, the mitigation design will have shallow and deeper pools where the soils are appropriate for each type, and where the watershed can support the specific ponding goals. In order to guarantee that all the pools hold water for at least 30 days, even in an above average rainfall year, they would have to be made relatively deep, which would not be conducive to the development of a naturally diverse floral and faunal complex, and would certainly preclude the introduction of sensitive species other than those that are more aquatic. For example, the introduction of plant species like the San Diego mesa mint would be limited by the deeper pools. The mitigation design would include pools that would be

expected to pond (in an average rainfall year) anywhere from 2 to 4 weeks, and this will be tied to specific success criteria in the mitigation plan.

- Details of the western spadefoot relocation effort are included as a component of the Vernal Pool Mitigation Plan (see Section 8.4.3 of Appendix R to the Biological Resources Technical Report [Appendix D]) and subject to approval by the wildlife agencies. The details provided in the plan are sufficient for CEQA purposes to support the conclusion that the impacts to the species are less than significant with this and the other mitigation measures. The wildlife agencies will review and typically will add additional refinements per their jurisdictions under the species protection laws. Any more restrictive measures these agencies impose will also be implemented.
- Mitigation for western spadefoot would also include the preservation of 146.24 acres of existing suitable modeled habitat and 24 occupied pools (1.4:1 ratio) within the Habitat Preserve (see EIR Table 5-4a). Mitigation Measure BIO-1 (Preserve Management Plan) is the mechanism to dedicate the existing open space as MSCP Habitat Preserve that includes modeled suitable habitat for western spadefoot.
- In-perpetuity management of the Habitat Preserve with adaptive management strategies outlined in Mitigation Measure BIO-1 (Preserve Management Plan) provided as Appendix P to the Biological Resources Technical Report.
- Temporary impacts are addressed in the Upland Restoration Plan (Appendix Q to the Biological Resources Technical Report) and Section 8 in Appendix Q provides the performance standards for the upland revegetation program. If the project does not meet the performance standards, the project biologist/habitat restoration specialist would make recommendations to bring the project into compliance, and the maintenance-and-monitoring period would continue until the performance standards are met.
- Implementation of African clawed frog trapping (Mitigation Measure BIO-19).

Therefore, as discussed above, the mitigation strategy proposed in the EIR would reduce impacts to western spadefoot to a less than significant level.

### **Indirect Impacts and Edge Effects**

Comments express concerns about other issues such as the preserved occupied pools being in proximity to permanent and temporary impacts, the adequacy of adjacent upland habitat to sustain life cycle needs and metapopulation dynamics (e.g., dispersal), and potential degradation of upland habitat and breeding pools over time due to factors such as edge effects.

These concerns, as well as the concern over mitigation ratios, are addressed by Mitigation Measure BIO-1: Preserve Management Plan (provided as Appendix P to the Biological Resources Technical Report), which will be implemented in perpetuity. In order to monitor and adaptively manage western spadefoot and its habitat, spadefoot surveys would be conducted every 5 years. Every 3

years, a habitat evaluation and threats assessment would be conducted that focuses on the quality of breeding and upland aestivation habitat, including invasive plant species, presence of non-native wildlife species (e.g., African clawed frog), hydrologic modifications, changes in habitat cover resulting from alteration of fire regime and/or climate modifications, connections between breeding habitat and upland aestivation habitat. The level of human activities in breeding habitat (e.g., trail use, littering, and vandalism) as well as other threats would be assessed to determine management needs.

## References

- Baumberger K.L., M.V. Eitzel, M.E. Kirby, and M.H. Horn. 2019. Movement and Habitat Selection of the Western Spadefoot (*Spea hammondi*) in Southern California. PLoS ONE 14(10): e0222532. Accessed August 2020. <https://doi.org/10.1371/journal.pone.0222532>.
- Rochester, C.J., K.L. Baumberger, and R.N. Fisher. 2017. Draft Final Western Spadefoot (*Spea hammondi*): Independent Scientific Advisor Report for the City of Santee Multiple Species Conservation Plan (MSCP) Subarea Plan.
- Semlitsch, R.D., and J.R. Bodie. 2003. “Biological Criteria for Buffer Zones Around Wetlands and Riparian Habitats for Amphibians and Reptiles.” *Conservation Biology*, 17(5), 1219–1228.

### 4.2.7 Wildlife Movement and Habitat Connectivity

This thematic response addresses comments to the EIR regarding wildlife movement and habitat connectivity, including the analysis of proposed project-related impacts, both direct and indirect/edge effects, and recommended mitigation measures.

#### Background on Preserve Design and Regulatory Framework

As stated in EIR Section 4.3.5.6, Threshold 6: Habitat Conservation Plan, the current project footprint has been reduced from the previous development hardline footprint identified in the approved 1998 MSCP Plan (City of San Diego 1998). A large development bubble in the southern portion of the site from the 1998 project design was removed, increasing the size of the current Habitat Preserve by more than 200 acres. Therefore, implementation of the current project design would be consistent with the Draft Santee MSCP Subarea Plan and would not compromise future implementation of the Draft Santee MSCP Subarea Plan in the City because the current project meets all requirements and provides a greater level of conservation than required for the Draft Santee MSCP Subarea Plan pursuant to the MSCP Plan.

The Habitat Preserve was designed to meet or exceed the CDFW NCCP/HCP Conservation Standard and is consistent with the Design Criteria for Linkages and Corridors (Attachment H) in the approved South County MSCP Subarea Plan Biological Mitigation Ordinance (BMO). The BMO Design Criteria for Linkages and Corridors contain discrete standards for the length and



width of wildlife movement areas, as well as other required features to protect the biological value of linkages and corridors such as maintaining lines of sight and vegetative cover. The Habitat Preserve design process was informed by the wildlife movement field studies intended to ensure ease of movement for wide-ranging species such as mule deer, and would contain an approximately 900-acre unfragmented habitat block, connected to other preserved and managed open space within the vicinity, generally by habitat linkages 1,000 feet or more in width.

### **Wildlife Movement and Habitat Connectivity**

Various comments state that the project region is important for local, regional, and global diversity and that wildlife movement and habitat connectivity must be maintained at multiple scales to preserve the area's rich biodiversity. Some comments assert that the EIR fails to adequately describe the project site's importance in wildlife movement and habitat connectivity and inadequately assesses impacts to these ecological functions. The comments claim that the proposed project layout would fragment the site by habitat removal, degradation, and isolation and have severe impacts on wildlife movement and habitat connectivity, citing various scientific studies showing the negative effects of roads and development such as creating barriers to wildlife movement, reducing reproductive success and physiological state, contributing to genetic isolation, and creating adverse edge effects, among others.

The EIR discusses wildlife corridors and habitat connectivity in EIR Section 4.3.1.5, Wildlife Corridors and Habitat Linkages. As an existing undeveloped landscape, the project site functions as an intact habitat block without distinct on-site wildlife corridors or habitat linkages. Existing trails, ridges, and valleys throughout the project site facilitate wildlife movement, as depicted on EIR Figure 4.3-2, Sample Game Trails. Biological Resources Technical Report (Appendix D) Section 4.5.4, Wildlife Movement, provides more detail on wildlife camera studies that were conducted to document wildlife use of the project site.

Per applicable criteria in Appendix G of the CEQA Guidelines, the proposed project was evaluated in EIR Section 4.3.5.4 under Threshold 4: Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. In this analysis, the EIR notes that the project site serves as live-in habitat for a variety of large and small wildlife, including at least partial territories for several mid-sized large mammals, including mountain lion, bobcat (*Lynx rufus*), mule deer, and coyote (*Canis latrans*), with local movement occurring throughout the project site. The EIR also states that the project site contributes to regional wildlife movement between County open space, MCAS Miramar, and Santee Lakes Recreation Preserve as shown on the Draft Santee MSCP Subarea Plan Preserve System Map (see EIR Figure 4.3-3, Regional Planning Context – Draft Santee MSCP Subarea Plan). The EIR analysis was conducted in this regional context but does not depend on whether or not the Draft Santee MSCP Subarea Plan is implemented. The EIR concluded that the

proposed project could have both direct and indirect impacts to habitat linkages and wildlife corridors, both regionally and locally on site, consistent with the conclusions made in the comments.

Any large-scale project within a previously undisturbed landscape can be criticized for causing habitat loss and fragmentation. Despite some habitat loss and fragmentation, the EIR describes how the proposed project would maintain the functions of both regional and local wildlife movement and habitat connectivity consistent with the generally accepted principles of wildlife movement and the Draft Santee MSCP Subarea Plan Guidelines, and thus reduce impacts to a less than significant level. Through implementation of EIR Mitigation Measure BIO-22 (Wildlife Corridors), and as shown in EIR Figure 4.3-9, Local Wildlife Corridors, wildlife movement and habitat connectivity would be preserved along the northwestern and northern boundary of the project site, with Habitat Preserve widths between permanent development and the project site boundary ranging from 619 feet to more than 1,400 feet, providing a buffer between development and off-site open space north of the project site protected and managed as part of County Park Preserve lands. Likewise, along the western boundary the Habitat Preserve is 400 to 1,000 feet wide, where it connects to preserved MCAS Miramar open space west of the project site. Because the Habitat Preserve abuts extensive preserved open space to the north and west, the regional wildlife corridors are functionally much broader than just the widths of Habitat Preserve on the project site, as illustrated in EIR Figure 4.3-10, Regional Wildlife Corridors. The Habitat Preserve along the western and northern boundary therefore contributes to the regional wildlife movement and habitat connectivity within approximately 5 miles of the project site, including Goodan Ranch/Sycamore Canyon County Preserve to the north, County open space to the east, and MCAS Miramar open space to the west. From a regional perspective, the proposed project would not substantially constrain wildlife movement and habitat connectivity.

Comments indicate that the proposed mitigation for significant impacts to wildlife movement and habitat connectivity is generally insufficient to prevent isolation of the approximately 900-acre habitat block in the southern portion of the project site, specifically the single wildlife undercrossing of Cuyamaca Street on the eastern side of the project site and the single 48-inch culvert on the western side of the project site, primarily for western spadefoot, but also intended for other small- and mid-sized wildlife (e.g., coyote). Therefore, the comments assert that the EIR fails to adequately assess and mitigate impacts to wildlife movement and habitat connectivity.

Consistent with these comments, the EIR concluded that buildout of the proposed project could significantly constrain local wildlife movement and habitat connectivity to the approximately 900-acre southern portion of the Habitat Preserve by the village developments to the north and streets bordering open space to the west (Fanita Parkway extension and improvements) and to the east (Cuyamaca Street extension and improvements) (see EIR Figure 4.3-9, Local Wildlife Corridors). In addition, the Habitat Preserve in the northern part of the project site would be bisected by two

roads (Streets “V” and “W”) connecting the village developments, potentially affecting north–south wildlife movement through the project site.

The EIR also concluded that several indirect impacts of the proposed project could significantly affect wildlife movement, including noise and vibration, lighting, increased human activity, altered fire regimes, and increased roadkill, which is consistent with the adverse edge effects identified by these comments.

Given the proposed project development footprint, there are limited opportunities to provide multiple connections on the project site between the northern and southern portions of the Habitat Preserve, as clearly shown in EIR Figure 4.3-9, Local Wildlife Corridors. In addition, much of the southern portion of the Habitat Preserve is surrounded by urban development, so the only connection opportunities are from the north. The width of the Habitat Preserve north of, and along the Fanita Parkway extension, where the 48-inch culvert is located (primarily for western spadefoot), is approximately 1,000 feet wide. According to the Gunson et al. (2016) study cited in a comment, crossing structures should generally be spaced about every 300 meters (984 feet) where roadways bisect large expanses of continuous habitat. Under this recommendation, only one crossing would be recommended. The crossing area of the Cuyamaca Street extension to connect the northern and southern portions of the Habitat Preserve is similarly constrained and would also need only a single crossing location according to the Gunson et al. criterion.

Comments state that the two crossings are insufficient to mitigate impacts to connectivity and would essentially isolate the approximately 900 acres in the southern portion of the Habitat Preserve and would fail to meet the needs of the diverse species that use or potentially use the area. Based on the information provided in the Biological Resources Technical Report (Appendix D), the City disagrees with this conclusion. While the opportunities for wildlife movement and habitat connectivity are constrained in these two crossing areas, the EIR states that “none of the wildlife species that would be affected or displaced by the loss or constraint of local movement areas have genetically unique or endemic populations that would be functionally isolated from other populations, and the regional habitat linkages would ensure that genetic exchange and diversity of species in the region would be maintained.” The approximately 900-acre habitat block, for the most part, would be self-sustaining for the vast majority of species using, or potentially using, the area (i.e., providing for all critical life history needs) even with constraints on movement between the southern portion of the Habitat Preserve to the northern portion and conserved off-site open space to the west, north, north and east compared to existing conditions. Avian species, in particular, would have no trouble accessing the area due to the nearby large off-site open space areas, only needing to cross the Fanita Parkway and Cuyamaca Street extensions. Studies conducted by Soulé and colleagues in the 1990s suggest that an intact 900-acre habitat block would be large enough to sustain commonly occurring species in the coastal San Diego region. Soulé et al. (1992) found that chaparral flowering plants and vertebrates (birds and mammals) richness

declined in isolated habitat fragments generally less than 100 hectares (247 acres) in size, while Bolger et al. (1997) found that isolated habitat patches 24–80 hectares (59-198 acres) tended to retain native rodent communities.

The potential habitat fragmentation effects and other direct and indirect adverse effects posed by Streets “V” and “W” would be mitigated by EIR Mitigation Measure BIO-20 (Wildlife Protection) that incorporates features that would allow wildlife to cross the roadways more safely, including a 25 mph speed limit, street signs, speed bumps, and other traffic-calming devices. EIR Mitigation Measure BIO-22 (Wildlife Corridors) includes a measure (see No. 6) that safety lighting for Streets “V” and “W” would be button started with a timer shut-off delay so that lighting is not on at night except for emergency purposes or pedestrian safety. These are standard wildlife protection measures that are widely applied for this purpose. Here, the measures are expected to be particularly effective since traffic volumes on these roads would be very low when most wildlife crossing occurs and native vegetation exists on both sides of the roads in crossing areas.

The EIR proposes several mitigation measures to address the potential indirect effects on wildlife movement and habitat connectivity cited above. As described in detail in the EIR, Mitigation Measure BIO-22 (Wildlife Corridors) includes measures to direct lighting away from the Habitat Preserve and control public and domestic pet access to trails. Other EIR mitigation measures that would reduce indirect impacts include Mitigation Measure BIO-1 (Preserve Management Plan), Mitigation Measure BIO-6 (Land Use Adjacency Guidelines), Mitigation Measure BIO-9 (Habitat Preserve Protection), Mitigation Measure BIO-10 (Weed Control Treatments), Mitigation Measure BIO-20 (Wildlife Protection), and Mitigation Measure BIO-21 (Fire Protection Plan, Appendix P1 of the EIR).

A comment states that the lack of requirements for buffers outside the Habitat Preserve, except as required for wetlands by state and/or federal permits specified in EIR Mitigation Measure BIO-6, is unacceptable, citing that buffers are valuable habitat and connectivity for numerous species, primarily riparian systems that are important habitat for species such as migratory birds.

The project site supports relatively small patches of riparian habitat, including only 1.54 acres of southern willow riparian forest, 0.86 acre of southern willow scrub, 0.48 acre of disturbed southern willow scrub, and 3.23 acres of southern sycamore-alder riparian forest (see EIR Table 4.3-1, Existing Vegetation Communities and Land Cover Types on the Project Site and Off-Site Improvement Areas). Avian surveys have documented from one to three occurrences of special-status riparian birds, such as least Bell’s vireo (*Vireo bellii pusillus*), willow flycatcher (*Empidonax traillii extimus*), yellow-breasted chat (*Icteria virens*), and yellow warbler (*Setophaga petechia*) (see EIR Table 4.3-4, Special-Status Wildlife Species Observed on the Project Site and Off-Site Improvement Areas), which is consistent with a lack of riparian habitat in patches large enough to support more than one or two territories for these species. With the relatively small amount of

available riparian habitat and limited use by special-status migratory riparian birds for nesting or migration, the survey data supports the conclusion that the project site does not function as an important regional use or stopover area for migratory riparian birds, making the comment's concern about buffers for these species a moot point. However, where buffers on the project site are important is for buffering development from the Habitat Preserve, which is broadly connected to surrounding off-site open space. The project design includes wide fire protection zones (i.e., 115 feet to 165 feet in some areas) around the two villages, outside the Habitat Preserve, which would buffer development from the Habitat Preserve while maintaining native vegetation.

A comment also states that the EIR fails to adequately assess and mitigate impacts to wildlife connectivity in oak woodlands. Like riparian, oak woodlands are a relatively small component of the project site, comprising 29.68 acres, of which 26.36 acres (89 percent) would be protected and managed in perpetuity within the Habitat Preserve per EIR Mitigation Measure BIO-1 (Preserve Management Plan) and Mitigation Measure BIO-9 (Habitat Preserve Protection). In addition, EIR Mitigation Measure BIO-4 (Oak Tree Restoration) includes 3:1 mitigation by seedling planting for impacts to 5 individual Engelmann oak trees and 17 individual oak trees in the coast live oak woodland vegetation community. Therefore, a total of 66 oak trees would be planted to meet the 3:1 mitigation ratio requirement.

## References

- Bolger, D.T., A.C. Alberts, R.M. Sauvajot, P. Potenza, C. McCalvin, D. Train, S. Mazzoni, and M. E. Soulé. 1997. "Response of Rodents to Habitat Fragmentation in Coastal Southern California. *Ecological Applications*." 7(2), pp. 552–563. The Ecological Society of America.
- Gunson, K., D. Seburn, J. Kintsch, and J. Crowley. 2016. *Best Management Practices for Mitigating the Effects of Roads on Amphibian and Reptile Species at Risk in Ontario*.
- Soulé, M.E., A.C. Alberts, and D.T. Bolger. 1992. The effects of habitat fragmentation on chaparral plants and vertebrates. *Oikos* 63: 39–47.

### 4.2.8 2017 Scoping Plan

This thematic response has been prepared in response to comments that suggest the project must have net zero emissions to be consistent with the 2017 Scoping Plan. In the 2017 Scoping Plan discussion of project-level greenhouse gas (GHG) emissions reduction actions and thresholds, the California Air Resources Board (CARB) "recommends that projects incorporate design features and GHG reduction measures, to the degree feasible, to minimize GHG emissions" (CARB 2017.) CARB does not require that all new development result in no net additional GHG emissions. Instead, the Scoping Plan specifically states the following (CARB 2017):

Achieving no net increases in GHG emissions, resulting in no contribution to GHG impacts, may not be feasible or appropriate for every project, however, and the inability of a project

to mitigate its GHG emissions to net zero does not imply the project results in a substantial contribution to the cumulatively significant environmental impact of climate change under CEQA. Lead agencies have the discretion to develop evidence-based numeric thresholds (mass emissions, per capita, or per service population) consistent with this Scoping Plan, the state's long-term GHG goals, and climate change science.

Based on the above guidance, it is clear that net zero is not a mandate for all proposed development. Instead, CARB recognizes that local agencies have the authority to determine that evidence-based numeric thresholds are appropriate when those thresholds can demonstrate that a project would not have a significant impact on the environment.

It is important to note that some projects, like the Newhall Ranch Resource Management and Development Plan and Spineflower Conservation Plan, were able to achieve net zero emissions by relying on the purchase of carbon credits (CARB 2017). The Sustainable Santee Plan (City of Santee 2019) does not include carbon credits as a potential GHG emissions reduction measure, and therefore, the proposed project did not include the purchase of carbon credits as potential mitigation. The proposed project is able to mitigate its GHG emissions entirely onsite and without the need for carbon credits. See EIR Section 4.7, Greenhouse Gas Emissions, for additional details.

#### **4.2.9 Evacuation**

Comments questioned whether the proposed project can be safely evacuated, what impacts the proposed project would have on local and regional evacuations, how evacuations would occur, estimated timing for evacuation of the proposed project's residents, and whether the provided evacuation plan was adequate. The following thematic response addresses evacuation planning and implementation in the City of Santee and San Diego County and addresses the purpose and content of a project-specific evacuation plan. This response does not address all evacuation related details, and the reader is encouraged to review responses to specific comments as well at the Final EIR, and the proposed project-specific Wildland Fire Evacuation Plan (Appendix P2).

#### **Evacuation Planning and Implementation in Santee and San Diego County**

The proposed project-specific Wildland Fire Evacuation Plan was prepared based on the Unified San Diego County Emergency Services Organization and County of San Diego Operational Area (OA) Emergency Operations Plan (EOP)<sup>1</sup> – Evacuation Annex. Law enforcement and fire agencies charged with managing evacuations likely would not refer to a project-specific evacuation plan when implementing an emergency evacuation. These agencies follow internal pre-wildfire plans, and utilize experience, situational awareness, and available resources to move people from areas of higher, to areas of lower, potential risk.

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<sup>1</sup> [https://www.sandiegocounty.gov/content/dam/sdc/oes/emergency\\_management/plans/op-area-plan/2018/2018-Annex-Q-Evacuation.pdf](https://www.sandiegocounty.gov/content/dam/sdc/oes/emergency_management/plans/op-area-plan/2018/2018-Annex-Q-Evacuation.pdf)

**Evacuation Planning Begins with the County Office of Emergency Services (OES).** To establish a framework for implementing well-coordinated evacuations, the County of San Diego OES developed an Evacuation Annex as part of the area EOP (County of San Diego 2014 – see footnote 6). Most cities, including Santee, have adopted local plans that incorporate all or a majority of the County’s plan. Large-scale evacuations are complex, multijurisdictional efforts that require coordination between many agencies and organizations. Emergency services and other public safety organizations play key roles in ensuring that an evacuation is effective, efficient, and safe.

Evacuation during a wildfire is not necessarily directed by the fire agency, except in specific areas where fire personnel may enact evacuations on scene. The San Diego County Sheriff’s Department (SDCSD), California Highway Patrol (CHP), and other cooperating law enforcement agencies have primary responsibility for evacuations. These agencies work closely within the unified Incident Command (IC) system, with the County OES, and responding fire department personnel who assess fire behavior and spread, which should ultimately guide evacuation decisions. To that end, Santee Fire Department (SFD), law enforcement agencies, Public Works, Planning, Emergency Services Departments, and California Department of Transportation (Caltrans), among others, have worked with a County pre-fire mitigation task force to address wildland fire evacuation planning for the County.

If the emergency only impacts a local jurisdiction, the decision to evacuate would be made at the local jurisdiction level with regional collaboration considerations. SDCSD would manage evacuations in Santee. Based on the information gathered, local jurisdictions would generally make the determination on whether to evacuate communities as the need arises, on a case-by-case scenario basis. Technological advancements in emergency notification capabilities has resulted in the ability of emergency managers to evacuate targeted areas in contrast to the mass evacuations that occurred during 2003 and 2007 wildfires in the region. Targeted evacuations allow better management of traffic congestion and focus on evacuating populations on a threat-level priority basis. “Ready, Set, Go!” is a program that has been widely adopted for preparing residents to respond quickly to evacuation orders. The robust emergency notification system available to help manage evacuations, combined with the “Ready, Set, Go!” program, can prepare residents to be ready, which entails gathering necessities and preparing for an eventual evacuation by getting set to leave or to temporarily refuge in their residence. Residents are then ready to enact an evacuation quickly once they are told to leave. There have been comments submitted that the “Ready, Set, Go!” program has been denounced by San Diego County Fire Authority and Cal Fire, which is not accurate. The program provides for an aware and ready populace, which results in higher success probabilities than with an unprepared populace, whether a phased evacuation occurs or a temporary on-site refuge is implemented.

**Evacuation Scenarios Vary and Often Change in Response to the Fire.** Every evacuation scenario includes unique challenges, constraints, and fluid conditions that require interpretation, fast

decision-making, and alternatives. For example, given a distant wildfire driven by Santa Ana winds, emergency managers may have several hours or more to evacuate communities like the proposed project with less urgency and the ability to spread traffic surges out over a longer time frame. In a scenario where a wildfire ignites closer, less time is available and a more strategic approach may be necessary. Optionality is important in case unforeseen issues arise that require short-term or long-term changes to the evacuation process. In general, risk is considered highest when evacuees are evacuating late and fire encroachment is imminent. The proposed project provides protected evacuation corridors along with the option of contingency on-site temporary refuge in designated buildings/areas to address this scenario.

**Evacuation and Early Warning Systems.** As demonstrated during large and localized evacuations occurring throughout the County over the last 20 years, an important component to successful evacuation is early assessment of the situation and early notification via managed evacuation declarations. San Diego County utilizes early warning and informational programs to help with these important factors. The University of California San Diego has developed a robust wildfire movement prediction program, there are numerous back country web cameras and fire detection networks, and weather tracking has become very sophisticated. For example, the weather system developed by San Diego Gas & Electric (SDG&E) is considered to be one of the most robust systems in the country. This system enables the detection of changing weather that may favor wildfire ignition and spread and can predict these changes with 24 to 72 hours' notice, allowing time to prepare and deploy fire response resources and provide resident warnings. Similarly, there are numerous fire detection assets positioned in the County's open space areas, resulting in more time availability for the evacuation process to begin while a wildfire is still in its early stages. Among the methods available to citizens for emergency information are Reverse 911/Alert San Diego,<sup>2</sup> radio, television, social media/internet, neighborhood patrol car, and Aerial Support to Regional Enforcement Agencies helicopter (as available) and public address notifications.

**The Fanita Ranch Project-Specific Evacuation Plan Is Consistent with the City and County EOP.** The proposed project's Wildland Fire Evacuation Plan (Appendix P2) does not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. There is no known, officially adopted, publicly available evacuation plan for the greater Santee area. Hence, the proposed project-specific evacuation plan focuses on preparing the residents so they are familiar with direction they may be given during a wildfire emergency and does not conflict with any adopted evacuation plans. The Wildland Fire Evacuation Plan incorporates concepts and protocols practiced throughout the County. The San Diego County Evacuation Annex follows basic protocols set forth in the City of Santee's and the County of San Diego's Operation Area EOP and the California Master Mutual Aid Agreement, which dictate who is responsible for an evacuation effort and how regional resources will be requested and coordinated. In addition, the proposed

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<sup>2</sup> <https://www.readysandiego.org/alertsandiego/>.



project's Wildland Fire Evacuation Plan includes standards that can be integrated into a regional evacuation plan when and if the area officials and stakeholders (Santee Fire Department, County OES, California Department of Forestry and Fire Protection [CAL FIRE], SDCFA, OES, SDCSD, and others) complete one. The proposed project's Wildfire Evacuation Plan has been reviewed and accepted by the Santee Fire Department.

**Law Enforcement Takes Lead on Evacuations.** The SDCSD is the lead agency for evacuations of Santee, including the proposed project. The SDCSD, as part of a Unified Command, assesses and evaluates the need for evacuations, and orders evacuations according to established procedures. Additionally, the SDCSD identifies available and appropriate evacuation routes and coordinate evacuation traffic management with Caltrans, CHP, other supporting agencies, and jurisdictions. The following process describes how emergency evacuation decisions are coordinated, allowing emergency managers and other supporting response organizations to make collaborative decisions.

**Law Enforcement, OES and Fire Agencies Determine Evacuation Routes.** Evacuation routes are determined by 1) jointly prepared pre-wildfire plans (e.g., Rhode & Associates,<sup>3</sup> SDCFA, Cal Fire, and others) that indicate the likely fire scenario, and how traffic can be moved from an area, and 2) in real time using data reflecting fire location, movement, and projected path considering downstream traffic and most vulnerable populations. As indicated above, real-time evacuations in Santee are primarily managed by SDCSD, which relies on input and situational awareness provided by the Incident Command and supporting agencies. SDCSD coordinates with Caltrans and CHP for road management during evacuations. The pre-prepared evacuation plans, such as the proposed project's Wildland Fire Evacuation Plan, are guidance documents only and meant for resident preparedness. The City of Santee and San Diego County emergency service agencies have separately prepared regional wildfire response plans that guide emergency responses and evacuation procedures. Actual field conditions supersede prepared subdivision-specific evacuation plans, but these plans educate local residents about what to expect in an evacuation scenario.

**Factors Affecting Evacuation Timing and Routes.** The main factors affecting the timing and routing of evacuations are those related to the nature of the wildfire. For example, is the fire uncontrollable and does it have the capability of affecting a wide area? How will its movement and projected path play into evacuation route decisions? A key component of evacuations is the weather. On non-windy days and days with higher humidity, it is far less likely for a vegetation ignition to burn out of control and therefore, evacuation notifications are not typical. Windy, low humidity days (Red Flag Warning days) are far more prone to result in vegetation ignition escape and spread, resulting in far more sensitive evacuation trigger thresholds.

Evacuation routes that are considered acceptable when a wildfire is distant may be considered unsafe when a wildfire is in closer proximity. Having alternative routes offers flexibility for

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<sup>3</sup> <http://www.rohdeassociates.net/wui-fire-plans>.

decision makers and having the contingency option of being able to temporarily refuge citizens within fire hardened structures offers yet another option in an environment where optionality is extremely valuable. Changes in wildfire behavior and traffic flow do alter how evacuation orders are implemented. Evacuation orders are based on a great deal of input, contemplation, situational awareness, and pre-planning. Evacuations may be altered to focus on controlling downstream intersections so that a population that is at highest risk can be moved before other populations that are considered at lower risk are allowed passage. This occurs often during wildfires. As weather conditions change and influence wildfire movement, evacuation orders will also shift, typically including larger areas. San Diego County Fire and Law Enforcement Agencies and related partners have a robust ability to rationally predict wildfire movement. This is accomplished through pre-fire planning and fire behavior modeling, working with University of California San Diego's WIFIRE lab advanced wildfire behavior projection technology, and SDG&E's weather system network. More than \$500 million has been invested to enhance the County's fire prevention, detection, response, suppression, and recovery capabilities since the 2003 Cedar Fire.<sup>4</sup> These efforts have proven effective in successfully managing wildfire events, such as was accomplished during the successfully managed 2017 Lilac Fire.

**Fire Agencies and Law Enforcement Do Not Use Subdivision-Specific Evacuation Plans.** Agencies involved in implementing an evacuation order would not rely on a project-specific evacuation plan. Individual residential subdivision evacuation plans prepared in the County have been prepared as a tool to help residents be aware of wildfire evacuations, their potential evacuation routes, and the fact that they may be directed to stay in their homes in lieu of evacuating. Further, Incident Commands and law enforcement are not bound by subdivision-specific evacuation plans. Instead, evacuation managers would rely on situation awareness that dictates decision-making and where possible, on wildfire pre-plans. The wildfire pre-plans are an operational tool provided to emergency responders that provide high-level fire environment, assets at risk, preferred evacuation approaches, and other safety information to responding personnel to inform evacuation decision-making.

**Modeling Evacuation Scenarios and Estimating Evacuation Time.** Modeling potential traffic impacts during an evacuation would include assumptions for the following variables (at a minimum): number of existing vehicles (various methods), number of project vehicles (various methods), roadway capacities (maximum lane capacity discounted or provided a premium if enhancements are provided – e.g., extra lanes, lane widening, signaling intersections), total intersections, final destination, targeted evacuation area, total mobilization time, and others. Every fire scenario would include different assumptions. But the assumptions would change, depending on how a fire spreads, spots, and new fires start and impact routes being relied upon. Wildfire pre-plans typically relied upon by the emergency decision makers for evacuation include key

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<sup>4</sup> <https://www.sandiegocounty.gov/content/dam/sdc/sdcfa/documents/prevention/2019-Wildfire-update-5-6-2019.pdf>.

operational information without attempting to model evacuation traffic because the results would be unreliable. These plans define wildfire categories: extreme fire weather, fire weather, and typical (and within each of these categories, there could be a wide variety of conditions related to high wind/low humidity v. low wind/low humidity v. high wind/high humidity vs low wind/high humidity, etc.). Moreover, there would be variations based on the vegetation communities and terrain. Spot fires are difficult to predict without real-time weather conditions (wind direction and intensity, relative moisture level/humidity) and can affect fire spread rates and evacuation routes. There would also be many variations depending on where the ignition occurred. Simply put, there are many hundreds, perhaps thousands, of potential modeling scenarios and the results would be of limited value because the modeling would not be relied upon by emergency responders during an evacuation event.

#### **4.2.10 Fire Ignition and Risk**

Some comments question whether the EIR includes sufficient evidence to support the conclusion that the proposed project's fire safety measures will not exacerbate existing wildfire risk to adjacent communities. These comments imply that the proposed project will increase the risk of fire ignition on the proposed project property, which is currently undeveloped. This thematic response addresses the concern that the proposed project would increase fire ignitions and related risk.

#### **New Development in the Wildland-Urban Interface and Fire Ignition Risk**

**Data Do Not Support Assumptions That New Development Increases Fire Ignition Risk.** Some of the comments received suggested that placing a new residential project in Santee's wildland-urban interface (WUI) will increase the risk of fire ignition. The data, however, do not support that conclusion. According to the available evidence, no large fires in the County since 1990 were determined to have been started within a nearby master planned, ignition-resistant subdivision or neighborhood. Syphard and Keeley (2015 --Location, timing and extent of wildfire vary by cause of ignition) summarized all wildfire ignitions included in the CAL FIRE and Resource Assessment Program database, dating back over 100 years. They found that in the County, equipment-caused fires were by far the most numerous, and these also accounted for most of the area burned; power line fires were a close second. Ignitions classified as equipment-caused frequently resulted from exhaust or sparks from power saws or other equipment with gas or electrical motors, such as lawn mowers, trimmers or tractors. These ignition sources are typically associated with lower-density housing, not higher-density housing such as that contemplated by the proposed project where the large fuel modification zones (FMZs) would be maintained by professional contractors instead of individual homeowners. These same large FMZs would separate homeowner maintained areas from the unmaintained wildland areas, providing a buffer against accidental ignitions. It is noted that electrical transmission lines would be undergrounded within the proposed project. Further, SDG&E has become California's leader in fire safety among electric utilities, spearheading numerous new fire safety programs and investing heavily in fire preparedness, prevention,

detection, response, and recovery. Additionally, SDG&E is considered the leading electrical utility in California regarding its fire prevention and fire safety practices. SDG&E has invested heavily in developing a robust weather monitoring system with fire detection capabilities, fire hardening of its system, and fire awareness and outreach.

**Data Indicate That Lower-Density Housing Poses Greater Ignition Risk.** In the County, ignitions were more likely to occur close to roads and structures, and at intermediate structure densities. This is likely because lower-density housing creates a wildland-urban intermix rather than an interface. The intermix places housing among unmaintained fuels, whereas higher-density housing such as the proposed project converts all fuels within the footprint and provides a wide, managed fuel modification zone separating homes from unmaintained fuel. Syphard and Keeley (2015 – see footnote 1) determined that “the WUI, where housing density is low to intermediate, is an apparent influence in most ignition maps.” This further enforces the notion that lower-density housing is a larger ignition issue than higher-density communities. Syphard and Keeley also state that “development of low-density, exurban housing may also lead to more homes being destroyed by fire” (Syphard et al. 2013). However, neither of these findings considers the fire hazard and risk reduction associated with homeowners association (HOA) managed FMZs and ignition-resistant structures. In addition, the study found that frequent fires and lower-density housing growth may lead to the expansion of highly flammable exotic grasses that can further increase the probability of ignitions (Keeley et al. 2012). This is not the case with the proposed project, where the landscapes would be managed and maintained to remove exotic fuels that may become established over time. The Fire Protection Plan (Appendix P1) plant palette restrictions, combined with HOA maintenance and twice yearly 3rd party review/inspections of FMZ would minimize the establishment and expansion of exotic plants, including grasses. Based on research of the relevant literature and extensive conversations with active and retired fire operations and prevention officers, there is credible evidence to suggest that new residential neighborhoods built to the requirements of the County’s Fire and Building Codes increase the risk of wildfire ignition. Rather, the data indicate that roadways, electrical distribution lines, and lower-density residential projects (that do not have HOA enforced restrictions and annual inspections) are the primary causes of increased wildfire ignition. It is important to note that the proposed project would provide roadside fuel modification throughout the project area and on either side of all new roadways and that its electrical lines will be subterranean.

Importantly, the technical literature referenced in some comments and the latest research do not show a simple or direct correlation between new development in the WUI and increases in fire ignition or acres burned follows.

Syphard and Keeley, in a recent article, found that fire frequency in California increased through most of the twentieth century, peaking in 1980 but has since decreased steadily through 2016, despite significant population growth and more development in the WUI (Keeley and Syphard,

“Historical Patterns of Wildfire Ignition Sources in California Ecosystems,” *International Journal of Wildland Fire*, 2018, Volume 27, pp. 781–799). Here are some of the article’s key findings:

- “Particularly striking about California ignitions is the steady increase in the number of fires since the early 1900s until a peak c. 1980, followed by a marked drop in fire frequency up to 2016” (p. 793).
- “Factors that may have played a role in these historical patterns of ignitions and area burned are changes in: population density, infrastructure development, fire prevention success, fire-suppression effectiveness, vegetation-management practices, climate, and possibly record-keeping accuracy” (p. 794).
- “Not directly related to changing demography is the significant decline in fires in the last several decades – while population continued to grow after 1980, fire frequency was negatively related to population density. This is consistent with the pattern of fire activity peaking under intermediate population density” (p. 796).
- “Decreasing ignitions over the last 4 decades is potentially reflective of increasing efficiency of fire prevention. However, it also likely reflects changes in human infrastructure; new roads in this area were tied to development projects that required demonstration of adequate fire response capabilities” (p. 796).
- “In addition, an important factor behind declining ignitions is quite possibly the emergence of the California Fire Safe Council in the early 1990s, which made significant contributions to fire-safety education” (p.796).

Keeley and Syphard also found that since 1980, arson fires had decreased substantially, both in terms of number and area burned (p. 797). They noticed the same downward trend with respect to fires caused by smoking, children playing with fire, and motor vehicles. (p. 797.) The only ignition source that resisted this trend was electrical power lines; fires from this source continued to increase between 1980 and 2016. (p. 797.) According to the article, “although powerlines do not account for many fires, they often account for substantial area burned . . .” (p. 797). With regard to the proposed project, however, power line ignitions are less of an issue, since all such lines will be subterranean. Note also that SDG&E has embarked on an aggressive program to fire-harden its transmission line infrastructure and initiate systems that will enable it to predict (or quickly detect) dangerous wind events and adjust grid-power accordingly. These and other measures are set forth in SDG&E’s 2020 Wildfire Mitigation Plan: [https://www.sdge.com/sites/default/files/regulatory/SDG%26E%202020%20Wildfire%20Mitigation%20Plan%2002-07-2020\\_0.pdf](https://www.sdge.com/sites/default/files/regulatory/SDG%26E%202020%20Wildfire%20Mitigation%20Plan%2002-07-2020_0.pdf) (Section 5, pages 37 through 182).

The findings set forth in “Historical Patterns of Wildfire Ignition Sources in California Ecosystems” indicate that the mere presence of new development in the WUI does not equate to increases in fire ignition or acres burned. Rather, the arrangement of the development within the landscape, as well as the fire-resistant features of the community and the homes themselves, will determine whether a given development will or will not add to the local or regional fire risk.

#### 4.2.11 Fire Protection and Safety

Comments submitted in response to the EIR expressed concerns or requested information regarding the proposed project's location within a very high fire hazard severity zone, the features that would be provided to protect residents and structures, landscape and fuel modification zone definition, fire behavior modeling, access and road details, potential for increased ignitions, and related fire safety topics. This thematic response addresses commenters' issues regarding fire protection and safety at the project site, the defensibility of modern subdivisions, and temporary refuge strategies. This response does not address all fire protection, planning, design, monitoring and maintenance features and procedures that would be required of the proposed project. The reader is directed to responses to individual comments and the Final EIR, as well as the Fire Protection Plan (Appendix P1).

#### Fire Defensibility of Modern Residential Subdivisions

Not all fires can be avoided and residents throughout wildland-urban interface areas should therefore be prepared for wildfire. However, it is important to understand that potentially high fire hazard does not equate to high risk of structural loss if varying types of available and effective mitigation practices are employed to reduce such risk. Unprepared structures and residents within a low fire hazard area may be at higher risk than well prepared structures and residents in a high fire hazard area.

**Modern Subdivisions and Master Planned Communities Are Easier to Defend Than Neighborhoods with Older Homes.** San Diego County Fire Authority, Rancho Santa Fe Fire Protection District, and many other fire agencies (personal communications with Dudek and at Public Hearings between 2016 and 2019) have indicated that communities built to the standards required in Santee and the County in WUI or fire hazard severity zones, and maintained on an ongoing basis, enable them to allocate resources where they are needed most (i.e., in the older communities) while defending the newer communities with significantly fewer engines. Deploying fire fighters in new communities offers safe refuge due to the wide FMZs and ignition-resistant structures and landscapes. The requirements for ignition-resistant structures and landscapes that are maintained in ignition-resistant communities are designed to minimize impacts on residents, their property and fire agencies protecting them. These requirements have become part of the fire and building codes because they were found to be effective and important for protecting structures from ignition in post-fire assessments conducted by public agencies charged with fire protection. This is why newer communities are considered for contingency temporary refuge. Modern residential subdivisions in Santee are built to very strict requirements that have evolved over approximately 20 years to include a focus on ignition resistance. Following the 2003, 2007, and 2010 wildfires, assessment teams were formed to evaluate every home that was damaged or lost as well as, for the first time, homes that were saved. The resulting data, revealed that most homes lost were the result embers penetrating the attic or other openings, and that the buildings or homes lost were typically

situated among heavy, unmaintained landscape fuels. Saved homes were strongly linked to newer, more resistant construction materials and methods such as ember-resistant vents, boxed eaves, and other methods described in the Fire Protection Plan (Appendix P1), as well as maintained fuel buffers. These fire protection features are effective, as evidenced by numerous newer master planned communities in Southern California that have been subjected to wildfire and performed well. Examples include Cielo in Rancho Santa Fe, 4S Ranch in San Diego, and others in Orange, Los Angeles, Ventura, and other counties. Older communities throughout California continue to be the largest contributors to fire-destroyed homes, as occurred in Paradise during the Camp Fire (2018). Further evidence can be found in the Institute for Business and Home Safety Mega Fires – The Case for Mitigation (2007) report which discusses findings from the 2007 Witch Creek Fire, and the National Institute of Standards and Technology publication NIST Technical Note 1796, A Case Study of a Community Affected by the Witch and Guejito Fires: Report No. 2 – Evaluating the Effects of Hazard Mitigation Actions on Structure Ignitions. This study focused on a particular Rancho Bernardo community and findings associated with the 2007 Witch Creek Fire.

The following are various design features and measures the proposed project would employ to improve safety and reduce risk to life and property of its residents:

- Meets City of Santee Fire Code Amendments including enhanced ignition-resistant construction materials and methods
- Meets California State Fire Code
- Meets State Title 14 (Fire Safe Regulations, SRA)
- Meets Chapter 7A of the California Building Code building construction material requirements for WUI areas
- Customized FMZ – Irrigated buffer around project perimeter. Wider than required where considered needed
- Defensible space around each structure meeting code and including site-wide landscape vegetation restrictions
- Latest Ignition-Resistant Construction Materials – create fire hardened structures
  - Exterior walls of all structures and garages would be constructed with approved non-combustible (stucco, masonry, or approved cement fiber board) or ignition-resistant material from grade to underside of roof system. Wood shingle and shake wall covering would be prohibited. Any unenclosed under-floor areas would have the same protection as exterior walls. Per City Building Code, Chapter 7-A: Exterior wall coverings would extend from top of foundation to the underside of roof sheathing, and terminate at 2-inch nominal solid wood blocking between rafters at all roof overhangs, or in the case of enclosed eaves, terminate at the enclosure). The underside of any cantilevered or overhanging

- appendages and floor projections would maintain the ignition-resistant integrity of exterior walls, or projection would be enclosed to grade.
- Eaves and soffits would meet the requirements of SFM 12-7A-3 or be protected by ignition-resistant materials or non-combustible construction on the exposed underside, per City Building Code.
  - There would be no use of paper-faced insulation or combustible installation in attics or other ventilated areas.
  - There would be no use of plastic, vinyl (with the exception of vinyl windows with metal reinforcement and welded corners), or light wood on the exterior.
  - All roofs would be a Class “A” listed and fire-rated roof assembly, installed per manufacturer’s instructions, to approval of the City. Roofs would be made tight with no gaps or openings on ends or in valleys, or elsewhere between roof covering and decking, in order to prevent intrusion of flame and embers. Any openings on ends of roof tiles would be enclosed to prevent intrusion of burning debris. When provided, roof valley flashings would not be less than 0.019 inch (No. 26 gage galvanized sheet) corrosion-resistant metal installed over a minimum 36-inch-wide underlayment consisting of one layer of 72 pound ASTM 3909 cap sheet running the full length of the valley.
  - No vents in soffits, cornices, rakes, eaves, eave overhangs or between rafters at eaves or in other overhang areas. Gable end and dormer vents to be at least 10 feet from property line or provided alternative design resistant to ember penetration. Vents in allowed locations would be protected with wire mesh having no openings greater than 0.125 inch. Vent openings would not exceed 144 square inches. Vents would be designed to resist the intrusion of any burning embers or debris.
  - Vents would not be placed on roofs unless they are approved for Class “A” roof assemblies (and contain an approved baffle system (such as Brandguard or O’Hagin vents) to stop intrusion of burning material) or are otherwise approved.
  - Turbine vents would be prohibited.
  - Exterior glazing in windows (and sliding glass doors, garage doors, or decorative or leaded glass in doors) would be dual pane with one tempered pane, or glass block or have a 20-minute fire rating. Glazing to comply with CBC Chapter 7-A.
  - Any vinyl frames would have welded corners and metal reinforcement in the interlock area to maintain integrity of the frame certified to ANSI/AAMA/NWWDA 101/LS 2 97 requirements.
  - Skylights would be tempered glass.
  - Rain gutters and downspouts would be non-combustible. They would be designed to prevent the accumulation of leaf litter or debris, which can ignite roof edges.



- Doors to conform to SFM standard 12-7A-1, or would be of approved non-combustible construction or would be solid core wood having stiles and rails not less than 1 3/8 inches thick or have a 20-minute fire rating. Doors would comply with City Building Code, Chapter 7-A. Garage doors would be solid core 1.75-inch-thick wood or metal, to comply with code.
- Decks and their surfaces, stair treads, landings, risers, porches, balconies would comply with language in City Building Code, Chapter 7-A and be ignition-resistant construction, heavy timber, exterior approved fire retardant wood, or approved non-combustible materials.
- Decks or overhangs projecting over vegetated slopes would not be permitted. Decks would be designed to resist failing due to the weight of a firefighter during fire conditions. There would be no plastic or vinyl decking or railings. The ends of decks would be enclosed with the same type of material as the remainder of the deck.
- There would be no combustible awnings, canopies, or similar combustible overhangs.
- No combustible fences would be allowed within 5 feet of structures on any lots. The first 5 feet from a structure would be non-combustible or meet the same fire resistive standards as walls.
- All chimneys and other vents on heating appliances using solid or liquid fuel, including outdoor fireplaces and permanent barbeques and grills, would have spark arrestors that comply with the City Fire Code. The code requires that openings would not exceed 1/4-inch. Arrestors would be visible from the ground.
- Any liquid propane gas (LPG) tanks (except small barbecue and outdoor heater tanks), firewood, hay storage, storage sheds, barns, and other combustibles would be located at least 30 feet from structures, and, within the FMZ, 30 feet from flammable vegetation. There would be no flammable vegetation under or within 30 feet of LPG tanks, or tanks would be enclosed in an approved ignition-resistant enclosure with 10 feet clearance of flammable vegetation around it. In no case would a tank be closer than 10 feet from the structure (consultant recommendation). City Fire Code requires 10 feet of clearance of native vegetation, weeds, and brush from under and around LPG tanks.
- Storage sheds, barns, and outbuildings would be constructed of approved non-combustible materials, including non-combustible Class A roofs and would be subject to the same restrictions as the main structure on lot.
- Additionally, any of the above-listed structures (i.e., outbuildings, storage sheds, barns, separate unattached garages) that are 500 square feet or less in size and 10 or more feet from an adjacent structure would be not be required to include automatic fire sprinklers. Locations, and required FMZs, would be

subject to approval of City Fire Marshal and the Building Official based on size of the structure.

- Emergency Response Preparedness – populace would be ready and aware
- Suppression and Protection Capabilities – New Fire Station on site would improve City fire protection capabilities
- Water Supply – would provide firefighting water throughout the site with supplemental pumps and backup power where needed
- Public Notification/Alerts – would actively pursue resident registration with Alert San Diego
- Evacuation Planning and “Ready, Set, Go!” – part of an aware and ready populace
- Fire Protection Plan (Appendix P1) has been accepted by the Santee Fire Department
- Underground proposed project electrical transmission lines would eliminate a leading ignition source for large wildfires
- Road infrastructure –roads would be built to Specific Plan standards and include two primary access routes with multiple interconnections south of the proposed project
- Defensible higher-density development would be provided versus development inter-mixed with habitat
- Community design would create large ignition-resistant landscape/fuel break. Enables law enforcement and fire personnel options and flexibility for firefighting and evacuation or temporary refuge

### **Fuel Modification Zones**

In addition to ignition-resistant construction measures, including important ember-resistant vents to minimize the potential for structure fires from airborne embers, the proposed project has provided a customized fuel modification plan that includes code-exceeding design and wider areas where terrain would otherwise support more aggressive fire behavior.

**The Role Fuel Management Zones (FMZs) Play in Fire Protection.** FMZs provide managed and maintained separation between structures and infrastructure and the unmaintained wildland fuels. This setback is considered fuel modification zone and defensible space because it enables firefighters to safely position themselves at the development edge and begin tactical protection efforts. The FMZs essentially starve advancing wildfire of fuel through the outer thinning zones (where native fuels are reduced so that no more than 50 percent of the ground is covered by plant canopy and includes removal of the highest flammability species), then an inner irrigated zone removes all native plants and replaces them with fire resistive species that are kept irrigated and with high internal moisture, which results in more difficult ignition. The proposed project’s FMZs are provided access for maintenance and for firefighting efforts at regularly spaced intervals and would be inspected twice per year to confirm they are maintained to function as intended. Fire behavior is affected as a wildfire burns into the thinned zone. Flame lengths drop, spread rates are reduced, and intensity decreases. This process continues as fire burns into the irrigated zone where flame lengths, spread

rates and intensity are reduced substantially and wildfires become spotty and with much lower heat output. FMZs or “brush management” was initially made part of the Public Resources Code 4290 and 4291 to protect natural resources from fires originating in neighboring developed areas. FMZs have since become focused on protecting communities and structures, but they continue to have the same benefit of buffering preserved open space areas from accidental ignitions within communities and providing a caveat to comment referenced research that does not consider the presence of maintained FMZs and its reducing/minimizing effect on wildfire ignitions. Positioning the low plant density, irrigated zone directly adjacent to the structures provides a significant buffer between a house or other landscape fire and native vegetation. The same way that FMZs setback a wildland fire from structures, the FMZs setback a structure fire from the more burnable native plants. Embers can be generated by a structure fire and can be blown over the FMZs into native fuels, but the inclusion of automatic sprinklers in every building which are very effective at controlling structure fires to the room of origin and minimizing the potential for structure loss, combined with the presence of staffed fire stations with fast response significantly reduces the potential for a structure fire to reach a size that would produce significant fire and embers. The highest likelihood of vegetation ignitions would be related to roadways, which the Fire Protection Plan (Appendix P1) dictates would be provided roadside FMZ throughout the project area and along both sides of access roads up to 50 feet. In addition, the proposed project would provide 100 feet of FMZ along existing residential areas as additional protection from wildland fire. These FMZs would occur on the periphery of the proposed project as a method to protect existing neighbors from direct flame impingement. Embers may still represent a threat to these existing homes, and it is recommended that these neighbors harden their structures through retrofits and landscape maintenance to protect against the ember threat, which exists today.

## **Fire Protection and Response Infrastructure**

**Fanita Ranch Planned Amenities Improve Fire Response and Fire Safety.** The proposed project includes various improvements and amenities that would improve fire response and fire safety. The Santee Fire Department has accepted Fire Protection Plan (Appendix P1). The fire protection approach and individual requirements that provide fire safety include the following:

- Site access would comply with the requirements of the 2019 or most recently adopted California Fire Code and City Ordinance No. 570. The proposed project’s circulation system would consist of both public and private roads with each being built to the respective standards and maintained by a funded entity (public roads maintained by the City, private roads maintained by an HOA and/or CFD).
- At least two points of primary access for emergency response and evacuation would be provided into the Fanita Ranch community. All interior residential streets would be designed to accommodate a minimum of a 77,000 pound fire truck. SFD would participate in approval of street names.

- Primary access would be via Fanita Parkway, which would be improved to include the following:
  - Mast Boulevard to Lake Canyon Road – four lanes (two northbound and southbound) with 31 feet paved curb-to-curb in each direction within an 89 to 97 foot-wide right-of-way (ROW) (Vesting Tentative Map [VTM] Section 1).
  - Lake Canyon Road to Ganley Road - three total lanes (two southbound and one northbound) with 31 feet paved curb-to-curb on southbound side and 20 feet curb-to-curb northbound side for a total of 51 feet paved within a 78 to 86 foot-wide ROW (VTM Section 1A).
  - Ganley Road to the Fanita Community – one lane each direction, 22 feet paved curb-to-curb southbound side, which includes a 10-foot emergency/bike lane and 20 feet curb-to-curb northbound side within a 69 to 77-foot-wide ROW (VTM Section 4).
  - Fanita Parkway (Street E to Street N) – one lane each direction, 22 feet paved curb-to-curb southbound side and 25 feet curb-to-curb northbound side within a 83-foot-wide ROW (VTM Section 5).
  - The proposed project includes additional primary access to the south via Cuyamaca Street, providing ingress by fire agencies and egress by residents and visitors.
  - The Orchard Village includes a looped road system that provides residents with two access routes connecting to the remainder of the proposed project, at which point there are additional routes to the primary and secondary egress routes.
  - Fire department engine access points would be provided at dead end streets on the southerly, easterly, and westerly sides of existing, neighboring developments where they do not currently exist. These access points would be provided at SFD designated key points. Appendix D-4 of the Fire Protection Plan (Appendix P1) presents the locations of engine access points onto the southern portion of the proposed project property. Engine access would be facilitated via mountable curbs and accessible gates with Knox padlocks.
  - All on-site road widths would be constructed according to the Specific Plan standards. All streets within the project, public and private, include on-street parking when there is at least 36 feet of paved road width. Parking would be restricted along red curb painted fire lanes and by posting of signs stating “No Parking; Fire Lane” correctly marked per the California Vehicle Code to preserve the unobstructed width for emergency response. The signs would include language identifying the towing company and their phone number enabling legal enforcement of the no parking areas.
  - All fire access and vehicle roadways would be of asphaltic concrete, except as noted for grades exceeding 13 percent and designed and maintained to support the imposed loads of fire apparatus (not less than 77,000 pounds) that may respond,

including Type I engines, Type III engines, and ladder trucks. Access roads would be completed and paved prior to issuance of building permits and prior to the occurrence of combustible construction.

**On-Site Fire Station.** Having a fully staffed fire station within a community with the ability to respond quickly to all emergencies, including fire ignitions, is a benefit that increases fire safety and reduces fire risk. It has been a common fire industry estimate that most vegetation fire ignitions, estimated at 90 percent (Environmental Information Center 2020) occur during normal weather (non-extreme fire weather) and these fires account for approximately 10 percent of the total land area burned. This indicates that vegetation fires under normal weather conditions are controllable and fast response to these fires helps control them at small sizes. The 10 percent of fires that occur during extreme fire weather account for 90 percent of the burned area. These fires can quickly surpass efforts to control them and the need for a fast response to these types of vegetation fires is considerable if there is any likelihood of controlling/extinguishing them when they are small. The presence of an on-site station provides for fast response. Additional “eyes and ears” of residents in the project area heightens the likelihood of quick detection and reporting, enabling a fast response to ignitions. Structural fire ignitions are similar in that fast responses would reduce the fire’s ability to spread from the room of origin and limit the overall ability of a structural fire to result in a structure loss, which would be the primary ember producing “fuel” within a new development. However, even though fast fire station response would be provided, a built-in protection that is designed to provide for safe egress from a house fire is the automatic fire sprinkler system. These systems have been shown to contain interior fires to the room of origin and literally begin the process of fire suppression before firefighters arrive. The on-site fire station would primarily respond to medical emergencies, which would result in fast medical assistance throughout the proposed project and to surrounding neighborhoods.

**Water Service for Fire Suppression.** Water is a key component to fighting wildfire and protecting structures. Providing water where it is not currently available, especially when it is provided in a protected environment like the ignition-resistant landscapes of a new master planned community, enables firefighters to protect homes and work to control a wildfire’s advancement. New communities are required to provide fire hydrants meeting flow, volume and duration specifications at intervals designed to assist in fighting structural fires. These hydrants provide opportunities for wildland fire engines to stage, fill engine tanks, set up dip tanks for helicopter firefighting efforts, and sustain a fire fight. The proposed project’s location offers a large area of converted landscape, a fuel break, which offers opportunities for fighting and controlling wildfires before they encroach upon existing neighborhoods. The proposed project changes fire behavior at the site due to the conversion of fuels to ignition-resistant landscapes and, combined with aerial fire retardant drops, extend outward to slow or stop a fire’s advancement.

## Temporary Refuge as Contingency Option

**Temporary Refuge Defined.** Temporary refuge is the practice of going or remaining indoors during or following an emergency event. This procedure is recommended if there is little time for the public to react to an incident and it is safer for the public to stay indoors for a short time rather than travel outdoors, but only when fire protection features are provided that result in ignition-resistant community structures and where defensibility is apparent. Temporary refuge, or sheltering-in-place also has many advantages because it can be implemented immediately, allowing people to remain in their familiar surroundings and providing individuals with everyday necessities such as telephone, radio, television, food, water, and clothing. However, the amount of time people can stay sheltered-in-place is dependent upon availability of food, water, medical care, utilities, and access to accurate and reliable information.

**Temporary Refuge Strategies.** The decision on whether to evacuate or temporarily refuge is carefully considered with the timing and nature of the incident (County of San Diego 2014). Sheltering-in-place is the preferred method of protection for people that are not in the direct path of a hazard. This reduces congestion and transportation demand on the major transportation routes for those that have been directed to evacuate by police or fire personnel. When a community is within the projected path of a wildfire, temporary refuge is a contingency option, but the preferred approach is to evacuate early. Like most new master planned communities that incorporate ignition-resistant construction, delineate wide FMZs, and provide defensibility throughout the project site, responding fire and law enforcement personnel would be able to direct residents of the proposed project to temporarily refuge in their homes or within designated structures such as the school or Village Center if it is determined to be safer than evacuating, such as if an early evacuation is not possible.

**Evacuation v. Temporary Refuge.** Temporarily refuging on site during a wildfire is not recommended or viable in all buildings or communities. Further, temporarily refuging from wildfire is not the planned approach or preferred approach by fire agencies, even in communities that are designed, constructed, and maintained to withstand significant wildfire. The planned and preferred approach, given the ability to do so, is to evacuate a community and evacuate it early, long before a fire is threatening. When this is not possible, however, such as when a fire ignites nearby or otherwise does not enable enough time to fully evacuate, then temporary refuge is an important contingency plan. Evidence supporting the viability of sheltering in protected buildings requires an understanding of the previously described after-action reports and post-fire save and loss assessments. This information, coupled with the extensive research that goes into determining how fire and embers affect structures and how construction materials and methods can protect structures from ignition, provides insight into how buildings can be ignition resistant. Ignition and ember-resistant structures set back from wildfire by appropriate fuel modification zones/defensible space buffers result in the ability to temporarily refuge as a contingency option. Rancho Santa Fe includes four communities

designated as shelter in place/temporary refuge sites (Cielo, The Crosby, 4S Ranch, and The Lakes). In addition, there are many examples of people sheltering in open-air spaces or in buildings during wildfires, including within the town of Paradise in 2018 where nearly 150 people sheltered in an open-air parking lot that included buffers from adjacent fuels and others sheltered in a church. During the 2003 Cedar Fire, hundreds of people sheltered in the Barona Casino and hundreds of students were sheltered in the protected gymnasium in the Tea Fire on the Westmont College campus. Similarly, hundreds of students were sheltered on the Pepperdine Campus instead of evacuated during the 2018 Woolsey Fire. Providing the last resort, contingency option of temporary on-site refuge is an important feature that new, master planned communities like the proposed project offer to fire agencies and residents by providing an additional option if evacuation cannot be fully implemented. This is not an option for the existing neighborhoods currently at the WUI adjacent to the proposed project site because the existing structures and landscapes were not specifically designed and constructed to withstand significant wildfire.

### **Fanita Ranch Land Plan Defensibility – Supporting Research**

The proposed project's higher-density housing with highly maintained, irrigated vegetative fuel between or around homes and perimeter FMZs to keep an active flaming front at great distances from structures supports defensibility and appropriate hardening for the fire environment. These features make the proposed project substantially more resilient to fire than low to medium density projects where vegetation is allowed to grow between and among structures. This point is well-established in the scientific literature. For example, Alexandra D. Syphard, a fire expert who has studied fire conditions in the County, has consistently maintained that low to medium density developments that are interspersed or inter-mixed with wildland vegetation have the highest risk of fire-related damage. Below are references to some of the studies:

Alexandra D. Syphard and Jon E. Keeley, "Why Are So Many Structures Burning in California," *Fremontia*, 2020, p. 30. ("Data show that fires tend to be most frequent at low to intermediate housing and population densities.")

Alexandra D. Syphard, Teresa J. Brennan, and Jon E. Keeley, "The Importance of Building Construction Materials Relative to Other Factors Affecting Structure Survival During Wildfire," *International Journal of Disaster Risk Reduction*, Vo. 21 (2017), p 141. ("These [low to medium density] exurban housing developments are also located within complex terrain and may be more difficult to access by fire suppression crews; thus, low housing density has shown to be a major factor contributing to structure destruction in the [San Diego County] region.")

Alexandre, Patricia M., Susan I. Stewart, Miranda H. Mockrin, Nicholas S. Keuler, Alexandra D. Syphard, Avi Bar Massada, Murray K. Clayton, and Volker C. Radeloff, "The Relative Impact of Vegetation, Topography and Spatial Arrangement on Building

Loss to Wildfires in Case Studies of California and Colorado,” *Landscape Ecol.* 2016) Vo. 31, p. 416. (“The probability that a building is lost is highest in small, isolated building clusters with low to intermediate building density and few roads.”)

Alexandra D. Syphard, Avi Bar Massada, Van Butsic, and Jon E. Keeley, “Land Use Planning and Wildfire: Development Policies Influence Future Probability of Housing Loss,” *PLoS ONE* Vol 8, Issue 8 (2013), doi:10.1371/journal.pone.0071708.

Thus, the EIR and Fire Protection Plan (Appendix P1) accurately reflect Ms. Syphard’s long-held position, which is that low-density development, when inter-mixed with wildland fuels, are at the highest risk of fire damage, while higher-density development, such as that contemplated in the proposed project fare much better. Higher-density communities tend to perform well because they are closer to roads and fire suppression services, and because they are designed to minimize fuel loads between structures. Such communities also tend to be newer and thus benefit from upgraded, ignition-resistant building materials.

Comments also criticized the EIR for relying on “fire-hardening” as a means of protecting people and structures from wildfires, claiming no evidence supports such reliance. Such comments are incorrect. The technical literature indicates that ignition-resistant construction materials and other fire-hardening measures significantly improve the ability of structures (and people) to survive wildfires. For example, in an article titled, “The Importance of Building Construction Materials Relative to Other Factors Affecting Structure Survival During Wildfire,” *International Journal of Disaster Risk Reduction*, Vol. 21 (2017), pp. 143–144, Alexandra Syphard states that the results of her study “confirm the expectation that building construction and design play important roles in structure survival during large wind-driven fire events in San Diego County, CA.” In this same article, Ms. Syphard recommends that owners of older homes retrofit them with modern fire-hardening components, such as double-paned windows (p. 145). Ms. Syphard then draws the following conclusion:

“The data in our study show that newer buildings are more likely to be constructed using the materials and design that our data show to be empirically associated with structural survival. This is an encouraging sign for new construction in the region, and it helps to explain why structure age was one of the most important variables in the landscape analysis. Clearly, building ordinances adopted by [San Diego] County are effectively changing the design of new housing to become more fire resilient” (p. 146).

In this same article, Ms. Syphard explains why the County (and by extension Santee since it is consistent with County codes) is at the forefront of mandating fire-resistant housing materials.

The County has been enforcing fire codes for building construction in the WUI since 1997, when it adopted a requirement for Class “A” residential roof covering on new construction; which means



that the roofing material must pass a relatively stringent series of fire tests. Adopted in 2001 and made a requirement in 2002, the first comprehensive WUI code in the County required, in addition to the above, dual glazed/tempered windows, residential fire sprinklers, rated exterior construction, fire-resistant decks and patios, no eave vents, no paper-backed insulation in attics, and 30 meter (100 feet) vegetation modifications around structures. The WUI fire code has undergone additional fire protection and ignition resistance revisions in 2004 and 2008 in response to the large fire events of 2003 and 2007. These regulations for fire-safe building construction are enforced through the issuance of building construction permits and approval of new subdivisions and thus they do not apply to older homes (p.141).

This passage indicates that the County is, and has been, at the forefront of requiring state-of-the-art fire-resistant construction for new homes. It also illustrates that the County, in response to the Cedar and Harris Fires, has improved those fire safety requirements and made them even more robust and protective. The proposed project structures would be subject to these updated requirements. This was not the case with the majority of homes that were destroyed in the Cedar Fire (2003), the Harris Fire (2007), the Tubbs Fire (Santa Rosa 2017), and Camp Fire (Paradise 2018).

The proposed project is required to comply with Santee's stringent housing material requirements, as listed above in the quoted passage from Ms. Syphard's article. The EIR and Fire Protection Plan (Appendix P1, Section 6.4) include the comprehensive list of requirements. In addition, the homes at the project would have closed eaves, and the structures would be fitted with state-of-the-art ember-resistant vents. This last element – the ember-resistant vents – is a newer product not found in the homes that were featured in Ms. Syphard's studies. They are critically important, however, as they are designed to prevent the most dangerous source of structure ignition during wildfires – namely, embers penetrating the interior of homes.

It appears that the commenters did not take fire-resistant project features into account. References to homes lost in recent wildfire events in Northern California as well as past wildfires in the County did not include such features. Those homes were of an earlier vintage and did not have the benefit of modern fire-resistant construction or ongoing landscape fuel management that is inspected twice per year. Please refer to Thematic Response – Northern California Contrast. Thus, they reasonably cannot be compared to the proposed project's planned structures which must comply with the City's updated and stringent fire-hardening requirements. Moreover, the homes lost in mentioned fires were interspersed with vegetative fuel, something not permitted in modern developments such as the proposed project.

The proposed project is not like Paradise or other communities that were built before current fire standards. The proposed project would include a multi-layered fire protection system that is based on ignition-resistant buildings and landscapes, adherence to stringent codes, firefighting water availability, swift emergency response, and sound evacuation planning that includes a contingency

option for residents who may be directed to temporarily shelter within the community during a wildfire evacuation. The proposed project, like other new, master planned communities, should not be compared with older, less restrictive communities that were not built to current codes and do not receive ongoing maintenance. Other new, nearby communities have performed extremely well during wildfires and given the proposed project's location, surrounding fire environment, and proposed fire protection plans, it is anticipated that the proposed project would represent lowered risk to both proposed project residents and nearby neighboring communities.

#### **4.2.12 Northern California Contrast**

Several comments referred to Northern California wildfires occurring between 2016 and 2018 as examples of the types of wildfires and damage that would occur at the project site. These comments generically claim that wildfire would behave similarly and that many structures would be lost and wildfires would result in chaotic and uncontrollable evacuations. The following thematic response addresses some of the significant differences between the Northern California and proposed project fire environments.

##### **Camp Fire and Paradise Comparison**

The Camp Fire in Paradise, California, is considered one of the most devastating wildfires in California's long history of wildfires. However, the town of Paradise contrasts starkly with newer development in Santee. Most structures in Paradise were built pre-1970, long before ignition-resistant construction materials and methods were required by the California Fire Code. Newer communities in Santee and specifically the proposed project would be built to ignition-resistant standards designed to protect structures from wildfire (Thematic Response – Fire Protection and Safety). Most of the homes and buildings in Paradise included wood siding, wood roofs, vent openings, and lack of managed/maintained fuel modification zones. Santee and the County's newer communities include a system of protection that includes protected exteriors, Class A roofs, protected vent openings, and managed and maintained fuel modification zones, along with interior protection through fire sprinkler requirements.

Paradise is situated in a dense conifer forest that grows in and throughout many of the town's communities, providing fuel to facilitate fire spread within the community. The City of Santee's and the County's new communities are situated in areas of mainly coastal sage scrub or chaparral habitat that is removed from the site and setback from the structures by perimeter fuel modification. Wildfire would not have fuels to facilitate its spread within the proposed project site, and perimeter defensible space would be customized to keep flames and heat away from homes. Many Paradise homes were lost to ember penetration. The proposed project's new homes would be protected by ember-resistant vent openings. Paradise was not practiced and prepared like the County emergency management agencies are for large fire events, and emergency notifications were not successfully executed well before fire approached. The County agencies have successfully evacuated large

numbers of people (e.g., 400,000 people in the Cedar Fire and 150,000 in the Witch Fire) and has utilized situational awareness and notification technology for successfully evacuating areas and moving people out of harm's way. Paradise had no contingency plan if an evacuation was considered unsafe. Some people who realized they would not have enough time to evacuate sought protection in hardened public structures or in open park areas and survived. The proposed project, because of the fire protection features and planning, offers emergency managers with more flexibility and a contingency to an unsafe evacuation via temporarily sheltering residents in their homes or other designated on-site spaces, which are planned, designed, and maintained to function as temporary shelters when needed.

The ecology, botany, and general landscapes in and around Paradise are very different than in Santee, specifically at the proposed project site and its surroundings. In general, the Northern California Sierra Nevada foothills are dominated by large, mature conifer forests. Santee on the other hand is largely dominated by a combination of coastal sage scrub, chaparral and non-native species. The native landscapes have both significantly changed over time from their historic conditions, which has had an influence on the types of fires that could occur in both locales. This is important to understand because as a result of the management approaches like fire exclusion in Northern California forests, the pine forests around Paradise have become denser than their historical open, park like densities and now include understory fuels that increase the wildfire risk substantially. Fire exclusion has caused the forests to miss many successive intervals of the normally low-intensity fire. In the absence of these small, mostly benign surface fires, the vegetation there grew to provide greatly increased surface fuel loading as well as increased vertical continuity of shade-tolerant trees into the canopy of the larger dominant trees, resulting in ground fuel, ladder fuels, and dense canopy fuels, traits which foster high-intensity crown fires, that when combined with high winds, result in a fast-moving wildfire as experienced in the 2018 Paradise Fire.

After project implementation, the landscape around the proposed project site would no longer consist of contiguous, fire-prone shrublands. While the fuels in the open space would have the potential to burn (especially under hot and dry Santa Ana wind conditions), the irrigated, maintained landscape around the proposed project development would retard the spread and intensity of wildfires as they burn in a reduced intensity, spotty manner. There would not be a uniform fire front as would be expected in an uninterrupted fuel bed. The perimeter FMZ would be designed to reduce available fuels in the outer extents, which reduces fire intensity and spread rates. The next FMZ zone, which would be irrigated, would further reduce fire intensity and spread rates as high moisture plants are difficult to ignite. The FMZ starves the fire of fuel which directly impacts its ability to spread. The proposed project as a whole represents a large fuel break on the landscape.

It should be noted, however, that the greatest change to fuels in both locales is due to the building of homes and other structures in the landscape. The homes in Paradise were built before building codes considered wildfire; homes in the proposed project, however, would be built to meet, and in

some cases exceed, the current, restrictive Santee Fire and Building Codes. Whereas Paradise's ecosystem has evolved to now foster high-intensity crown fires, the proposed project's ecosystem would be expected to actually impede the spread of wildfire due to the ignition-resistant landscape and structures associated with the proposed project.

### **Evacuation Planning and Preparedness**

In both the 2017 Tubbs Fire in Santa Rosa and the 2018 Camp Fire in Paradise, residential notification was largely lacking. This was due to a myriad of factors including fires quickly burning down cell towers, residents cancelling their landline services, timing of fire spread at night when many residents turn off their phones to facilitate sleep, lack of phone registration via residents not understanding the need to "opt in," visitors who were unaware of the service, and others.

The City of Santee and San Diego County offers a robust emergency notification system. The system, operated by the Office of Emergency Services, is known as Alert San Diego, and is capable of notifying tens of thousands of phone numbers in a very short time frame of an impending emergency. The system has been successfully employed in recent wildfires. The system has the capacity to push out emergency notices to both land lines and cell phones. In both instances, residents must "opt in" to the program by registering individual phones. In addition, there are many local news sources including television, radio, public broadcast, and social media that are used to reach affected citizens. In some cases, emergency responders will go street by street or door by door to notify residents of an evacuation.

The proposed project, the SFD, and the County incorporate the "Ready, Set, Go!" evacuation protocol. Part of this protocol is understanding when fire threat is at its peak. Red Flag Warnings declared by the National Weather Service provide emergency responders and residents with a warning that they should be prepared to take action if a wildfire develops. The focus of the "Ready, Set, Go!" program is on public awareness and preparedness, especially for those living in the WUI areas. The program is designed to incorporate the local fire protection agency as part of the training and education process in order to insure that evacuation preparedness information is disseminated to those subject to the potential impact from a wildfire. The "Ready, Set, Go!" program is compatible with phased evacuations and the temporary on-site refuge contingency option. There are three components to the program:

**"Ready" – Preparing for the Fire Threat.** Take personal responsibility and prepare long before the threat of a wildfire so you and your home are ready when a wildfire occurs. Create defensible space by clearing brush away from your home as detailed in the Fire Protection Plan (Appendix P1). Use only fire-resistant landscaping and maintain the ignition resistance of your home. Assemble emergency supplies and belongings in a safe spot. Confirm you are registered for AlertSanDiego system. Make sure all residents residing within the home understand the plan, procedures and escape routes.

**“Set” – Situational Awareness When a Fire Starts.** If a wildfire occurs and there is potential for it to threaten your home, pack your vehicle with your emergency items. Stay aware of the latest news from local media and your local fire department for updated information on the fire. If you are uncomfortable, leave the area.

**“Go!” – Leave Early.** Following your action plan provides you with knowledge of the situation and how you will approach evacuation. Leaving early, well before a wildfire is threatening your community, provides you with the least delay and results in a situation where, if a majority of neighbors also leave early, firefighters are now able to better maneuver, protect and defend structures, evacuate other residents who could not leave early, and focus on citizen safety.

“Ready, Set, Go!” is predicated on the fact that being unprepared and attempting to flee an impending fire late (such as when the fire is physically close to your community) is dangerous and exacerbates an already confusing situation. The proposed project’s Wildland Fire Evacuation Plan (Appendix P2) provides key information that can be integrated into the individual action plans, including the best available routes for them to use in the event of an emergency evacuation.

Because fires may ignite at any time of the day and may move rapidly under Santa Ana wind conditions, the proposed project would provide ongoing fire awareness training and resources to its residents. The goal is to create a fire aware community that understands the types of fire threats that may occur and what actions law enforcement or other officials may direct them to take.

## **Road Infrastructure**

Road infrastructure to facilitate ingress of firefighting equipment and egress of residents would be significantly better in the newly developed proposed project than in communities impacted by the fires in Northern California. Emergency planners in Paradise planned for average conditions in which the community would be evacuated in phases; unfortunately, the extreme fire behavior led to simultaneous evacuation of all residents, which greatly inhibited traffic flow on limited egress paths. The County (including for the City of Santee) has successfully implemented phased evacuations using its advanced situational awareness tools and notification technology, most recently in the Lilac Fire in 2017. Although it is possible that a fire ignites close to the proposed project site with less time available to evacuate residents than the time needed for the fire to encroach upon the perimeter FMZ, the fire intensity and built-in protections provides emergency responders with the contingency option of ceasing evacuations and directing residents to temporarily shelter in their homes. The ongoing training and fire awareness programs at the proposed project are expected to result in homeowners understanding the capabilities of their homes and the community.

Per the proposed project’s Wildland Fire Evacuation Plan (Appendix P2), ingress/egress would include primary and secondary evacuation routes. Unlike the road network developed long ago in

Paradise, the proposed project roads would be built to current standards, which calls for specific specifications for the following:

- Road width
- Grade
- Turning radii
- Maximum dead end road lengths
- Secondary access

Further, roadside vegetation clearance would be created and maintained, which would provide an additional buffer and hardening of the evacuation routes.

### **Evacuation Procedures and Capabilities**

The evacuation procedures and pre-planning in Santee and throughout the County are extensive and the practiced experience of County agencies is to a higher standard than that in Paradise. Indeed, previous wildfires in the County that caused large-scale evacuations have led to many “lessons learned” over the years, which have prepared first responders for significant fire events. Whereas Paradise planned for a smaller fire event during average weather conditions (which would enable a phased evacuation), the proposed project recognizes that fires would likely burn under Santa Ana wind conditions and have planned accordingly.

The proposed project would follow the “Ready, Set, Go!” approach to evacuation, where residents are expected to leave well before any wildfire might arrive into the community. That said, unforeseen conditions (and normal human nature of delaying evacuation to “see just how bad it’s going to get”) could potentially preclude safe evacuation of some residents. However, the very nature of the home construction and landscaping in the proposed project enables residents to passively shelter in their homes as a last resort. While certainly not the first choice to advance life/safety, it provides residents with a safer alternative than attempting to evacuate during a wildfire’s immediate passage.

Other communities in San Diego have successfully implemented this approach. For example, multiple residents who lived in “shelter in place” subdivisions in Rancho Santa Fe safely stayed in their homes during the 2007 Witch Creek Fire after evacuation was precluded. Most stated that while staying in their home was not their preferred option, it was much safer than evacuating as the fire burned through the area.

### **Wildfire Hazard v. Wildfire Risk**

Although the proposed project is located in a very high fire hazard severity zone (VHFHSZ), it would have a significantly lower potential of actual loss than other older communities (such as Paradise) that are also located in a VHFHSZ. This is based upon the distinction between HAZARD

(which the state categorizes) and RISK (which the state does not quantify). HAZARD is the potential fire behavior (i.e., flame length, crown fire occurrence, capacity to generate embers) in the predicted mature vegetation of the area. RISK, however, is the potential for structural loss from said fire. Thus, even if there is a potential low fire hazard in a given area (expected low flame lengths), a home might still be at high risk of ignition if the physical characteristics of the property would facilitate structural ignition (e.g., flammable vegetation next to a home with wood siding).

Conversely (and more applicable to the proposed project), a home might be in a high-risk hazard area (potential exposure to high flame lengths and ember generation), but may actually be at low risk of ignition if the structure is built with ignition-resistant construction materials and adequate defensible space is provided around the home.

This is especially true in planned communities where fuel modification can be provided over large areas and includes a perimeter FMZ. Recent research indicates that scenarios with lower housing density, large lots (ranchettes) and larger numbers of small, isolated clusters of development resulted in higher predicted fire risk. By way of comparison to the low-density General Plan land use patterns, the proposed project land use density would not only be safer for the residents within the proposed project, but the proposed project itself would act as a large irrigated fire break that would be expected to impede fire spread by inhibiting large-scale wildland fires from spreading across the project site and into existing nearby Santee neighborhoods.

In contrast, unlike the proposed project and surrounding areas, the landscape-level vegetation in and around the Paradise area, consisted primarily of (1) mature mixed-conifer forests with a high degree of both horizontal and vertical continuity, and (2) high loads of contiguous grasses in areas that were burned a decade ago. These fuel types facilitated rapid fire spread and intensity in the wildland areas that surrounded Paradise, and also caused an enormous storm of embers to be cast onto individual parcels. While some of the surrounding areas near Paradise were burned in a fire in 2008, the high grass levels (fostered by late spring rains) were continuous and facilitated rapid spread into the community.

Although Paradise had nearly identical defensible space regulations as the proposed project (minus restricted plants), local authorities there did not seem to regularly enforce these regulations, which is unfortunately common in areas that do not have a funded HOA and in areas where the fire agency does not have the capacity to enforce defensible space regulations. The high degree of near-structure vegetation in Paradise, which was prevalent throughout the community before the 2018 Camp Fire, would have readily ignited the adjacent structures once they started burning.

All that said, the most granular level of fuels to consider (the homes themselves) served as the most important fuel that led to the mass devastation in Paradise. Indeed, throughout that community, home after home was destroyed, but the adjacent vegetation was left largely untouched. This phenomenon has been observable in multiple large, destructive fires, including

the 2007 Witch Creek Fire in the County, the 2009 Black Saturday Fires in Victoria, Australia, the 2017 Tubbs Fire in Santa Rosa, and the 2018 Woolsey Fire in Los Angeles County. In all cases, mass destruction in many parts of the fire boundary was largely related to homes igniting via an ember storm, which burned many homes from the inside out following embers entering the structure via vents, windows, and under doors. The proposed project's structures are designed to withstand ember storms by providing tightly built structures with no unprotected openings and ember-resistant vents that prevent ember intrusion.

## **Topography**

The topography in the proposed project also significantly varies from that in Paradise. Elevations in the proposed project range from 417 feet to 1,215 feet and occur in generally rolling hills, which sometimes includes small canyons that contain native fuels that are directionally aligned with the normal direction of Santa Ana winds. While this should be of some concern and receive attention, dead and dying vegetation would be removed in these areas and these sites would be maintained to reduce ladder fuels.

While the community of Paradise is relatively flat, this can be deceiving because it is bounded by steep canyons that range from 2,000 feet to 2,800 feet below the ridgetop in which it resides. As noted, these extremely deep, sheer canyons were directionally aligned with the strong winds, slamming the homes at the edge of the slopes and causing an ember storm that fell within the community (subsequently facilitating house-to-house spread).

## **Successful Examples of Similar Fire-Safe Projects**

Other developments in Southern California that have been designed to resist wildfires have shown similar rates of significantly lowered loss when exposed to wildfire, including the 4S Ranch in the County, Stevenson's Ranch in Valencia, Serrano Heights in Orange County, and others. All of these communities were built with heightened requirements for fire safety, including hardened buildings, protected roofs, vent protections, maintained fuel modification zones, and others, all of which would be required of the proposed project. In contrast, wildfires have also occurred in and around Paradise and Santa Rosa (sometimes reburning the exact same areas), but little was done to reduce risk of structural loss there. In fact, the 2017 Tubbs Fire followed virtually the exact same footprint as the 1964 Hanley Fire; what differed from 1964 and 2017 was the amount of fire-prone homes that were built in the area. Had these homes been built with fire-resistant materials such as required by Chapter 7A of the California Fire Code, and further refined in the City of Santee and San Diego County, it is unlikely that the level of devastation would have been the same. Similarly, 13 significant wildfires occurred in the last 20 years around the community of Paradise, yet there seemed to be little mitigation to reduce the risk there. When the 2018 Camp Fire ignited under extreme weather conditions, a massive ember storm easily ignited older homes, which then caused a chain reaction of structure-to-structure ignitions.



While the County has been incredibly progressive in their attempts to reduce wildfire losses (especially following the 2003 Cedar fire), the sites recently impacted in Northern California did not seem to take their fire risk as seriously. For example, CAL FIRE reportedly warned Paradise as early as 2005 that the community was at risk of a devastating conflagration similar to that experienced in the 1991 Oakland Hills Fire, which killed 25 and destroyed 2,900 structures.<sup>5</sup> Butte County Fire Safe Council had been awarded over \$600,000 in grant funding for fuels reduction in Paradise, but did not have time to utilize these funds before the fire burned through the community. That said, given the nature of ember-driven ignitions and subsequent house-to-house spread (with little impact to the adjacent forest), it is unclear if the fuel reduction would have led to a significant reduction in the level of destruction experienced during the Camp Fire. It is possible that utilizing these funds along with homeowner funds to retrofit older homes for ember resistance and structure hardening would have been more impactful.

### **Ignition Minimizing Measures**

Wildfires in Southern California are almost always human-induced. Efforts to reduce risk of ignition within the proposed project would include undergrounding power lines, which would effectively eliminate a potential ignition source. Further, roadside clearance is planned within the community, which would reduce the risk of wildfire ignition from vehicles (via glowing catalytic converter debris, sparks from dragging chains, etc.). The wide FMZs would provide a buffer between humans and the open space areas, minimizing potential for accidental fires to escape into the unmaintained fuels. Please refer to Thematic Response – Fire Ignition and Risk for details regarding potential for human caused ignitions and measures provided to minimize risk.

Many of the destructive fires in the region (and also the recent devastating fires in Santa Rosa and Paradise) were ignited by power lines. Of note, however, SDG&E has recently taken a very aggressive approach at restricting ignitions via their power lines, becoming one of the most progressive utilities in the world at closely monitoring conditions that might facilitate ignitions and rapid fire spread, and then taking appropriate steps to minimize fire starts, including shutting down the electrical grid in areas deemed to be potentially vulnerable to ignition. Further, the California Public Utilities Commission, as of February 6, 2019, now requires all energy companies in California to prepare comprehensive Wildfire Mitigation Plans. These plans provide detailed assessment and accounting of risk drivers and risk reduction measures being employed for each facility, including electrical transmission and distribution lines.

Finally, the proposed project would not be like Paradise or other communities that were built before current fire standards. The proposed project would include a multi-layered fire protection

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<sup>5</sup> St. John, P., J. Serna, and L. Rong-Gong II. 2018. Here's how Paradise ignored warnings and became a deathtrap. Los Angeles Times, 30-Dec.

system that is based on ignition-resistant buildings and landscapes, adherence to stringent codes, firefighting water availability, swift emergency response, and sound evacuation planning that includes a contingency option for residents who may be directed to temporarily shelter within the community during a wildfire evacuation. The proposed project, like other new, master planned communities, should not be compared with older, less restrictive communities that were not built to the latest codes and do not implement ongoing maintenance. Other new, nearby communities with many of the same fire protection features have performed extremely well during wildfires.