

**Appendix C:
Biological Resources Assessment**

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BIOLOGICAL RESOURCES ASSESSMENT

Environmental Impacts	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
<i>Would the project:</i>				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game ¹ or U.S. Fish and Wildlife Service?		X		
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?				X
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				X
d) 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?				X
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X
<p>Note:</p> <p>¹ Beginning January 1, 2013, the California Department of Fish and Game (CDFG) officially changed its name to California Department of Fish and Wildlife (CDFW). However, CEQA Guidelines Appendix G: Environmental Checklist Form has not been updated to reflect this name change</p>				

1.1 - Study Methods

1.1.1 - Literature Review

An FCS biologist researched readily available information, including relevant literature, databases, agency web sites, various previously completed reports and management plans, Geographic Information System (GIS) data, maps, aerial imagery from public domain sources, and in-house records to: 1) assess habitats, special-status plant and wildlife species, jurisdictional waters, critical habitats, and wildlife corridors that may occur in and near the project site, and 2) identify local or regional plans, policies, and regulations that may apply to the project. Plant and wildlife species protected by federal agencies, state agencies, and nonprofit resource organizations, such as the California Native Plant Society (CNPS), are collectively referred to as “special-status species” in this report.¹ Some of these plant and wildlife species are afforded special legal or management protection because they are limited in population size, and typically have a limited geographic range and/or habitat. The following data sources were accessed.

- United States Geological Survey (USGS) 7.5-Minute Topographic Map *Orange* Quadrangle and current aerial imagery.
- California Natural Diversity Database (CNDDDB) provided by the California Department of Fish and Wildlife (CDFW) (CDFW, 2017c).
- Information, Planning and Conservation (IPaC) provided by the United States Fish and Wildlife Service (USFWS) (USFWS, 2017b).
- Inventory of Rare and Endangered Plants of California provided by the CNPS (CNPS, 2017).
- National Wetlands Inventory (NWI) and Wetlands Mapper provided by the USFWS (USFWS, 2017c).
- Biogeographic Information and Observation System (BIOS) provided by CDFW (CDFW 2017a and 2017b).
- Critical Habitat Portal provided by the USFWS (USFWS, 2017a).

1.1.2 - Field Survey

Following the literature review, FCS’s biologist, Mr. Damien Edwards, conducted the reconnaissance-level field survey on August 31, 2017. The survey included the following:

- Habitat assessment and plant community mapping.
- General plant survey.
- General wildlife survey.
- Jurisdictional assessment.
- Wildlife movement evaluation.

¹ Avian species protected by the Migratory Bird Treaty Act (MBTA) are not considered “special-status species.”

The reconnaissance-level survey was conducted on foot during daylight hours and covered all accessible areas of the project site. The biologist characterized the existing habitat and search for the presence of sensitive plant communities, special-status plants and wildlife, jurisdictional areas, and potential wildlife corridors. The purpose of the survey was not to extensively search for every species occurring within the project site, but to ascertain general site conditions and identify potentially suitable habitat areas for various special-status plant and wildlife species. Special-status or unusual biological resources identified during the literature review were ground-truthed during the reconnaissance-level survey for mapping accuracy.

1.2 - Existing Conditions

The project site is previously developed land consisting of 441 multiple family residential apartment units in 8 buildings. The project site is located in a primarily developed portion of the City and is completely developed and no longer supports natural plant communities or native soils. The project site contains no undeveloped natural open land capable of supporting natural vegetation or habitats. Natural topography such as slopes, canyons, mounds, gullies, draws, rivulets, terraces, channels, drainages, and other natural features are absent from the project site.

1.2.1 - Land Cover Types

One land cover type was determined to be present within the project site as determined by the literature review and field survey:

- Developed lands and ornamental landscaping.

Developed lands are non-vegetated features describe areas occupied by man-made structures, paving and other impermeable surfaces that cannot support vegetation. On-site developed lands consist of a paved parking lot, driveway and other permanent structures. Landscaping (ornamental trees, shrubs, turf, etc.) associated with the developed lands are also included within this category. The developed areas provide virtually no habitat for wildlife species; however, birds could use the ornamental trees for roosting, foraging, and nesting. Developed lands are not considered a sensitive plant community.

1.2.2 - Special-Status Plants

No listed, sensitive, or rare plant species were observed within the project site during the field survey. In addition, the literature review and field survey determined that the project site lacks suitable habitats, soils, and/or other factors to support special-status plant species.

1.2.3 - Special-Status Wildlife

No listed or sensitive wildlife species were observed within the project site during the field survey. In addition, the literature review and field survey concluded that the project site lacks suitable and adequate biological and physical features that are needed to support special-status wildlife species. The wildlife observed and/or detected within the project site during the field survey represents the diversity of wildlife in the surrounding areas and in urban built out areas.

1.2.4 - Protected Trees

The City of Orange has adopted a tree preservation ordinance (Chapter 12.32 of the Orange Municipal Code), the purpose of which is to regulate the removal and destruction of trees from undeveloped and public interest properties within the City of Orange. Section 12.32.020 defines a “tree” as any “live plant which has a single trunk measuring 10.5 inches in circumference, measured at a point 24 inches above the ground level.” Section 12.32.060 of the Municipal Code also defines a “historical tree” as those trees “by virtue of their original size, uniqueness and/or national or regional rarity are now or are likely to be of historical value.” Undeveloped property is defined as “any real property which has not been caused to progress to a more improved, advanced state of development.” Public interest property “shall be any property, privately owned or otherwise, whether developed or undeveloped, which has, because of the presence of certain trees of historical value in such property, become property endowed with a public interest.” Section 12.32.110, Subdivisions or Grading Plan requires that: In the case of a subdivision, or grading plan, the grading plan shall show the location of each tree proposed to be removed. If the City approves the subdivision map, or grading permit, the Director of Community Services may, in his/her discretion, relieve the applicant of any necessity to apply for a separate permit for tree removal.

The project site is not recognized by the City as an undeveloped or public interest property as described above. Therefore, the City’s Tree Preservation Ordinance does not apply to the project.

1.2.5 - Jurisdictional Areas

The literature review determined that the project site does not contain NWI wetlands. The jurisdictional assessment determined that the project site does not contain hydrological features, wetlands, marshes, vernal pools, channels with a bed or bank, or evidence of an ordinary high water mark (OHWM); therefore, the project site does not contain federal or state wetlands, waters, or habitats that are potentially subject to the jurisdictional authority of the United States Army Corps of Engineers (USACE), the Regional Water Quality Control Board (RWQCB), or CDFW.

1.2.6 - Critical Habitats

The literature review determined that the project site is not located within a designated or proposed critical habitat for listed plant or wildlife species.

1.2.7 - Wildlife Corridors

The literature review determined that the project site is not located within a CDFW designated Essential Habitat Connectivity Area or a Natural Landscape Block. The field survey determined that the project site does not function as a wildlife movement corridor. The project site does not contain wildlife travel routes, such as a riparian strip, ridgeline, or drainage; or wildlife crossings, such as a tunnel, culvert, or underpass. In addition, the project site is not located adjacent to nor does it connect large blocks of habitat. The project site does not represent a wildlife movement corridor because the site is completely developed and is completely surrounded by other development, walls, and roadways. These permanent structures serve as significant barriers to wildlife movement through the project site and region.

1.2.8 - Nursery Sites

The project site does not support resident or migratory fish species and no native wildlife nursery sites or rookeries were observed within the project site during the field survey.

1.3 - Discussion of Impacts

- a) **Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW and USFWS?**

Less than significant impact with mitigation incorporated: the project is not anticipated to have direct or indirect impacts on listed or sensitive plants or wildlife. In regard to the significance criterion, the project is anticipated to have no substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS.

Even though the project site is developed, it supports landscaped/ornamental trees and/or structures that could potentially provide cover, foraging, and nesting habitat for resident and migratory birds that have adapted to urban areas, such as rock pigeons (*Columba livia*) and mourning doves (*Zenaida macroura*). Mourning doves are protected by the Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code (§§ 3503, 3503.5, and 3513), which render it unlawful to take native breeding birds, and their nests, eggs, and young. The project has the potential to result in direct impacts on breeding birds, if project activities occur during the breeding bird season and birds are nesting within the project site and/or immediate vicinity at that time. Temporary direct impacts on breeding birds could occur from increased noise, vibration, and dust during construction, which could adversely affect the breeding behavior of some birds, and lead to the loss (take) of eggs and chicks, or nest abandonment. Impacts on nesting birds would be considered significant. Implementation of MM BIO-1 would help to avoid, eliminate or reduce direct impacts on breeding birds to less than significant levels.

- b) **Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by CDFW and USFWS?**

No impact: riparian habitats are those on, relating to, or near the banks of a river, stream, creek, spring, seep, pond or lake. The project site is developed and completely dry and does not support aquatic features, natural or man-made water bodies, wetlands or jurisdictional areas necessary to support riparian vegetation. Sensitive plant communities (sensitive habitats) are communities that are of limited distribution statewide or within a county or region and are often vulnerable to environmental impacts of projects (CDFG, 2009). No riparian habitat or other sensitive natural communities were observed on project site; therefore, the project is not anticipated to have direct or indirect impacts on riparian habitats or other sensitive natural communities. In regard to the significance criterion, the project is anticipated to have no substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFW or USFWS.

- c) **Would the project have a substantial adverse effect on federally protected wetlands as defined by section 404 of the Clean Water Act (CWA) (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?**

No impact: the project site is developed and completely dry and does not support aquatic features, natural or man-made water bodies and wetlands or jurisdictional areas; therefore, the project is not anticipated to have direct or indirect impacts on federally protected wetlands as defined by section 404 of the CWA. In regard to the significance criterion, the project is anticipated to have no substantial adverse effect on federally protected wetlands through direct removal, filling, hydrological interruption, or other means.

- d) **Would the project 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?**

No impact: the project site does not contain and is not connected to an established wildlife corridor; therefore, the project is not anticipated to have direct or indirect impacts on wildlife corridors or wildlife movement. The project site does not support resident or migratory fish species or wildlife nursery sites; therefore, the project is not anticipated to have direct or indirect impacts on wildlife nursery sites. In regard to the significance criterion, the project is not anticipated to 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.

- e) **Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?**

No impact: The project site contains numerous landscape trees on private property. Some of these trees would be removed during project implementation; however none of these trees meet the definition of historical tree, occur on undeveloped property or would otherwise fall under the provisions of Chapter 12.32 of the Orange Municipal Code. For these reasons, the project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

- f) **Would the project conflict with the provisions of an adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other approved local, regional, or state habitat conservation plan?**

No impact: the project site is not located within the boundary of and does not contain undeveloped natural lands subject to an adopted HCP, NCCP or other approved local, regional, or state HCP; therefore, the project would not conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or state HCP.

1.4 - Mitigation Measures

This section lists the measures recommended to avoid, eliminate and/or reduce the project's anticipated and potential direct and indirect impacts on biological resources to less than significant levels.

MM BIO-1 Construction during Breeding Season and Pre-construction Breeding Bird Surveys

To be in compliance with the MBTA and the California Fish and Game Code, and to avoid and reduce direct and indirect impacts on migratory non-game breeding birds, and their nests, young, and eggs to less than significant levels, the following measures should be implemented.

- Project activities that would remove or disturb potential nest sites would be scheduled outside the breeding bird season, if feasible. The breeding bird nesting season is typically from February 15 through September 15, but can vary slightly from year to year, usually depending on weather conditions. Removing all physical features that could potentially serve as nest sites outside of the breeding bird season also would help to prevent birds from nesting within the project site during the breeding season and during construction activities.
- If project activities that would remove or disturb potential nest sites cannot be avoided during February 15 through September 15, a qualified biologist would conduct a pre-construction clearance and nesting bird survey to search for all potential nesting areas, breeding birds, and active nests or nest sites within the limits of project disturbance up to seven days prior to mobilization, staging and other disturbances. It would end no more than three days prior to vegetation, substrate, and structure removal and/or disturbance.
- If no breeding birds or active nests are observed during the pre-construction survey, or if they are observed and would not be disturbed, then project activities may begin and no further mitigation would be required.
- If an active bird nest is located during the pre-construction survey and potentially would be disturbed, a no-activity buffer zone would be delineated on maps and marked (flagging or other means) up to 500 feet for special-status avian species and raptors, or 75 feet for non-special status avian species. The limits of the buffer would be demarcated so as to not provide a specific indicator of the location of the nest to predators or people. Materials used to demarcate the nests would be removed as soon as work is complete or the fledglings have left the nest. The biologist would determine the appropriate size of the buffer zone based on the type of activities planned near the nest and bird species because some bird species are more tolerant than others to noise and other disturbances. Buffer zones would not be disturbed until a qualified biologist determines that the nest is inactive. Additionally, the area would also not be disturbed until the young have fledged, the young are no longer being fed by the parents, the young have left the area, or the young would no longer be impacted by project activities.

- Birds or their active nests will not be disturbed, captured, handled or moved. Inactive nests may be moved by a qualified biologist, if necessary, to avoid disturbance by project activities.

1.5 - Acronym/Abbreviation

Acronym/Abbreviation	Term
BIOS	Biogeographic and Information Observation System
CDFW	California Department of Fish and Wildlife
CNDDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CWA	federal Clean Water Act
GIS	Geographic Information System
HCP	Habitat Conservation Plan
IPaC	Information, Planning, and Conservation System
MBTA	Migratory Bird Treaty Act
NCCP	Natural Community Conservation Plan
NWI	National Wetlands Inventory
OHWM	ordinary high water mark
RWQCB	Regional Water Quality Control Board
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey

1.6 - References

- CDFG (California Department of Fish and Game). 2009. Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities. California Natural Resources Agency, Department of Fish and Game. November 24, 2009
- CDFW (California Department of Fish and Wildlife). 2017a. Biogeographic Information and Observation System (BIOS). BIOS Habitat Connectivity Viewer. Website: <https://map.dfg.ca.gov/bios/?bookmark=648>. Accessed on August 31, 2017.
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- USFWS (United States Fish and Wildlife Service). 2017a. Environmental Conservation Online System (ECOS). Critical Habitat Portal. Website <https://fws.maps.arcgis.com/home/webmap/viewer.html?webmap=9d8de5e265ad4fe09893cf75b8dbfb77>. Accessed on August 31, 2017.
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