

RANCHO LA HABRA SPECIFIC PLAN

PARTIALLY RECIRCULATED DRAFT EIR
SCH NO. 2015111045

CITY OF LA HABRA
November 2019

APPENDIX F Biological Resources



Metis Environmental Group

Appendix F

Biological Resources

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Appendix B-1

Jurisdictional Determination/Delineation

MEMORANDUM

GLENN LUKOS ASSOCIATES

Regulatory Services



PROJECT NUMBER: 10860004WRGC

TO: Andrew Han

FROM: Tony Bomkamp

DATE: July 9, 2019

SUBJECT: Jurisdictional Determination/Delineation for Westridge Golf Club, La Habra, California

This Technical Memorandum summarizes our findings of U.S. Army Corps of Engineers (Corps), California Department of Fish and Wildlife (CDFW), and Regional Water Quality Control Board (Regional Board) jurisdiction for the above-referenced property. It is important to note relative to U.S. Army Corps of Engineer Section 404 jurisdiction, that on August 16, 2018 the District Court for South Carolina granted an injunction against the Trump administration regulation suspending the June 29, 2015 definition of “Waters of the United States” (“WOTUS”) Rule.¹ This ruling reinstated the WOTUS Rule in the 26 states where district courts had not previously enjoined that Rule, which included California. As discussed below, the WOTUS Rule resulted in changes to the areas delineated in the DEIR as potential Corps jurisdiction. The WOTUS does not affect jurisdiction of other agencies.

The Westridge Golf Club [Exhibit 1], comprises approximately 150 acres and contains no blue-line drainages (as depicted on the U.S. Geological Survey (USGS) topographic map La Habra California USGS 7.5-minute topographical map (dated 1964, photorevised 1981) [Exhibit 2 – Vicinity Map]. The Westridge Golf Course (the Project) is located within the City of La Habra, Orange County, California and is located in Section 18, Township 3 South, Range 10 West, of the Approximate Universal Transverse Mercator (UTM) coordinates for the site are 508846.74 mE and 37263600890.00 mN (Zone 8Z). The Project site is located south of Imperial Highway and east of Beach Boulevard, is bounded by South Idaho Street to the east, residential development and a small portion of undeveloped land to the south, Beach Boulevard and residential development to the west, and commercial and residential development to the north.

On July 27 and September 6, 2018, Senior Regulatory Specialist Tony Bomkamp of Glenn Lukos Associates, Inc. (GLA) examined the project site to determine the limits of (1) Corps jurisdiction pursuant to Section 404 of the Clean Water Act, (2) CDFW jurisdiction pursuant to Division 2, Chapter 6, Section 1600 of the Fish and Game Code, and (3) Regional Board

¹ Department of the Army, Corps of Engineers and Environmental Protection Agency. June 29, 2015. Clean Water Rule: Definition of “Waters of the United States”; Final Rule. Federal Register, Vol. 90, No. 24, pp. 37054 – 37127.

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jurisdiction pursuant to the Waste Discharge Requirements of the Porter Cologne Act. Enclosed is a 500-scale map [Exhibit 3] that depicts the areas examined for Corps, CDFW, and Regional Board jurisdiction. Exhibit 4 depicts area of Corps jurisdiction and areas subject to Regional Board jurisdiction pursuant to Section 401 of the Clean Water Act, Exhibit 5 depicts the Deed Restricted Areas that include riparian areas, emergent wetlands and open water subject to CDFW notification requirements areas potentially subject to the Porter Cologne Waste Discharge Requirements.

IMPACT SUMMARY

Potential impacts to Corps jurisdiction and Regional Board jurisdiction pursuant to Section 401 would be limited to the lower segment of Deed Restricted Area A-10 totaling 0.01 acre of ephemeral drainage course. In addition, a portion of Deed Restricted Area A-4, accounting for 0.03 acre would also be impacted for a total of 0.04 acre of non-wetland Waters of the U.S.

Potential impacts to CDFW jurisdiction under Section 1602 would include areas of created riparian or wetland habitat associated with Deed Restricted Areas A-4, A-8, A-9 and A-10; Deed Restricted Areas B-1 – B-5, and Deed Restricted Ponds 1 and 2 totaling 3.99 acres. Potential impacts to CDFW jurisdiction would also occur in areas outside, but adjacent to the deed restricted areas totaling 1.79 acres. In addition, there are 2.3 acres of upland habitats including coastal sage scrub within these Deed Restricted Areas.

Areas of riparian habitat, emergent marsh, and open water determined to be subject to CDFW, would also be subject to the Porter Cologne Waste Discharge Requirements (WDRs) totaling 5.78 acres.

BACKGROUND INFORMATION

Thirteen specific areas were evaluated including eleven “Deed Restricted Areas” that were installed during construction of the golf course as mitigation areas and, for purposes of this Jurisdictional Determination/Delineation are designated as: Deed Restricted Area A- 4, Deed Restricted Area A-8, Deed Restricted Areas A-9/10, Deed Restricted Areas B1– B5, Deed Restricted Area Pond 1, Deed Restricted Area Pond 2, and Golf Course Pond (which is outside the Deed Restricted Areas). As detailed below, portions of the Deed Restricted areas referenced above were planted/created to mitigate for impacts to Section 1600 jurisdiction, totaling 4.55 acres of predominately mulefat scrub that was characterized as “disturbed” containing a suite of non-native species. The installed mitigation included riparian woodland, mulefat scrub, emergent wetland and open water. Portions of Deed Restricted Areas A-9/10 also included areas of coastal sage scrub as described below. Three additional Deed Restricted Areas, A-1, A-2, and A-5 were

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planted with coastal sage scrub to compensate for coastal sage scrub impacts and are not further addressed in this jurisdictional delineation report. It is also important in addressing the jurisdictional status of the Deed Restricted areas that the Special Conditions in the Section 404 Permit, dated April 27, 1995 included no mitigation requirements for impacts to 0.18 of non-wetland ephemeral drainages. Thus, the riparian and wetland mitigation established in the golf course was specifically dedicated for impacts to CDFW jurisdiction under Section 1600. Coastal sage scrub mitigation in the golf course was a component of a coastal sage scrub mitigation program intended to mitigate impacts to 18 acres of disturbed coastal sage scrub that also supported two pairs of coastal California gnatcatchers.

Finally, the DEIR included a delineation of Section 404, 401/Porter Cologne/ and 1602 jurisdiction, including within the Deed Restricted areas, the Golf Course Pond, and one additional area between Deed Restricted Areas A-5 and A-8 as depicted on Exhibit 3. As discussed below, GLA found no streambed or wetlands in this area and no areas subject to Section 404, 1602 or Porter Cologne.

SECTION 404 JURISDICTION

Areas subject to the jurisdiction of the Corps is limited to two water features on the golf course: Deed Restricted Areas A-4 and A-10. Additional areas evaluated which do not contain areas subject to Corps jurisdiction include, Deed Restricted Area A-8, Deed Restricted Area A-9, Deed Restricted Areas B-1 – B-5, Deed Restricted Area Pond 1, Deed Restricted Area Pond 2, Golf Course Pond and the areas between Deed Restricted Areas A-5 and B-8 (which are both outside the Deed Restricted Areas).

Areas within Section 404 Jurisdiction

Deed Restricted Area 4

Deed Restricted Area 4 is located within the central-portion of the Golf Course between golf holes 8 and 9. The area extends from south to north with the feature terminating at Deed Restricted Area Pond 1, addressed below. The feature receives no offsite drainage and drainage from the adjacent slopes are captured in concrete V-ditches and discharge to a pipe that carries water under the cart path to upper portion of the drainage. Given the limited watershed, the feature does exhibit a bed and bank or indicators for the presence of an Ordinary High Water Mark (OHWM)² in the upper reach of the drainage. At about the midpoint of the drainage, weak

² In the absence of wetlands, the limits of Corps jurisdiction in non-tidal waters, such as intermittent streams, extend to the OHWM which is defined at 33 CFR 328.3(e) as:

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indicators for a presence of an OHWM becomes visible and the feature exhibits a shallow bed and bank. Corps jurisdiction is limited to areas within the OHWM and accounts for 0.03 acre within 553 feet of the channel. The feature supports riparian habitat; however, the riparian habitat is largely supported by water subsidies from golf course irrigation.

Deed Restricted Area 10

Deed Restricted Area 10 is the southernmost drainage segment on the golf course and is a linear feature with a limited riparian canopy in the upper segment which transitions to coastal sage scrub in the lower portion. The coastal sage scrub area is sparsely vegetated with black sage (*Salvia mellifera*, UPL), coyote brush (*Baccharis pilularis*, UPL) and occasional individuals of mulefat (*Baccharis salicifolia*, FAC). Corps jurisdiction is limited to an area where there are both bed and banks and an OHWM and totals 0.01 acre and extends for 351 feet, averaging one foot in width. The upper portion lacks both a channel with a bed and bank and indicators for the presence of an OHWM. As noted below under the non-jurisdictional areas, Deed Restricted Area 9, which is immediately downstream of Deed Restricted Area 10 is a flat area with no channel or other drainage feature. This area continues to support patches of cottonwoods around the perimeter that are primarily supported by golf course irrigation.

Areas Not Subject to Corps Jurisdiction

Deed Restricted Area 8

Deed Restricted Areas 8 is located near the northeast corner of the golf course. This area does not exhibit a defined drainage channel that includes a bed and bank or indicators for the presence of an OHWM and does not support wetlands. This area is not subject to Corps jurisdiction. The area supports riparian habitat that is predominately supported by golf course irrigation.

Deed Restricted Area 9

As noted above, Deed Restricted Area 9 is a flat area with no channel or other drainage feature and no wetlands. The flat portions of the Deed Restricted area support coyote brush scrub. This area continues to support patches of cottonwood around the perimeter that are primarily supported by golf course water. Because the area contains no drainage with an OHWM and no wetlands it would not be subject to Corps jurisdiction.

...that line on the shore established by the fluctuation of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

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Deed Restricted Areas Pond 1 and Pond 2

Deed Restricted Areas Ponds 1 and 2 are located immediately east of the golf course club house and are within golf course fairway 18. These artificial ponds are golf course water features that are surrounded by areas of golf course including fairways and a putting green. Limited areas of emergent cattails and bulrush and riparian woodland occur on the margins of the ponds, and as noted below are associated with Deed Restricted Areas B1 – B5.

Deed Restricted Areas Pond 1 and Pond 2 are artificial golf course ponds that are maintained with potable water. These features would not be considered a water of the U.S. pursuant to the Corps' regulations: Section 328.3: Definitions within the July 29, 2015 Clean Water Rule:³

(b) The following are not ‘waters of the United States’ even where they otherwise meet the terms of paragraphs (a)(4) through (8) of this section.

(ii) Artificial, constructed lakes and ponds created in dry land such as farm and stock watering ponds, irrigation ponds, settling basins, fields flooded for rice growing, log cleaning ponds, or cooling ponds;

(iii) Artificial reflecting pools or swimming pools created in dry land;

(iv) Small ornamental waters created in dry land;

Thus, Deed Restricted Areas Pond 1 and Pond 2 would not be considered Corps jurisdiction, subject to Section 404. It is important to note that under the 1986 Definitions of Waters of the U.S. the Corps retained discretion over such features by including the language: “*For clarification it should be noted that we generally do not consider the following waters to be ‘Waters of the United States’*” [Emphasis Added]; whereas the language in the 2105 Definitions are unequivocal in stating that: *The following are not ‘waters of the United States’ even where they otherwise meet the terms of paragraphs (a)(4) through (8) of this section.*

Deed Restricted Areas B1 – B5

Deed Restricted Areas B1 – B5 are limited areas adjacent to Pond 1 and/or Pond 2 and consist of emergent wetlands, riparian forest, or in some areas, uplands. These “fringing” emergent marsh area and/or riparian areas are directly supported by the golf course ponds and for purposes of Section 404 would be considered part of the golf course ponds and would not be subject to Corps jurisdiction in accordance with the Corps' guidance referenced above. In addition, these areas would also be excluded based on Section (b)(4)(i) which excludes:

³ Department of the Army, Corps of Engineers and Environmental Protection Agency. June 29, 2015. Clean Water Rule: Definition of “Waters of the United States”; Final Rule. Federal Register, Vol. 90, No. 24, pp. 37054 – 37127.

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(i) Artificially irrigated areas that would revert to dry land should application of water to that area cease;

Golf Course Pond

On the western portion of the golf course, adjacent to golf course fairway 13 is a Golf Course Pond that is not within a Deed Restricted area. This water feature is the primary water storage pond for the golf course irrigation and serves as a “water hazard” for golf course hole 13. The feature is a constructed pond created in dry land and not subject to Section 404 jurisdiction.

(b) The following are not “waters of the United States” even where they otherwise meet the terms of paragraphs (a)(4) through (8) of this section.

(ii) Artificial, constructed lakes and ponds created in dry land such as farm and stock watering ponds, irrigation ponds, settling basins, fields flooded for rice growing, log cleaning ponds, or cooling ponds;

(iii) Artificial reflecting pools or swimming pools created in dry land;

(iv) Small ornamental waters created in dry land;

This feature supports fringing cattails and bulrush along the northern edge of the water feature which are support by the artificial hydrology and would not be considered wetlands pursuant to Section 404.

Area Between Deed Restricted Areas A-5 and B-8

The DEIR depicts an approximately 200-foot-long drainage feature as potentially subject to Corps jurisdiction. During the site visits, there was no evidence of a drainage channel that exhibited indicators of the presence of an OHWM and no wetlands. Thus, this area would not be subject to Corps jurisdiction pursuant to Section 404.

SECTION 1602 JURISDICTION

As noted above, the Deed Restricted Areas were created for purposes of providing compensatory mitigation for impacts to approximately 4.55 acres of predominately disturbed mulefat as well as providing a component of the coastal sage scrub mitigation associated with impacts to 18 acres of coastal sage scrub and two pairs of coastal California gnatcatchers. The Deed Restricted Areas account for approximately eleven acres and have been subject to updated vegetation

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mapping prepared in response to CDFW's comments on the DEIR.⁴ Table 1 below includes the Deed Restricted Areas included in Table 1 of the above-referenced Technical Memorandum. As summarized in Table 1 (see page 10), the Deed Restricted Areas referenced (A-4, A-8, A-9, A-10, B-1 – B-5 and Deed Restricted Ponds 1 & 2) above currently support approximately 3.99 acres of open water, marsh, or riparian habitats combined. For purposes of Section 1602, the open water, wetland emergent and riparian habitats impacted by the project will require mitigation, which is expected to include a combination of onsite and offsite mitigation. In addition, adjacent areas of Riparian, Emergent Marsh or Open Water, not within the boundaries of the Deed Restricted areas but containing contiguous habitat totals 1.79 acres.

REGIONAL WATER QUALITY CONTROL BOARD 401 CERTIFICATION AND WASTE DISCHARGE REQUIREMENTS

Section 401 Jurisdiction

For areas subject to Section 404 jurisdiction, the Regional Board is responsible for issuing Water Quality Certifications pursuant to Section 401 of the Clean Water Act. Thus, areas that exhibit an OHWM within Deed Restricted Area A-4 totaling 0.03 acre and A-10 totaling 0.01 acre would be subject to Section 401 Water Quality Certification by the Regional Board. Isolated non-federal waters can be regulated by the Regional Board when discharge of fill could impact Beneficial Uses as defined by the Santa Ana Regional Board's "Basin Plan". Beneficial uses related to biological resources would include provision habitat for wildlife, which certain of the Deed Restricted Areas provide and thus, the loss of a Beneficial Use would require replacement.

As described above, Deed Restricted Area A-9 does not exhibit an OHWM and does not exhibit wetland conditions and, because they are not subject to Corps jurisdiction, would not be subject to Section 401 Water Quality Certification by the Regional Board. This is also the case for the area between Deed Restricted Areas A-5 and B-8, which does not exhibit an OHWM or support wetlands.

The Deed Restricted Golf Course Ponds 1 and 2 and associated Deed Restricted Areas B-1 – B-5 that exhibit fringing emergent marsh or riparian vegetation would not be considered subject to Corps jurisdiction and therefore not subject to Section 401 Water Quality Certification by the Regional Board. This is also the case for the Golf Course irrigation Pond 3 adjacent to golf course hole 13.

⁴ Glenn Lukos Associates. August 13, 2018. Technical Memorandum addressing: Mapping of Vegetation Alliances at Westridge Golf Club for the Rancho La Habra Specific Plan Project, Orange County, California

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Porter Cologne Waste Discharge Requirements

Under the Porter Cologne Waste Discharge Requirements (WDRs), the Regional Board requires notification for impacts to “Waters of the State” which are not regulated by the Corps pursuant to Section 404 of the federal Clean Water Act. The lower segments of Deed Restricted Areas A-4 and A-10 are subject to Corps jurisdiction as noted above. The upper segment of these features lacks an OHWM and do not support wetlands and are not WOTUS. The Regional Board could potentially consider riparian areas within or adjacent to the Deed Restricted Areas that are subject to CDFW jurisdiction and impacted by the project to also be subject to the WDRs.

Deed Restricted Areas 8 and 9

Deed Restricted Areas 8 and 9 lack an OHWM and support no wetlands and no indicators for an OHWM. Nevertheless, The Regional Board could potentially consider riparian areas within these Deed Restricted Areas subject to CDFW jurisdiction to be subject to the WDRs.

Deed Restricted Areas Pond 1 and Pond 2

Deed Restricted Areas Ponds 1 and 2 are located immediately east of the golf course club house and are within golf course fairway 18. The features are golf course water features that are surrounded by areas of golf course including fairways and a putting green. Limited areas of emergent cattails and bulrush and riparian woodland occur on the margins of the ponds, and as noted below are associated with Deed Restricted Areas B1 – B5. Open Water associated with Deed Restricted Areas Ponds 1 and 2 totals 1.15 acres. The Regional Board is expected to determine that Ponds 1 and 2 and fringing vegetation exhibit Beneficial Uses and require notification regarding potential impacts pursuant to the WDRs.

Deed Restricted Areas B-1 – B-5

Deed Restricted Areas B-1 – B-5 are limited areas adjacent to Pond 1 and/or Pond 2 and consist of open water, emergent wetlands, riparian forest, or in some areas, uplands. While these “fringing” emergent wetlands and/or riparian habitat are directly supported by the golf course irrigation the Regional Board could determine that such areas exhibit Beneficial Uses under Porter Cologne. Areas B-1 – B-5 collectively support 0.03 acre of bulrush alliance, 0.06 acres of cattail alliance, 0.12 acre of arroyo willow alliance; and 0.06 acre of Fremont cottonwood alliance and are included in the totals in Table 1 below.

Golf Course Pond

On the western portion of the golf course, adjacent to golf course fairway 13 is a Golf Course Pond 3 that is not within a Deed Restricted area. This water feature is the primary water storage

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pond for the golf course irrigation and serves as a “water hazard” for golf course hole 13. The Regional Board is not expected to determine that the Golf Course Pond and fringing vegetation exhibit Beneficial Uses and subject to notification in accordance with the WDRs.

Area Between Deed Restricted Areas A-5 and B-8

The DEIR depicts an approximately 200-foot-long drainage feature as potentially subject to Corps jurisdiction. During the site visits, there was no evidence of a drainage channel that exhibited indicators of the presence of an OHWM and no wetlands. Thus, this area would not be a Water of the State subject to the WDRs. As noted above, this area would not be subject to Corps or CDFW and therefore not subject to Section 401 or the WDRs.

IMPACTS AND MITIGATION

As noted, the project site includes areas that are subject to Corps, CDFW and Regional Board jurisdiction as described above. Grading for the project would result in filling areas within the jurisdiction of the Corps, CDFW and Regional Board.

Areas within Section 404 Jurisdiction

The project would impact 0.01 acre of ephemeral drainage within Deed Restricted Area A-10 and 0.03 acre for Deed Restricted A-4. Mitigation, if required by the Corps would be determined at the time of permit issuance and would be covered by the proposed mitigation required by CDFW for impacts to streambed, riparian habitat, emergent marsh and open water. This would also address impacts to Section 401 jurisdiction.

Areas within Section 1602 Jurisdiction

The project would impact 10.98 acres of Deed Restricted Areas. Deed Restricted Areas 1, 2, and 4 support only coastal sage scrub and account for approximately 4.266 acres. The remaining approximately 6.71 acres support 3.99 acres of riparian, marsh and open water areas, that would be subject to CDFW Section 1602 jurisdiction and would be impacted. The remaining 2.94 acres support areas of coastal sage scrub or other upland land cover types. An additional 1.79 acre of arroyo willow forest, cattail marsh, California bulrush and open water that is just outside Deed Restricted Area B-1 that would also be impacted for a total impact of 5.78 acres. Mitigation, for the 5.78 acres of riparian, marsh, and open water areas of which 3.99 acres are in Deed Restricted Area would be determined at the time of permit issuance required by CDFW.

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Table 1: Riparian, Marsh and Open Water in Deed Restricted and Outside Deed Restricted Areas	
Riparian, Emergent Marsh or Open Water	Acres
Deed Restricted Areas	
Unvegetated Drainage	0.010
Arroyo Willow Forest Alliance	0.115
California Bulrush Alliance	0.028
Fremont Cottonwood Forest Alliance	1.904
Mixed Riparian Scrub Alliance	0.558
Mulefat Scrub Alliance	0.169
Open Water	1.148
Southern Cattail Alliance	0.061
Subtotal	3.993
Outside Deed Restricted Areas	
Fremont Cottonwood Forest Alliance	0.720
Arroyo Willow Forest Alliance	0.093
Mulefat Scrub	0.017
Mixed Riparian Scrub	0.950
California Bulrush Alliance	0.009
Open Water	0.003
Subtotal	1.791
Total	5.784

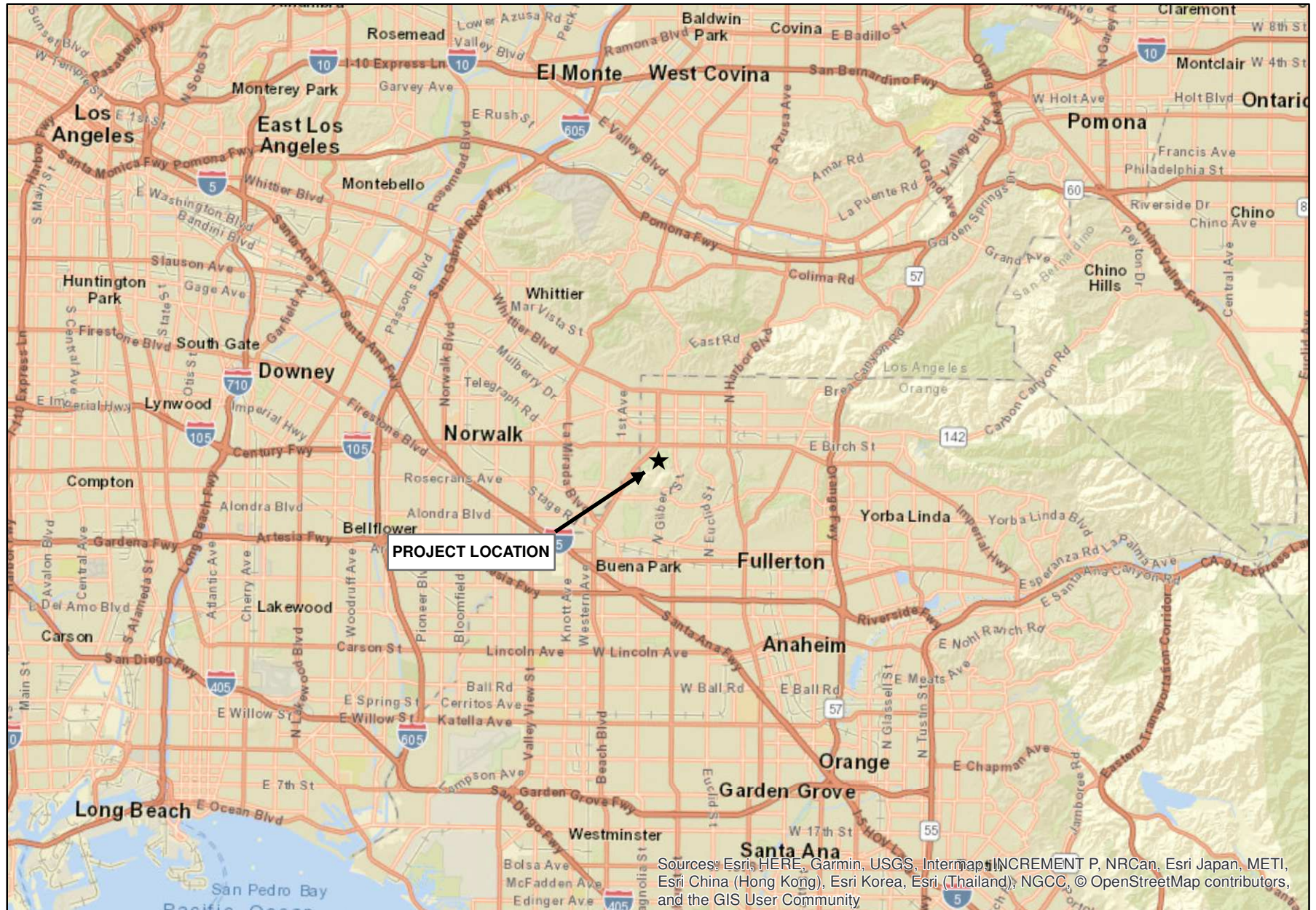
Areas Potentially Subject to the Porter Cologne Waste Discharge Requirements

The Regional Board is expected to assert jurisdiction over areas of riparian habitat, marsh, and open water within the Deed Restricted Areas, consistent with the requirements of CDFW. Mitigation for CDFW, would satisfy the requirements of the Regional Board for mitigation.

Source: ESRI World Street Map



0
2
4
8
Miles



Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community

RANCHO LA HABRA SPECIFIC PLAN

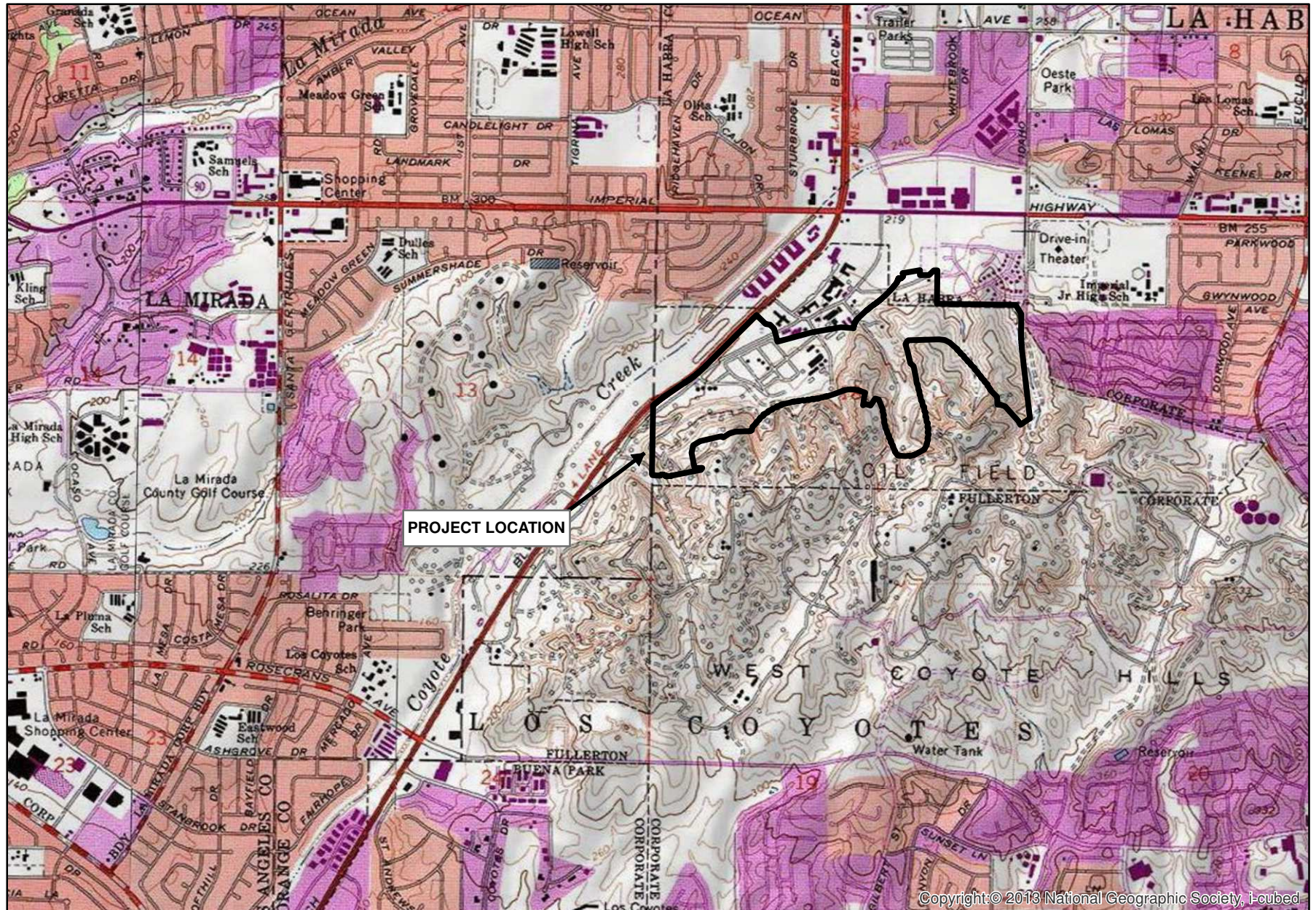
Regional Map

GLENN LUKOS ASSOCIATES

Exhibit 1



Adapted from USGS La Habra, CA quadrangle



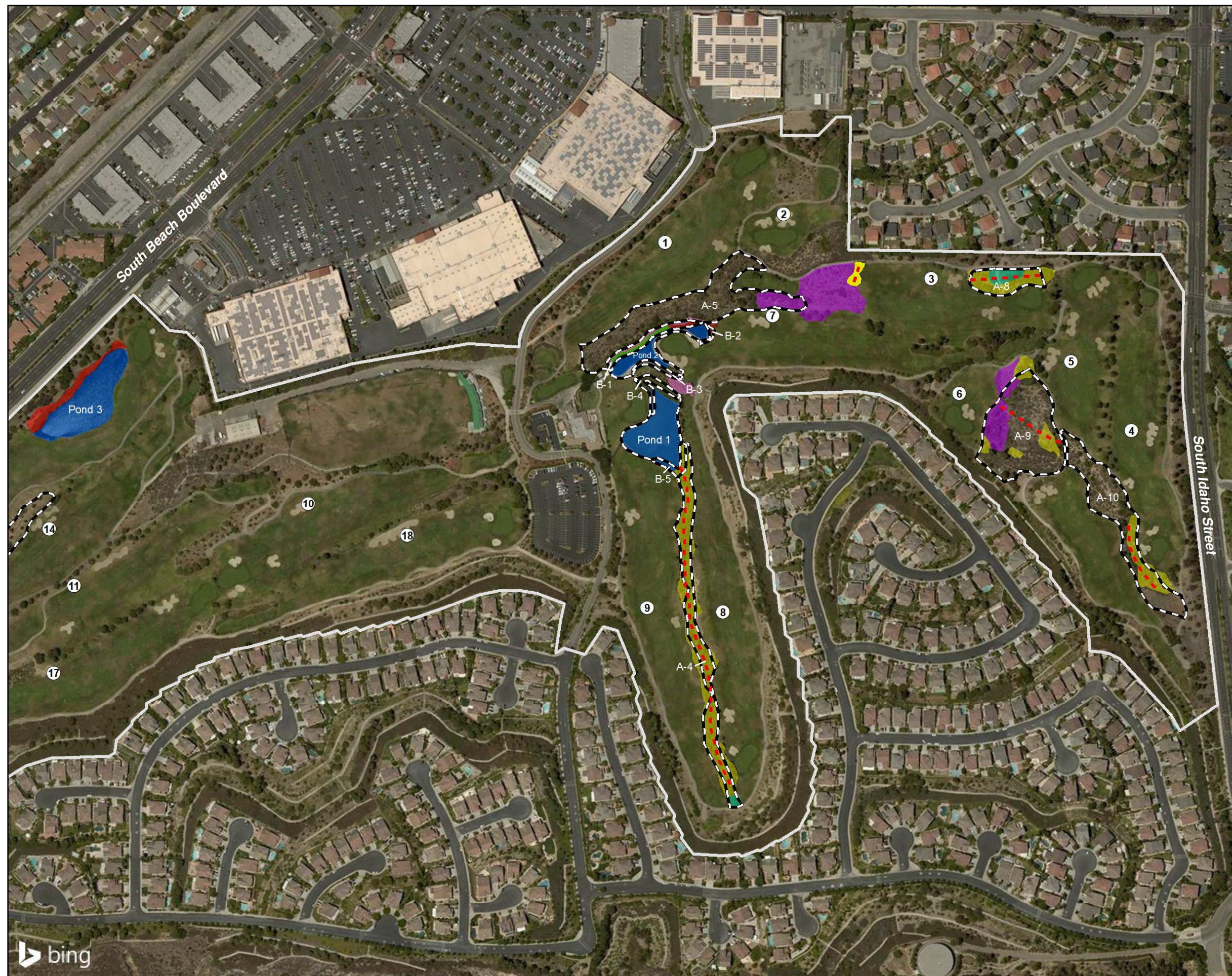
RANCHO LA HABRA SPECIFIC PLAN

Vicinity Map

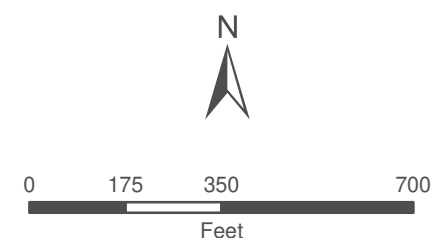
GLENN LUKOS ASSOCIATES

Exhibit 2





- Project Boundary
- Deed Restricted Areas
- Arroyo Willow Forest Alliance
- California Bulrush Marsh Alliance
- Fremont Cottonwood Forest Alliance
- Mixed Riparian Scrub Shrubland Alliance
- Mulefat Thicket Shrubland Alliance
- Non-Riparian Streambed
- Southern Cattail Marsh Alliance
- Open Water
- No OHWM & No Bed/Bank
- Golf Course Hole Number



1 inch = 350 feet

Coordinate System: State Plane 6 NAD 83
 Projection: Lambert Conformal Conic
 Datum: NAD83
 Map Prepared by: B. Gale, GLA
 Date Prepared: July 10, 2018

RANCHO LA HABRA SPECIFIC PLAN

Areas Evaluated for Corps/RWQCB/CDFW Jurisdiction

GLENN LUKOS ASSOCIATES



Exhibit 3

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- Project Boundary
- Deed Restricted Areas
- Corps/RWQCB Non-Wetland Waters
- No OHWM & No Bed/Bank
- Width of OHWM in feet
- Golf Course Hole Number



0 100 200 400
Feet

1 inch = 200 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: B. Gale, GLA
Date Prepared: July 9, 2019

RANCHO LA HABRA SPECIFIC PLAN

Corps/RWQCB Jurisdictional Delineation Map

GLENN LUKOS ASSOCIATES

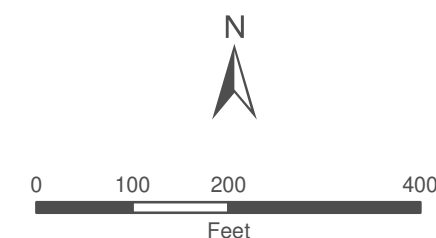
Exhibit 4



X:\0363-THE REST\1086-04WRGC\1086-4GIS\Delineation\1086-4CorpsLayout.mxd



- Project Boundary
- Deed Restricted Areas
- Arroyo Willow Forest Alliance
- California Bulrush Marsh Alliance
- Fremont Cottonwood Forest Alliance
- Mixed Riparian Scrub Shrubland Alliance
- Mulefat Thicket Shrubland Alliance
- Non-Riparian Streambed
- Southern Cattail Marsh Alliance
- Open Water
- 1086_4_Cottonwood_B5
- Golf Course Hole Number



1 inch = 200 feet

Coordinate System: State Plane 6 NAD 83
 Projection: Lambert Conformal Conic
 Datum: NAD83
 Map Prepared by: B. Gale, GLA
 Date Prepared: July 10, 2019

RANCHO LA HABRA SPECIFIC PLAN

CDFW Jurisdiction & Potential WDR Notification

GLENN LUKOS ASSOCIATES

Exhibit 5



Appendix B-2

Mapping of Vegetation Alliances

TECHNICAL MEMORANDUM

GLENN LUKOS ASSOCIATES

Regulatory Services



PROJECT NUMBER: 10860004WRGC
TO: Andrew Han
FROM: Tony Bomkamp
DATE: August 13, 2018 [Revised July 9, 2019]
SUBJECT: Mapping of Vegetation Alliances at Westridge Golf Club for the Rancho La Habra Specific Plan Project, Orange County, California

I. INTRODUCTION

In a comment letter dated December 16, 2015, the California Department of Fish and Wildlife (CDFW) recommended the following regarding mapping of vegetation communities:

A thorough, recent floristic-based assessment of special status plants and natural communities, following the Department's Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (see <http://www.dfg.ca.gov/habcon/plant/>). The Department recommends that floristic, alliance-based and/or association-based mapping and vegetation impact assessments be conducted at the Project site and neighboring vicinity. The Manual of California Vegetation, second edition, should also be used to inform this mapping and assessment where site activities could lead to direct or indirect impacts offsite. Habitat mapping at the alliance level will help establish baseline vegetation conditions.

The purpose of this Technical Memorandum is to supplement the information presented in the Draft Rancho La Habra Specific Plan EIR (DEIR) by providing updated descriptions for the vegetation communities (alliances) on the site in accordance with the Manual of California Vegetation, Second Edition (MCVII) ¹. Section 3.5, pages 3.5-12 through 3.5-19, Biological Resources of the DEIR, provides descriptions of the "habitats" in the development footprint also depicted on Figure 3.5-2. In introducing the habitat descriptions, the following was noted on page 3.5-12:

¹ Sawyer, J.O., Keeler-Wolf, T., & Evens, J.M. 2008. A Manual of California Vegetation, Second Edition, California Native Plant Society.

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b. Habitats in the Development Footprint

*The existing habitats found in the development footprint are presented in **Figure 3.5-2**, and the characteristics of each of the habitats are discussed below. Since the habitats identified in **Figure 3.5-2** have the potential to support special-status species, they are also referred to as sensitive habitats.*

Following the updated habitat descriptions, this Technical Memorandum also considers the status of the habitats/vegetation alliances relative to CEQA Appendix G significance criteria. It is important to note that not all habitat/vegetation alliances found within the development footprint constitute sensitive habitats. However, the refinement of the vegetation descriptions that could support special-status species, for which the coastal sage scrub (CSS) alliances were most affected, does not result in changes to the significance determination performed pursuant to the CEQA Appendix G significance criteria set forth in the DEIR. It is also important to note that the habitat descriptions provided in the DEIR were sufficiently accurate to make determinations regarding the significance of potential impacts.

Section 3.5, pages 3.5-12 through 3.5-19, of the DEIR identified the “habitats” listed in Column 1 of Table 1 below. Column 2 lists the alliances consistent with the MCVII. The MCVII includes three major categories of vegetation, “Forests and Woodlands,” “Shrublands,” and “Herbaceous Vegetation,” each of which is further divided into “Alliances,” which are defined based upon species composition and typically determined based upon “Membership Rules”. Thus, habitats such as coastal sage scrub are divided into numerous alliances based on the dominant species. In some instances, areas of CSS do not meet the “Membership Rules” for alliances set forth in MCVII; nevertheless, they are described below in a manner consistent with the MCVII.

Coastal Sage Scrub	<i>Artemisia californica</i> Shrubland Alliance <i>Baccharis pilularis</i> Shrubland alliance <i>Encelia californica</i> Shrubland Alliance <i>Eriogonum fasciculatum</i> Shrubland Alliance Mixed Scrub Shrubland Alliance <i>Salvia mellifera</i> Shrubland Alliance
Riparian Woodland	<i>Populus fremontii</i> Woodland Alliance <i>Salix lasiolepis</i> Shrubland Alliance
Mulefat Scrub	<i>Baccharis salicifolia</i> Shrubland Alliance
Emergent Wetland Habitat	<i>Schoenoplectus californicus</i> Herbaceous Alliance <i>Typha domingensis</i> Herbaceous Alliance
Artificial Golf Water Features	Not included in the MCVII
Landscaped Slopes	Not included in the MCV

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III. DESCRIPTION OF VEGETATION ALLIANCES

On July 5, 2018 GLA biologist April Nakagawa visited each of the habitat areas on the site to more accurately characterize the vegetation alliances. Each area was evaluated using the Relevé technique² which requires a visual estimate of the percent-cover for each species within representative plots. On July 27, 2018, GLA Senior Biologist Tony Bomkamp conducted a site review to finalize the proposed changes to the vegetation mapping. As discussed below, the data collection and field review allowed GLA to assign areas to the proper alliance set forth in the MCVII, with the caveat that in some cases there was not an exact match with the alliances as defined in the MCVII. In such cases, the “best” match was used or where no match was possible, site specific descriptions were provided based on the cover data. Table 1 provides a summary of the vegetation alliances as set forth in the MCVII (or as modified where necessary).

Table 1: Comparison of DEIR Figure 3.5-2 and MCVII Alliances (Total on Site)			
Figure 3.5-2	Acres	MCVII Alliances	Acres
Coastal Sage Scrub	10.67	Black Sage Shrubland Alliance	1.40
		Brittlebush Scrub Shrubland Alliance	2.86
		California Buckwheat Shrubland Alliance	0.40
		California Sagebrush Shrubland Alliance	1.62
		Coyote Brush Scrub Shrubland Alliance	2.32
		Mixed Scrub Shrubland Alliance	3.03
Total CSS	10.67	Total CSS	11.53
Riparian Woodland	3.78	Arroyo Willow Forest Alliance	0.21
		Fremont Cottonwood Forest Alliance	2.62
Total Riparian Woodland	3.78	Total Riparian Woodland	2.83
Mulefat Scrub	2.28	Mulefat Thicket Shrubland Alliance	0.19
		Mixed Riparian Scrub Shrubland Alliance	1.51
Total Mulefat Scrub	2.28	Total Riparian Scrub	1.70
Emergent Marsh (Previous Mitigation)	0.10	Southern Cattail Marsh Alliance	0.06
		California Bulrush Marsh Alliance	0.04
Artificial Ponds Previous (Mitigation)	1.15	Open Water	1.15
Emergent Marsh (Golf Course Pond)	0.62	Total Marsh and Open Water	1.25
Total	17.98	Total	17.41
Non-Jurisdictional Golf Course Water Features (Not included in impact analysis)	1.12	Non-Jurisdictional Golf Course Water Features (Not included in impact analysis)	1.12

² Dieter Mueller-Dombois and Heinz Ellenberg. 1974. *Aims and Methods of Vegetation Ecology*. John Wiley & Sons, New York.

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As the comparison above makes clear, the detailed mapping in accordance with the MCVII resulted in changes to the vegetation totals. For example, the amount of CSS increased slightly, primarily due to conversion of areas previously mapped as Mulefat Scrub to Coyote Brush Scrub Shrubland Alliance or Black Sage Scrub Shrubland Alliance, which is likely due to the ongoing drought. Similarly, Mulefat Scrub decreased due to conversion to CSS or due to failure to meet the Membership Rules with some areas now mapped as Mixed Riparian Scrub Shrubland Alliance. Riparian Woodland decreased due to the drought and associated mortality.

Scrub Alliances: Coastal Sage Scrub and Riparian Scrub

Figure 3.5-2 of the DEIR depicts the locations of the habitat types described. Based on cover data collected by GLA, most of the areas of coastal sage scrub (CSS) match the membership rules for the alliances set forth in the MCVII and a few areas do not. Exhibit 1 depicts the alliances set forth in Table 1 above and described below.

***Artemisia californica* Shrubland Alliance (California sagebrush scrub)** areas account for 1.62 acres and occur in the western and central portions of the golf course and consists of species planted as part of the golf course landscaping and a portion of which was planted as habitat mitigation restoration for the La Habra Hills Specific Plan project and includes other species that have colonized these areas. Based on Relevé cover data, California sagebrush accounts for greater than 50-percent cover with other CSS species present including coyote brush (*Baccharis pilularis*), California brittlebush (*Encelia californica*), California buckwheat (*Erigonum fasciculatum*), giant wild rye *Elymus condensatus*), black sage (*Salvia mellifera*), lemonade berry (*Rhus integrifolia*), and laurel sumac (*Malosma laurina*). Non-natives species include summer mustard (*Hirschfeldia incana*), black mustard (*Brassica nigra*), hottentot fig (*Carpobrotus edulis*), horehound (*Marrubium vulgare*), and Bermuda grass Membership rules for the California sagebrush series are provided in the MCVII (p. 386).

Artemisia californica > 60% relative cover in the shrub canopy; *Artemisia californica* > 3 times cover of *Baccharis pilularis* and other shrub species; *Artemisia californica* > 60% relative cover in the shrub canopy, or *Malosma laurina* or *Diplacus aurantiacus* sometimes > 30% relative cover. The Rarity Ranking for the California sagebrush series is G5 S5.

***Baccharis pilularis* Shrubland alliance (Coyote brush scrub)** areas account for 2.32 acres occur at the western end of the golf course and consists of species planted as part of the previous La Habra Hills Specific Plan project habitat mitigation restoration and species that have colonized. Based on Relevé cover data, coyote brush is the most common species in these areas accounting for approximately 30-percent of the cover with other CSS species including California brittlebush, California buckwheat, California sagebrush, giant wild rye, black sage, lemonade berry, and laurel sumac. Non-natives species include summer mustard, Australia saltbush (*Atriplex semibaccata*), hottentot fig, horehound, and Bermuda grass all of which occur

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in very low percentages (e.g., 1 – 3-percent). Membership rules for Coyote brush series are provided as follows in the MCVII (p. 421):

Baccharis pilularis > 50% absolute cover in the shrub layer; *Baccharis pilularis* > 15% cover over grassy understory; *Baccharis pilularis* relative cover > 50% than other shrub species. The last of the three rules is consistent with the scrub on the site. Rarity Ranking for the coyote brush series as discussed further below is G5 S5.

***Encelia californica* Shrubland Alliance (Coast brittlebush scrub)** areas account for 2.86 acres and occurs at the western end of the golf course and consists of species planted as part of the previous golf course landscaping and includes additional species that have colonized. Coast brittlebush is dominant in these areas accounting for greater than 50-percent cover. Other species include California sagebrush, coyote brush, giant wild rye, black sage, lemonade berry, and laurel sumac. Non-natives species include summer mustard, Australia saltbush, horehound, and Bermuda grass all of which occur in very low percentages (e.g., 1 – 3-percent). Membership rules for the California brittlebush series are provided as follows in the MCVII (p. 498):

Encelia californica at least 30% relative cover in the shrub canopy. The Rarity Ranking for the California encelia series is G4 S3.

***Eriogonum fasciculatum* Shrubland Alliance (California buckwheat scrub)** area accounts for 0.40 acre and occurs near the eastern end of the course and consists of species planted as part of the golf course landscaping and includes additional species that have colonized. California buckwheat is dominant in this area covering approximately 30-percent with other CSS species including California sagebrush, giant wild rye, coyote brush, mulefat (*Baccharis salifolia*), and lemonade berry. Membership rules for California buckwheat scrub are provided as follows in the MCVII (p. 528):

Eriogonum fasciculatum > 5% absolute cover in the shrub canopy; *Eriogonum fasciculatum* > 2% absolute cover in the shrub canopy or > 50-percent relative cover in the shrub canopy; other shrubs if present, < half its cover...; *Eriogonum fasciculatum* > 50% relative cover in the shrub canopy other shrubs if present, < 50% relative cover except in some cases *Rhus ovata*. The first of the three rules is consistent with the buckwheat scrub on the site. Rarity Ranking for the buckwheat series as discussed further below is G5 S5.

Areas of **Mixed Riparian Scrub** account for 1.51 acres and consist of species planted as part of the previous habitat restoration mitigation for the La Habra Hills Specific Plan project and species that have colonized the areas, but which do not match any alliance within the MCVII and instead includes riparian scrub and woodland species growing with a predominance of CSS species including coyote bush, California buckwheat, California sagebrush, black sage, toyon (*Heteromeles arbutifolia*), lemondade berry, laurel sumac, and sugar bush (*Rhus ovata*). The

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mixed scrub immediately north of the golf course water features includes riparian and/or woodland components such as mulefat, coast live oak (*Quercus agrifolia*), arroyo willow (*Salix lasiolepis*), Gooddingii's black willow (*Salix gooddingii*), and sandbar willow (*Salix exigua*). Because the predominance of the vegetation consists of upland species, the most accurate description of this area is "mixed scrub with woodland components". Other areas, because of the species planted as part of the restoration efforts include an even mix of a number of species. Finally, near the southwest area of the golf course is an area of mixed scrub that includes four-winged saltbush (*Atriplex canescens*) which comprises up to 30-percent cover. There are no rarity rankings for these areas and they would not be considered "sensitive" based on Rarity Rankings as they do not meet Rarity Rankings of S1, S2 or S3 as noted above. Where such areas support CAGN, they would be considered sensitive.

***Salvia mellifera* Shrubland Alliance (Black sage scrub) areas** account for 1.40 acres occur in the eastern portion of the golf course and consists of species planted as part of the previous habitat mitigation restoration for the La Habra Hills Specific Plan project and species that have colonized these areas. Black sage accounts for greater than 60-percent cover with limited amounts of California buckwheat, California sagebrush, giant wild rye, lemonade berry, and laurel sumac. Non-natives include summer mustard, black mustard and non-native annual grasses including bromes and oats. Membership rules for black sage scrub are provided as follows in the MCVII (p. 706):

Salvia mellifera > 60% relative cover in the shrub canopy; *Salvia mellifera* usually > 60% or combined with a coastal shrub species > 30% relative cover in the shrub canopy. The Rarity Ranking for the Black sage series is G4 S4.

Areas of Mulefat Scrub ***Baccharis salicifolia* Shrubland Alliance (Mulefat thickets)** account for 0.19 acres as depicted on Figure 3.5-2 of the DEIR with locations in the central and eastern portions of the site. Based on GLA cover data, it was determined that not all of the areas previously mapped as mulefat scrub are in accordance with the membership rules for this alliance as set forth in the MCVII. The membership rules for mulefat thickets are provided as follows in the MCVII (p. 425):

Baccharis salicifolia > 50% relative cover in shrub canopy. Mulefat thickets has a Rarity Ranking of G5 S4.

Specifically, four areas mapped as Mulefat Scrub on Figure 3.5-2 of the DEIR do not meet the membership rules for Mulefat Thickets in the MCVII. These areas are described as follows:

The area designated as **Mulefat Scrub** on Figure 3.5-2, located between the two golf course water features immediately east of the golf course club house has been updated: the eastern portion of this area supports a patch of **Arroyo Willow Forest** (described below), while the

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remaining area supports a mosaic of native and non-native species, including ornamental species and does not match any descriptions in the MCVII, accounting for 0.22 acre.

The area designated as **Mulefat Scrub** located east of the two golf course water features and straddled by golf course fairway #3 is now mapped as **Mixed Riparian Scrub Shrubland Alliance**. The area was planted as part of the previous habitat mitigation restoration for the La Habra Hills Specific Plan project at the golf course; however, the area lacks natural hydrology and with the persistent drought, most of the mulefat and arroyo willow plantings have died leaving approximately 10-percent cover by mulefat and 15-percent cover by arroyo willow which is limited to a small clump. The area also supports four small cottonwoods which comprise less than 5-percent cover. Understory is dominated by non-native annual grasses with red brome (*Bromus madritensis Rubens*) accounting for approximately 70-percent cover and another 5-percent by ripgut (*Bromus diandrus*), and also includes western ragweed (*Ambrosia psuilostachya*), and mugwort (*Artemisia douglasiana*).

The area designated as **Mulefat Scrub** located on the western side of the golf course between golf course fairways #5 and #6 has been changed to **Coyote Brush Scrub Shrubland Alliance and Mixed Riparian Scrub Shrubland Alliance**. The area was planted as part of the previous habitat restoration mitigation for the La Habra Hills Specific Plan project at the golf course; however, the area lack natural hydrology and with the persistent drought, most of the mulefat and willow plantings have died leaving approximately 15-percent cover by mulefat and 25-percent cover by coyote brush, 5-percent black sage and 5-percent California sagebrush. Numerous willows have died, and surviving Fremont cottonwoods occur along the edges of and adjacent to the area where they receive hydrology subsidies from the golf course irrigation. Understory consists of non-native grasses including red brome, ripgut, western ragweed and mugwort.

The area designated as **Mulefat Scrub** located on the western side of the golf course between golf course fairways #4 and #5 have also been updated. A portion of this area was planted as part of the previous habitat restoration mitigation for the La Habra Hills Specific Plan project at the golf course; however, the area lacks natural hydrology and with the persistent drought, most of the mulefat and plantings have died leaving approximately 5-percent cover by mulefat and the area has converted to **Black Sage Scrub Shrubland alliance** with over 40-percent absolute cover by black sage, 20-percent California sagebrush, and 5-percent coyote brush.

Riparian Woodland

Figure 3.5-2 of the DEIR depicts the locations of the identified riparian woodland habitat types. Based on GLA cover data, the areas of riparian woodland match the membership rules for the two alliances set forth in the MCVII including **Populus fremontii Forest Alliance (Fremont cottonwood forest)** which covers 2.62 acres and **Salix lasiolepis Forest Alliance (Arroyo**

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willow forest) which accounts for 0.21 acre. Portions of these areas were planted as mitigation associated with the La Habra Hills Specific Plan. For purposes of this evaluation, areas of riparian woodland are divided geographically and include “Central Riparian Woodland,” and “Eastern Riparian Woodland”. Areas in the DEIR mapped as “Riparian Woodland” have declined due to the drought such with the surviving woodlands located in areas immediately adjacent to the golf course where they receive a sufficient subsidy from golf course irrigation.

The Central Riparian Woodland occurs in two areas: the central drainage flanked by golf course holes 8 and 9 and limited patches around the golf course ponds. The Central Riparian Woodland between golf holes 8 and 9 corresponds most closely with ***Populus fremontii* Forest Alliance (Fremont cottonwood forest)**. This area supports canopy trees that include Fremont cottonwood (*Populus fremontii*) (20-percent), California sycamore (*Platanus racemosa*), black willow, arroyo willow, and Brazilian pepper (*Schnius terebinthifolius*) with mulefat and mugwort in the understory. The membership rules for the Fremont cottonwood series are provided as follows in the MCVII (p. 215):

Populus fremontii > 50% relative cover in the tree layer; *Populus fremontii* > 5% absolute cover in the tree layer; *Populus fremontii* > 50% relative cover in the tree layer, though sometimes *P. fremontii* > 30% relative cover is *Salix* species is co-dominant. The Rarity Ranking for the Fremont cottonwood series is G4 S3.2.

The Central Riparian Woodland between the golf course water features corresponds most closely with ***Salix lasiolepis* Forest Alliance (Arroyo willow forest)**. This area supports canopy trees that include arroyo willow accounting for over 50-percent, Gooddingii’s black willow, and California sycamore, with an understory of mulefat. The membership rules for arroyo willow thickets are provided as follows in the MCVII (p. 687):

Salix lasiolepis > 50% relative cover in the shrub or tree canopy; *Salix lasiolepis* > 25% absolute cover in the shrub or tree canopy. The arroyo willow thickets are consistent with both rules. The arroyo willow series has a Rarity Ranking of G4 S4.

The areas of Eastern Woodland correspond most closely with ***Populus fremontii* Forest Alliance (Fremont cottonwood forest)**. This area supports scattered canopy trees that include Fremont cottonwood, California sycamore, black willow, arroyo willow, Peruvian pepper and Brazilian pepper (*Schnius terebinthifolius*). The membership rules for the Fremont cottonwood series are provided above.

Emergent Wetland

Figure 3.5-2 of the EIR depicts the locations of the identified habitat types. Based on GLA cover data, two alliances of emergent wetlands match the membership rules for the MCVII including

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for *Schoenoplectus californicus* **California bulrush marsh Herbaceous Alliance** accounting for 0.04 acre and *Typha domingensis* **Cattail Marsh Herbaceous Alliance** which covers 0.06 acre. Areas on the site are equally dominated by California bulrush (*Schoenoplectus acutus*) and southern cattail (*Typha domingensis*), which occur in pure stands as well as mixed stands. The membership rules for the California bulrush series are provided as follows in the MCVII (p. 1055) and the membership rules for the Cattail marsh series are on p. 1067:

Schoenoplectus californicus \geq 10% absolute cover in the herbaceous layer; *S. acutus*, if present, $<$ 50% relative cover. The California bulrush series has a Rarity Ranking of G5 S4?³

Typha domingensis $>$ 50% relative cover in the herbaceous layer; one or more cattail species may be present. The Southern Cattail series has a Rarity Ranking of G5 S5.

For purposes of this analysis, the emergent marsh associated with Golf Course water features in the northwest portion of the site is not regulated by the Corps pursuant to Section 404 of the Clean Water Act or CDFW pursuant to Section 1602 of the Fish and Game Code and impacts to this feature would not be considered significant. Also, as noted, the California bulrush marsh series and Southern Cattail marsh series have State Rarity Rankings of S4? and S5 respectively and are not considered “special-status” vegetation alliances.

Open Water

Figure 3.5-2 of the DEIR depicts the locations of the identified habitat types. Open water does not correspond to any alliance within the MCVII and has no Rarity Ranking. For purposes of this analysis, the Golf Course Storage Pond in the northwest portion of the site is not considered a “special-status” vegetation alliance, nor is it regulated by the Corps pursuant to Section 404 of the Clean Water Act or CDFW pursuant to Section 1602 of the Fish and Game Code.

Rarity Rankings

CDFW typically considers Vegetation Alliances with a Rarity Ranking of S1, S2 or S3 to be “threatened communities”. Impacts to communities with rankings of S3 or lower are typically considered to be significant impacts under CEQA. Therefore, impacts to the CSS, Riparian Woodland, and Riparian Scrub vegetation alliances would be considered significant unless mitigated. Impacts to Emergent Wetland would not be considered significant because of the lower rarity ranking. Similarly, all areas of Open Water (Golf Course water features) are artificial and maintained as decorative golf course amenities).

³ Please note that the “?” included in the Rarity Ranking is included in the MCV II and indicates that the current ranking is provisional based on existing data.

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IV. IMPACTS

Impacts to vegetation alliances as set forth in the MCVII (or as modified as necessary) are summarized in Table 2 below:

TABLE 2: SUMMARY OF IMPACTS TO VEGETATION ALLIANCES			
Manual of California Vegetation Alliance	Impacts in Deed Restricted Areas (Acres)	Impacts Outside Deed Restricted Areas (Acres)	Total
Arroyo Willow Forest Alliance	0.115	0.093	0.208
Black Sage Shrubland Alliance	1.341	0.057	1.398
Brittlebush Scrub Shrubland Alliance	0.000	0.607	0.607
California Buckwheat Shrubland Alliance	0.000	0.403	0.403
California Sagebrush Shrubland Alliance	0.499	0.451	0.950
Coyote Brush Scrub Shrubland Alliance	1.019	0.047	1.066
Fremont Cottonwood Forest Alliance	1.904	0.720	2.624
Mixed Riparian Scrub Shrubland Alliance	0.558	0.950	1.508
Mixed Scrub Shrubland Alliance	2.182	0.301	2.483
Mulefat Thicket Shrubland Alliance	0.169	0.017	0.186
Open water	1.148	0.003	1.151
Southern Cattail Marsh Alliance	0.061	0.000	0.061
California Bulrush Marsh Alliance	0.034	0.009	0.043
Total	9.030	3.658	12.688

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Impacts to Coastal Sage Scrub Alliances

Impacts CSS alliances including Black Sage Shrubland Alliance, Brittlebush Scrub Shrubland Alliance, California Buckwheat Shrubland Alliance, California Sagebrush Shrubland Alliance, Coyote Brush Scrub Shrubland Alliance, and Mixed Scrub Shrubland Alliance total 6.91 acres including 5.041 acres in the Deed Restricted Areas and 1.87 in areas outside the Deed Restrictions. Impacts to these alliances would be considered significant due to their special status or because they support the CAGN.

Impacts to Riparian Scrub Alliances

Impacts to riparian scrub alliances including Mulefat Scrub Thickets Shrubland Alliance, and Mixed Riparian Scrub Shrubland Alliance total 1.847 acres including 0.727 acre within Deed Restricted Areas and 1.120 acres outside Deed Restricted Areas. Impacts to these alliances are generally considered significant if they are subject to jurisdiction of the California Department of Fish and Wildlife pursuant to Section 1602 of the Fish and Game Code.

Impacts to Riparian Forest Alliances

Impacts to riparian forest including Cottonwood Forest Alliance, and Arroyo Willow Forest Alliance total 2.832 acres, including 2.019 acres within the Deed Restricted Areas and 0.813 acre outside the Deed Restricted Areas. Impacts to these alliances are generally considered significant if they are subject to jurisdiction of the California Department of Fish and Wildlife pursuant to Section 1602 of the Fish and Game Code.

Impacts to Emergent Marsh Alliances

Impacts to emergent marsh alliances, including California Bulrush Marsh Series, and Southern Cattail Marsh Series total 0.104 acre of which 0.95 acre is within Deed Restricted Areas and 0.009 is outside but adjacent to the Deed Restricted Area. Impacts to these alliances would generally not be considered significant as they are not associated with streams or lakes; rather they are associated with golf course water features that are not subject to jurisdiction of the California Department of Fish and Wildlife pursuant to Section 1602 of the Fish and Game Code. Because the marsh areas are associated with the Deed Restricted Areas, the impacts would be considered significant.

In addition, and not counted for purposes of this analysis are areas of bulrush and cattail marsh that occur along the golf course pond which is not subject to Corps or CDFW jurisdiction and are decorative features included as part of the golf course. Also, as noted, the California bulrush marsh series and Southern Cattail marsh series have State Rarity Rankings of S4 and S5

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respectively and are not considered “special-status” vegetation alliances and impacts to the marsh areas associated with the golf course storage ponds would not be considered significant.

Impacts to Open Water

The project proposes impacts to Open Water totaling 1.151 acres of which 1.148 occur within Deed Restricted Areas and would be considered significant because of the Deed Restrictions and not in any inherent habitat values as discussed below.

IV. Conclusions

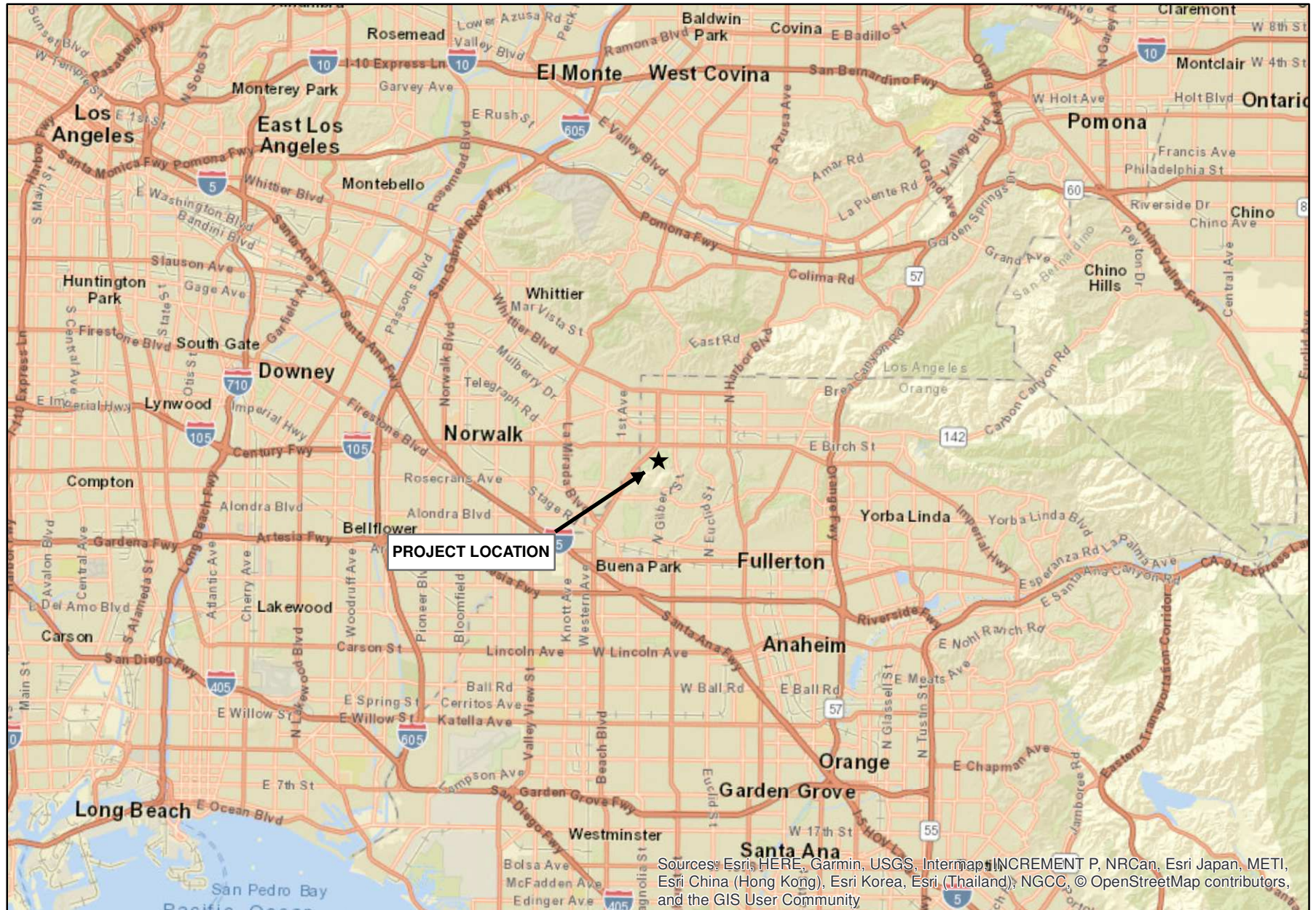
As noted in the descriptions above, each of the various vegetation alliances have been incorporated into the design of the golf course and as such exhibit limited function associated within the larger regional context. The areas are fragmented, occurring in small patches with large ratio of “edge” to area of habitat. The demonstrated most important function of the various vegetation alliances present in the existing golf course is provision of suitable habitat for the coastal California gnatcatcher. These areas of habitat occur most commonly within the western portion of the golf course, where the areas of coastal sage scrub are most expansive and in proximity to the habitat areas on the West Coyote Hills property.

Given these factors, mitigation for impacts should be focused on providing the most optimal functions for the resources currently present on the site. Given the limited success of previously introduced mitigation habitat, out-of-kind mitigation may be appropriate to ensure that maximum environmental benefits are derived from the mitigation proposed for the reuse of the property. For example, loss of golf course water features used by red-eared sliders (an invasive species of turtle) would not be a significant loss; whereas loss of coastal sage scrub occupied by the coastal California gnatcatcher would be significant and thus, increasing coastal sage scrub mitigation while reducing open water mitigation, would be of significant benefit for the gnatcatcher and constitute biologically superior mitigation.

Source: ESRI World Street Map



0
2
4
8
Miles



Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community

RANCHO LA HABRA SPECIFIC PLAN

Regional Map

GLENN LUKOS ASSOCIATES

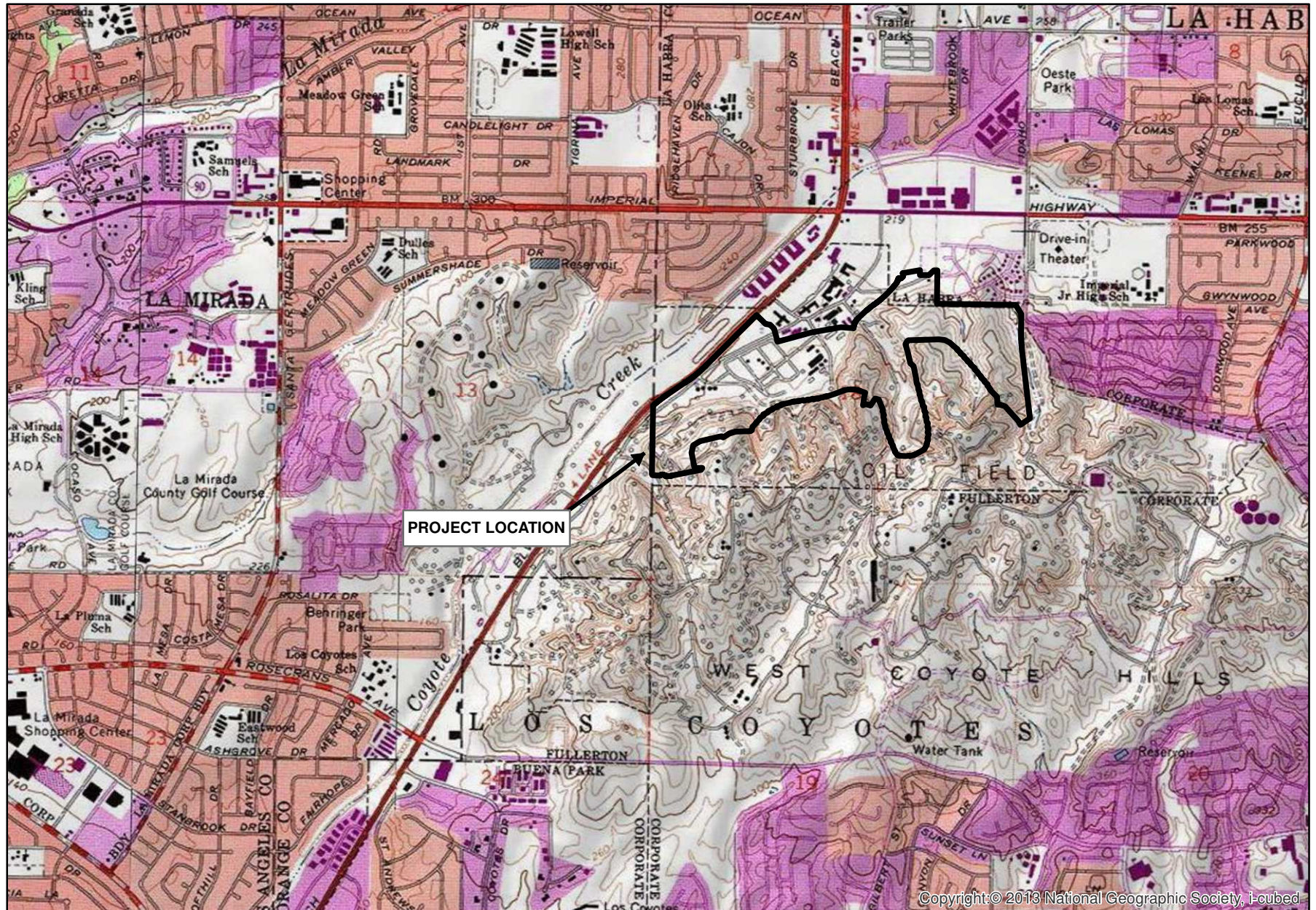
Exhibit 1



Adapted from USGS La Habra, CA quadrangle



0 1,000 2,000 4,000
Feet



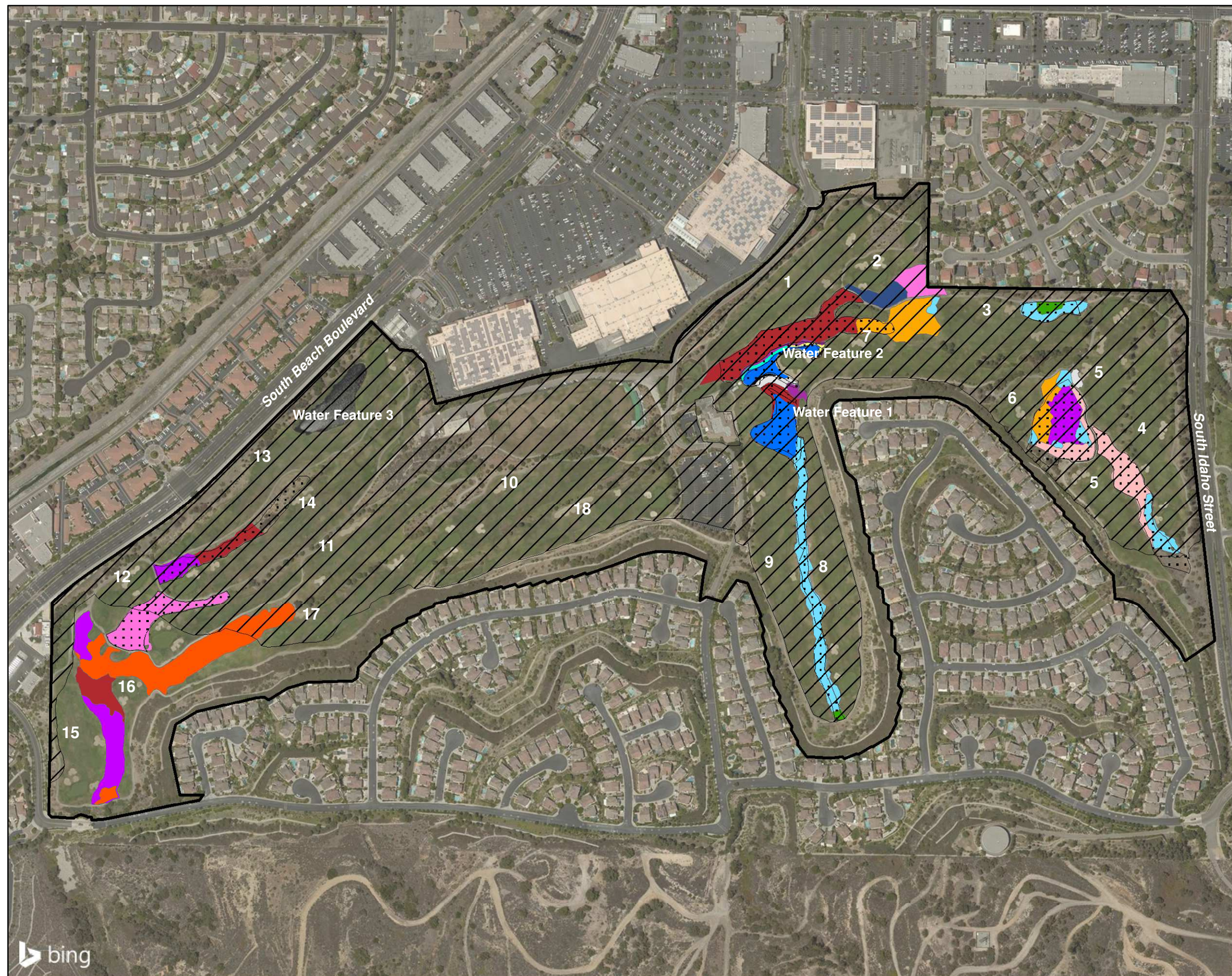
RANCHO LA HABRA SPECIFIC PLAN

Vicinity Map

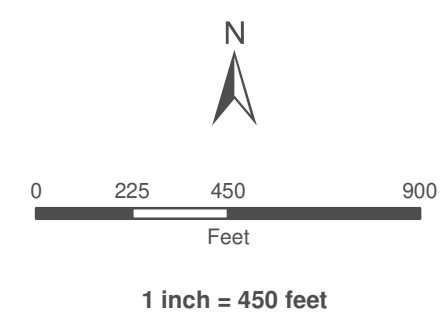
GLENN LUKOS ASSOCIATES

Exhibit 2





- Project Boundary
- Deed Restricted Areas
- Impact Limits
- Arroyo Willow Forest Alliance
- Black Sage Shrubland Alliance
- Brittlebush Scrub Shrubland Alliance
- California Buckwheat Shrubland Alliance
- California Bulrush Marsh Alliance
- California Sagebrush Shrubland Alliance
- Coyote Brush Scrub Shrubland Alliance
- Fremont Cottonwood Forest Alliance
- Mixed Riparian Scrub Shrubland Alliance
- Mixed Scrub Shrubland Alliance
- Mulefat Thicket Shrubland Alliance
- Southern Cattail Marsh Alliance
- Developed
- Open Water
- Ornamental
- 5 Golf Course Hole Number



Coordinate System: State Plane 6 NAD 83
 Projection: Lambert Conformal Conic
 Datum: NAD83
 Map Prepared by: B. Gale, GLA
 Date Prepared: July 9, 2018

RANCHO LA HABRA SPECIFIC PLAN

Vegetation Alliance Map with Impacts



Appendix B-3
Habitat Assessment and Focused Special
Status Plan Surveys

TECHNICAL MEMORANDUM

GLENN LUKOS ASSOCIATES

Regulatory Services



PROJECT NUMBER: 10860004WRGC

TO: Andrew Han, Lennar

FROM: Tony Bomkamp

DATE: August 21, 2018

SUBJECT: Habitat Assessment and Focused Surveys for Special-Status Plants, Westridge Golf Club for Rancho La Habra Project, La Habra, California

On May 16 and July 27, 2018, I conducted a habitat assessment and focused surveys for special-status plants within areas of emergent marsh, riparian habitat and coastal sage scrub. Table 3.5-1a of the Biological Resources Section of the Rancho La Habra Specific Plan EIR addressed the potential for occurrence for 29 special-status plant species, of which 18 were correctly determined to exhibit no potential for occurring on the site [survey areas are included on Exhibit 1]. The remaining 11 species were determined to exhibit low potential for occurrence on the site and represent the focus of this Technical Memorandum/Habitat Assessment and Focused Survey Report. This Technical Memorandum was prepared to document that the assessment and surveys for special-status plants is consistent with protocols set forth by the California Department of Fish and Wildlife (CDFW) that were referenced in their comment letter dated December 16, 2015, in response to the project's Notice of Preparation (NOP):

A thorough, recent floristic-based assessment of special status plants and natural communities, following the Department's Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (see <http://www.dfg.ca.gov/habcon/plant/>). The Department recommends that floristic, alliance-based and/or association-based mapping and vegetation impact assessments be conducted at the Project site and neighboring vicinity. The Manual of California Vegetation, second edition, should also be used to inform this mapping and assessment where site activities could lead to direct or indirect impacts offsite. Habitat mapping at the alliance level will help establish baseline vegetation conditions.

Before addressing each of the species, it is important to note the environmental setting/context of the site, which was a golf course developed in 2003, and prior to development the site was highly disturbed by decades of oil field operations. Thus, the potential for special-status plants was already very low at the time of development. Botanical surveys conducted by Dr. Ted Hanes, professor of botany and plant ecology for many years at California State University Fullerton did not detect any special-status plants, albeit, the plants listed in the Biological Technical Report

MEMORANDUM

August 21, 2018

Page 2

(BTR)¹ for the La Habra Hills Specific Plan, Final Environmental Impact Report No. 89-03 were not as expansive as Table 3.5-1a. The floral compendium prepared by Dr. Hanes included in the BTR also did not list any species that would be listed as having special-status today. Following development of the golf course in 2003, the site has been isolated within an expansive urban matrix, substantially limiting the potential for colonization by the special-status plants addressed below, which based on the evidence did not occur on the site prior to development. This is particularly noteworthy given that the mapped location of the few extant occurrences of the species addressed below occur many miles from the site and further, because many of the historic occurrences, as discussed below, have been extirpated, resulting in no potential for colonization of the site following development of the golf course.

The focused surveys were conducted on May 16 and July 27, 2018 by GLA Senior Biologist and Botanist Tony Bomkamp. Areas of suitable habitat were surveyed on foot so as to ensure visual coverage of the suitable habitat areas following CDFW's *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (see <http://www.dfg.ca.gov/habcon/plant/>). In some areas, due to limited access, emergent marsh was scanned, using binoculars, for the morning glory and dodder listed below. As discussed below, no special-status plants were detected on the site.

***Abronia villosa* var. *aurita* – chaparral sand verbena** occurs in sandy areas such as sand dunes as well as open areas with sandy soils in coastal sage scrub (CSS) and chaparral. The species was not observed during surveys. The substrate on the site is generally not suitable for this species; however, there are some sandy openings within areas of CSS. Notably, there are no records of this species from the vicinity of the site, with the nearest records from Yorba Linda and Anaheim; however, all of these were recorded between 1903 and 1935 and have been extirpated. The nearest Los Angeles County occurrence is from the desert. Given the lack of detection, the history of the site and the lack of potential source populations within the vicinity, there is no potential for this species to occur on the site.

***Berberis nevadensis* – Nevin's barberry** is a large distinctive shrub that typically occurs on rocky slopes and in alluvial scrub associated with large washes. The species was not observed during surveys. The substrate on the site is not suitable for this species. Also, there are no records of this species from the vicinity of the site and no records from Orange County. The nearest record is from Whittier Narrows approximately 10 miles to the northwest. Given the lack of detection, lack of suitable habitat, the history of the site and the lack of potential source populations within the vicinity, there is no potential for this species to occur on the site.

¹ Dr. Ted Hanes and Dr. Joel Weintraub. January 1989. *Biological Survey of the West Coyote Hills, La Habra Sphere of Influence, Orange County, California*.

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August 21, 2018

Page 3

Calochortus plummerae **Plummer's Mariposa lily** is a distinctive and easily recognized lily that occurs in CSS and chaparral, typically on ridgelines and dry slopes. This distinctive species was not observed during surveys. There are no historic records from the vicinity of the site and the nearest extant populations in Orange County occur in the southern end of the Santa Ana Mountains approximately 13 miles to the east and in Los Angeles County in areas within the San Gabriel Mountain foothills around Glendora and San Dimas approximately 16 miles to the north. In both instances, the site is separated from the extant occurrences by essentially unbroken urban development. Given the lack of detection, lack of suitable habitat, the history of the site and the lack of potential source populations within the vicinity, there is no potential for this species to occur on the site.

Calystegia felix – **lucky morning glory** is a morning glory that is typically associated with seeps, wet meadows and wet areas within riparian habitat. The emergent wetlands exhibit conditions that could support this species; however, there are no records from Orange County and the nearest records in Los Angeles County have been extirpated. The nearest extant locations occur in the Chino area, approximately 17 miles to the east. Given the lack of detection during surveys, history of the site, and the lack of potential source populations within the vicinity, there is no potential for this species to occur on the site.

Cuscuta obtusiflora var. *glandulosa* – **Peruvian dodder** is a parasitic plant that grows on wetland emergent plants such as cattails and bulrush that occur on the edges of the golf course ponds. The determination to include this species as having “low potential” in Table 3.5-1a was based on an historic reference in the California Natural Diversity Database; however, the two nearest occurrences are from El Monte, near the corner of Garvey Avenue and Rosemead Boulevard, 12 miles to the northwest of the site in an area that has been developed for decades and is clearly extirpated. The other occurrence is from 1899 in the Colton area and is also within a developed area and is extirpated. Given the lack of detection, history of the site and the lack of potential source populations within the vicinity, there is no potential for this species to occur on the site.

Horkelia cuneata ssp. *puberula* – **mesa horkelia** occurs in sandy open areas in coastal sage scrub (CSS) and chaparral. The species was not observed during surveys. The substrate on the site is suitable for this species in some areas. Nevertheless, there are no records of this species from the vicinity of the site, with the nearest records from the Santa Ana Mountains 13 miles to the east and Santa Fe Dam Recreation area in Duarte, 14 miles to the north. Given the lack of detection, the history of the site and the lack of potential source populations within the vicinity, there is no potential for this species to occur on the site.

Lasthenia glabrata ssp. *coulteri* – **Coulter's goldfields** is a small annual wildflower that occurs in inland areas in clay soils within alkali sink scrub and in coastal areas on the fringes of coastal salt marsh. This species blooms early, typically in February and March. The descriptions of

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preferred habitat and potential for occurrence in Table 3.5-1a is clearly wrong. There is no suitable habitat for this species on the site and no potential for occurrence.

Lepidium virginicum* var. *robinsonii – **Robinson's peppergrass** is an annual typically associated with rocky outcrops and openings in CSS. The species was not observed during surveys. The substrate and habitat structure on the site are not suitable for this species. Also, there are no records of this species from the vicinity of the site, with the nearest records from the Santa Ana Mountains 13 miles to the east and Santa Fe Dam Recreation area in Duarte, 14 miles to the north. Given the lack of detection, lack of suitable habitat, the history of the site and the lack of potential source populations within the vicinity, there is no potential for this species to occur on the site.

Phacelia stellaris **Brand's star phacelia** – is an annual typically associated with sand dunes and coastal strand and sandy openings in CSS. The only Orange County occurrence is from 1932 and occurs within a developed area in the Los Alamitos area. The nearest occurrence in Los Angeles County is from 1923 and occurs near the 105 Freeway in a developed area. Other occurrences in Los Angeles County are near El Segundo and LAX, well removed from the site. Given the lack of detection, the history of the site and the lack of potential source populations within the vicinity, there is no potential for this species to occur on the site.

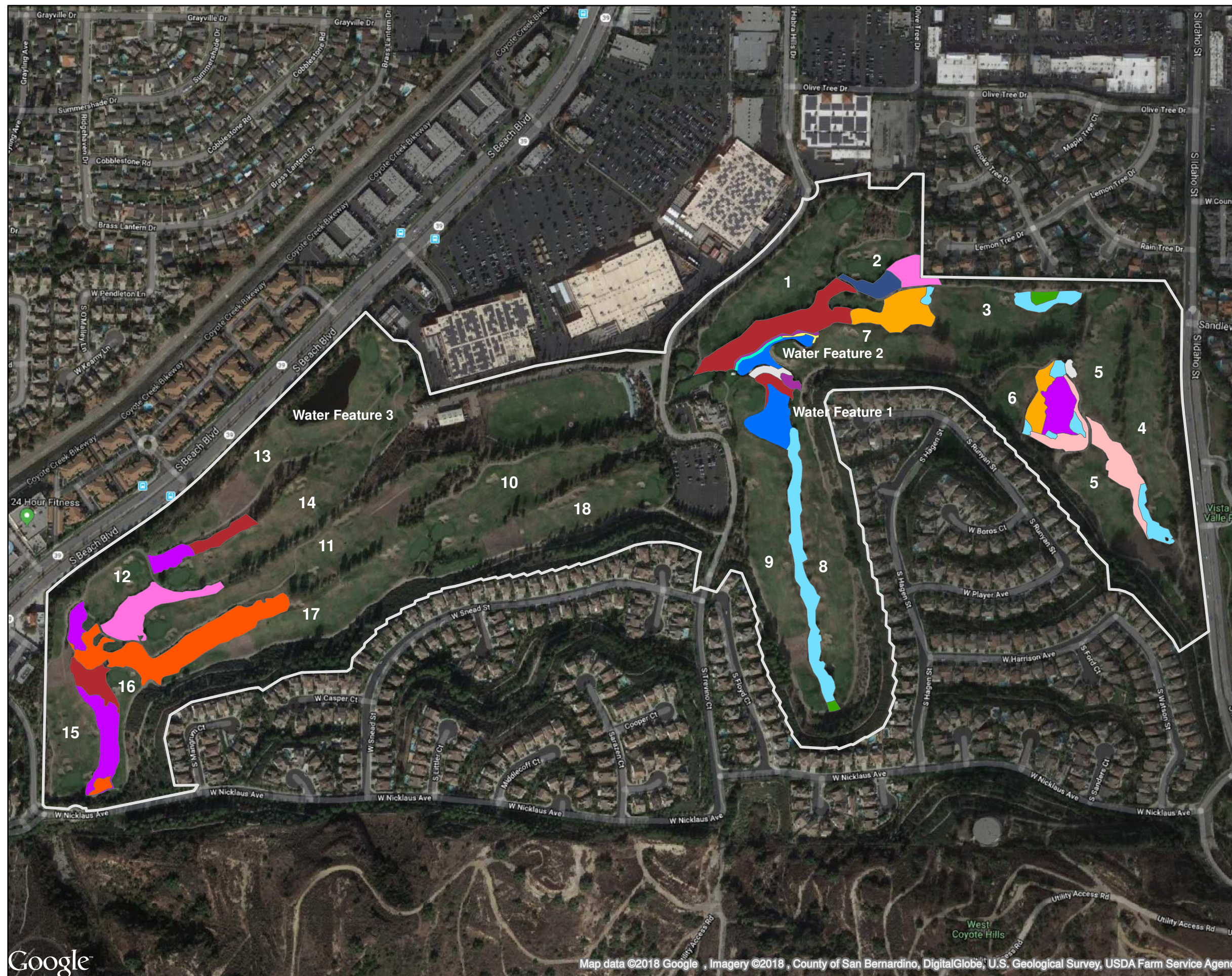
Pseudognaphalium leucocephalum – **white rabbit tobacco** is an annual that is typically associated with areas of alluvial scrub within high-energy streams. The species was not observed during surveys. The substrate and habitat structure on the site are not suitable for this species. Also, there are no records of this species from the vicinity of the site, with the nearest records from south Orange County in San Juan Creek 35 miles southeast of the site. The nearest Los Angeles Records are from 1900 and 1905 in Pasadena in developed areas and 1881 from Azusa in areas now developed. Given the lack of suitable habitat including hydrologic conditions, the history of the site and the lack of potential source populations within the vicinity, there is no potential for this species to occur on the site.

Symphotrichum defoliatum – **San Bernadino aster** is a perennial that according to the Jepson Manual is associated with grasslands and disturbed areas. Table 3.5-1a states that it occurs in vernal moist areas, ditches, seeps and springs. There are no extant records in the vicinity of the site with the nearest location from 1896 in a now-developed area of Buena Park. Other occurrences in the Los Alamitos and Seal Beach areas are from 1932 and are presumably extirpated. Currently known locations are from the Los Pinos Potrero in the Santa Ana Mountains², Santa Rosa Plateau and San Bernardino County. Given the lack of suitable habitat, the history of the site and the lack of potential source populations within the vicinity, there is no potential for this species to occur on the site.

² Robert L. Allen and Fred M. Roberts. 2013. *Wildflowers of Orange County and the Santa Ana Mountains*. Laguna Wilderness Press, Laguna Beach, CA.

Conclusisons

Based on the factors noted for each species addressed above, there is no potential for special-status species to occur on the site. Thus, the project exhibits no potential for impacts to special-status plants.



- Project Boundary
- Arroyo Willow Forest Alliance
- Black Sage Shrubland Alliance
- Brittlebush Scrub Shrubland Alliance
- California Buckwheat Shrubland Alliance
- California Bulrush Marsh Alliance
- California Sagebrush Shrubland Alliance
- Coyote Brush Scrub Shrubland Alliance
- Fremont Cottonwood Forest Alliance
- Mixed Riparian Scrub Shrubland Alliance
- Mixed Scrub Shrubland Alliance
- Mulefat Thicket Shrubland Alliance
- Southern Cattail Marsh Alliance
- Open Water
- Ornamental
- 5 Golf Course Hole Number



0 225 450 900
Feet

1 inch = 450 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: C. Lukos, GLA
Date Prepared: July 31, 2018

WESTRIDGE GOLF COURSE

Rare Plant Survey Map

GLENN LUKOS ASSOCIATES



Exhibit 1

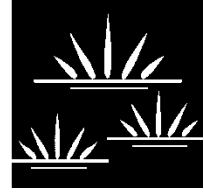
X:\0363-THE REST\1086-04WRGC\1086-4GIS\Rareplants\1086-4Rareplants.mxd

Appendix B-4

Results of Protocol Least Bell's Vireo Surveys

GLENN LUKOS ASSOCIATES

Regulatory Services



August 15, 2018

Andrew Han
Lennar
25 Enterprise
Suite 400
Aliso Viejo, California 92656

SUBJECT: Results of Protocol Least Bell's Vireo Surveys for the Westridge Golf Course,
City of La Habra, Orange County, California

Dear Mr. Han:

This letter report documents the results of protocol presence/absence surveys conducted by Glenn Lukos Associates, Inc. (GLA) for the federally and State-listed endangered least Bell's Vireo (*Vireo bellii pusillus*; LBV) at the above-mentioned property. Surveys were conducted from May 16, 2018 through July 27, 2018 in all areas of potentially suitable habitat in accordance with U.S. Fish and Wildlife Service (USFWS) guidelines. As discussed in detail below, a single migrant LBV was detected in an approximately 0.45-acre patch of cottonwood woodland at the northwest corner of the golf course during the eighth survey on July 26, 2018. In order to determine whether this was a migrating individual, the area was re-surveyed on the following day, July 27 and the LBV was not detected and was also not detected in other areas of suitable habitat during the July 27, 2018 survey. The location of the migrant LBV is depicted on Exhibit 3 – Site Map.

During the surveys for LBV, observations of the federally listed threatened coastal California gnatcatcher (*Polioptila californica californica*) were recorded and are depicted on Exhibit 3.

1.0 SITE LOCATION AND DESCRIPTION

The Westridge Golf Course (the Project) is located within the City of La Habra, Orange County, California [Exhibit 1 – Regional Map]. The Project site is located in Section 18, Township 3 South, Range 10 West, of the La Habra California USGS 7.5 minute topographical map (dated 1964, photorevised 1981) [Exhibit 2 – Vicinity Map]. Approximate Universal Transverse Mercator (UTM) coordinates for the site are 508846.74 mE and 37263600890.00 mN (Zone 8Z). The Project site is located south of Imperial Highway and east of Beach Boulevard, is bounded by South Idaho Street to the east, residential development and a small portion of undeveloped

land to the south, Beach Boulevard and residential development to the west, and commercial and residential development to the north [Exhibit 3]

The Project site is an approximately 150-acre property, consisting of golf course uses, which also contains a number of limited areas of restored habitat intermixed with golf course play areas and open water features. These areas include coastal sage scrub, riparian habitats and emergent marsh growing on the edge of the golf course water features.

Specifically, the Project site contains approximately six acres of created riparian habitat, dominated by arroyo willow (*Salix lasiolepis*), black willow (*Salix gooddingii*), Brazilian pepper (*Schinus terebinthifolius*), and Fremont cottonwood (*Populus fremontii*). Additional prominent species include California mugwort (*Artemisia douglasiana*), Mexican fan palm (*Washingtonia robusta*), mulefat (*Baccharis salicifolia*), Peruvian pepper (*Schinus molle*), western ragweed (*Ambrosia psilostachya*), and western sycamore (*Platanus racemosa*).

Areas of created coastal sage scrub also occur onsite, locally dominated by California brittlebush (*Encelia californica*), coyote brush (*Baccharis pilularis*), California buckwheat (*Eriogonum fasciculatum*), California sagebrush (*Artemisia californica*), and black sage (*Salvia mellifera*). Other species include giant wild rye (*Elymus condensatus*), laurel sumac (*Malosma laurina*), lemondade berry (*Rhus integrifolia*), and coast goldenbush (*Isocoma menziesii*). Non-native species include summer mustard (*Hirschfeldia incana*) and non-native annual grasses including bromes (*Bromus* spp.) and wild oats (*Avena* spp.).

The western portion of the site does not contain any suitable riparian habitat for LBV; rather, it consists of the developed golf course play areas with areas of created coastal sage scrub habitat and relatively sparse patches of ornamental vegetation such as Peruvian pepper and ornamental pine trees (*Pinus* sp.) [Exhibit 4 – Site Photographs, Photographs 1 and 2].

The eastern portion of the site consists of the developed golf course play areas as well as both coastal sage scrub and riparian habitats [Exhibit 4, Photographs 3 and 4].

2.0 METHODOLOGY

Focused protocol surveys for the LBV were conducted by GLA biologists Tony Bomkamp, Jeff Ahrens, and April Nakagawa as listed in Table 1. Surveys were conducted according to the survey guidelines issued by the 2001 U.S. Fish and Wildlife Service¹. These guidelines stipulate

¹ U.S. Fish and Wildlife guidelines for least Bell's vireo surveys recommend surveys of up to 50 hectares (approximately 120 acres) and no more than 3 linear kilometers (approximately 1.8 miles) per day, depending on site conditions (e.g., density and width of vegetation). U.S. Department of the Interior, Fish and Wildlife Service.

that a minimum of eight visits be conducted within areas of suitable habitat, with at least ten days between site visits.

Protocol surveys were conducted on May 16 and 26, June 5, 15, and 25, and July 5, 16, and 26, with an added visit on July 27, 2018. All surveys were conducted between dawn and 11:00 A.M. in accordance with USFWS guidelines. All suitable areas were covered on foot by walking slowly and methodically through the riparian habitat. Survey areas are depicted on Exhibit 3 and in site photographs provided in Exhibit 4. The presence/absence of LBV was determined by identifying all birds by sight and call, aided by the use of binoculars. No taped vocalizations were used to elicit response from LBV or any other species potentially present.

Weather conditions during the surveys were conducive to a high level of bird activity. Temperatures ranged from approximately 53 degrees Fahrenheit to 84 degrees Fahrenheit. Wind speeds ranged from 0-2 mile per hour during the surveys. Table 1 summarizes the survey dates and weather information for each survey date. As noted, observations of the CAGN were also recorded during the surveys for LBV.

3.0. RESULTS

Least Bell's vireo was not detected during the surveys 1 -7; however, during survey eight on July 26, 2018, a single LBV was detected in an approximately 0.45 acre, isolated patch of cottonwood woodland near the northeast corner of the golf course. Given the late July date for the first occurrence of least Bell's vireo on the site, it was suspected that the individual was likely an early migrant consisting of an unpaired male or juvenile. As noted in an email by Loren Hays of USFWS to Jeff Ahrens of GLA (addressing a similar, but different situation), such a single late occurrence is most likely a dispersing unpaired male or juvenile.

Although it is certainly possible that the bird you observed was unpaired [GLA again reiterates this this email was not addressing this specific site], my experience has been that unpaired males often abandon sites (by mid-July) if they were unable to attract mates by that time. Who knows where they go, but we have not often turned up adult (1+ year-old) males in late July or August in locales where a territory was not occupied during the breeding season. When we have detected males in late July, August or September at "new" sites (not previously occupied nesting locale or territory), they are often juveniles (which were identified by their plumages and/or imperfect songs)...²

2001 Least Bell's Vireo Survey Guidelines, Published guidelines by Ecological Services Carlsbad Fish and Wildlife Office, 3 pages.

² Loren Hayes. Email transmitted to Jeff Ahrens on August 9, 2001.

Based on these observations, GLA conducted a follow-up visit on July 27 to determine whether the individual was still present. A careful survey of the area by GLA Senior Biologist Tony Bomkamp did not detect the individual, confirming the (presumed) migratory status of the individual. Other areas of potential habitat were also surveyed during the July 27 site visit and LBV was not detected.

CAGN were observed during LBV surveys and the locations are depicted on Exhibit 3. Specifically, a pair of CAGN was observed in the eastern portion of the golf course in the southerly-most survey area on June 5, which was the only observation of a CAGN pair at this location during the nine LBV survey passes. On July 5, a single CAGN was observed to the north of this location, which again was the only observation during the nine survey passes. Also on July 5, a single CAGN was observed near the western edge of the site with a similar observation of a single CAGN at the western-most edge of the golf course. Both of the westerly occurrences were detected during vegetation mapping efforts.

Table 1. Summary of Survey Dates and Weather Data.

Date	Survey Time	Temperature (°F)	Cloud Cover (%)	Wind Speed (Mph)	Surveying Biologists
5/16/18	7:00A.M./ 8:45A.M.	57/61	Clear/Clear	0/0	TB/AN
5/26/18	7:00A.M./ 9:30A.M.	58/58	Overcast/ Overcast	0/0	AN
6/5/18	7:00A.M./ 9:30A.M.	53/64	Overcast/ Overcast	0/0	AN
6/15/18	7:30A.M./ 11:00A.M.	67/74	Partly cloudy/ Partly cloudy	0/0	JA/AN
6/25/18	7:15A.M./ 10:45A.M.	66/71	Overcast/ Clear	0/0	AN
7/5/18	7:30A.M./ 11:00A.M.	68/84	Clear/Clear	1/0	AN
7/16/18	7:30 A.M/ 10:45 A.M	72/79	Overcast	0/0	AN
7/26/18	8:15 A.M./ 11:00 A.M	74/80	Overcast/ Clear	1/2	AN
7/27/18	7:15 A.M./ 11:30	75/83	Overcast/ Clear	0/0	TB

TB = Tony Bomkamp; AN = April Nakagawa; JA = Jeff Ahrens

Additional birds observed during the protocol surveys included the following: Allen's hummingbird (*Selasphorus sasin*), American coot (*Fulica americana*), American crow (*Corvus brachyrhynchos*), American robin (*Turdus migratorius*), Anna's hummingbird (*Calypte anna*), barn swallow (*Hirundo rustica*), Bewick's wren (*Thryomanes bewickii*), black-crowned night-heron (*Nycticorax nycticorax*), black phoebe (*Sayornis nigricans*), Brewer's blackbird (*Euphagus cyanocephalus*), bushtit (*Psaltiriparus minimus*), California towhee (*Melospiza crissalis*), cliff swallow (*Petrochelidon pyrrhonota*), common yellowthroat (*Geothlypis trichas*), Cooper's hawk (*Accipiter cooperii*), Egyptian goose (*Alopochen aegyptiaca*), Eurasian collared-dove (*Streptopelia decaocto*), great-tailed grackle (*Quiscalus mexicanus*), hooded oriole (*Icterus cucullatus*), house finch (*Haemorhous mexicanus*), house wren (*Troglodytes aedon*), lesser goldfinch (*Spinus psaltria*), mallard (*Anas platyrhynchos*), mourning dove (*Zenaidura macroura*), northern rough-winged swallow (*Stelgidopteryx serripennis*), northern mockingbird (*Mimus polyglottos*), Nuttall's woodpecker (*Picoides nuttallii*), Pacific-slope flycatcher (*Empidonax difficilis*), phainopepla (*Phainopepla nitens*), pin-tailed whydah (*Vidua macroura*), red-shouldered hawk (*Buteo lineatus*), red-tailed hawk (*Buteo jamaicensis*), scaly-breasted munia (*Lonchura punctulata*), snowy egret (*Egretta thula*), song sparrow (*Melospiza melodia*), sora (*Porzana carolina*), spotted towhee (*Pipilo maculatus*), western bluebird (*Sialia mexicana*), western kingbird (*Tyrannus verticalis*), white-throated swift (*Aeronautes saxatalis*), Wilson's warbler (*Cardellina pusilla*), yellow-chevroned parakeet (*Brotogeris versicolurus*), and yellow warbler.

No brown-headed cowbirds (*Molothrus ater*) were detected onsite.

If you have any questions regarding the findings of this report, please contact me at (949) 340-7333

I certify that the information in this survey report and attached exhibits fully and accurately represents our work.

GLENN LUKOS ASSOCIATES

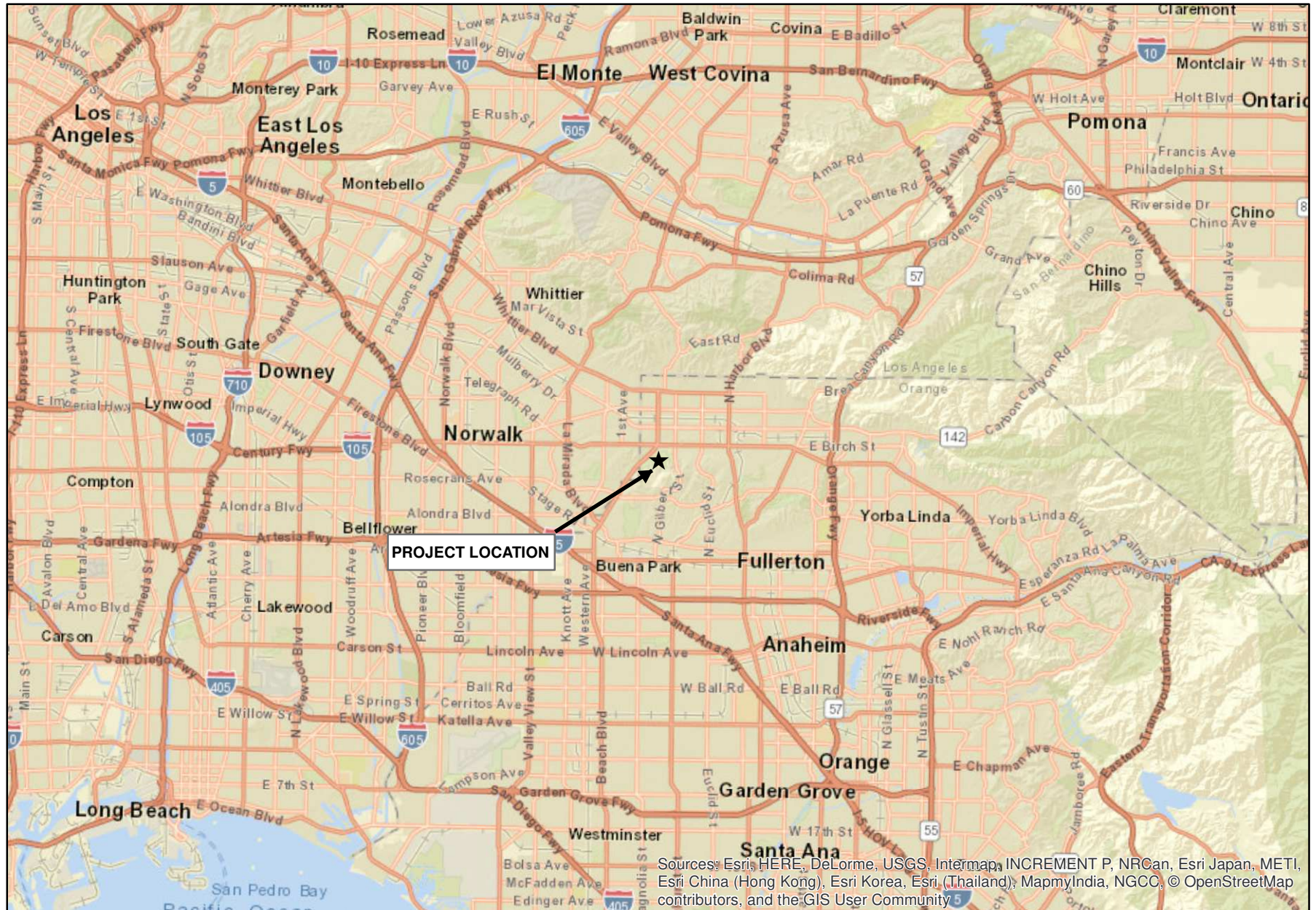


Tony Bomkamp
Technical Director/Senior Biologist

Source: ESRI World Street Map



0
2
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8
Miles



Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

WESTRIDGE GOLF COURSE

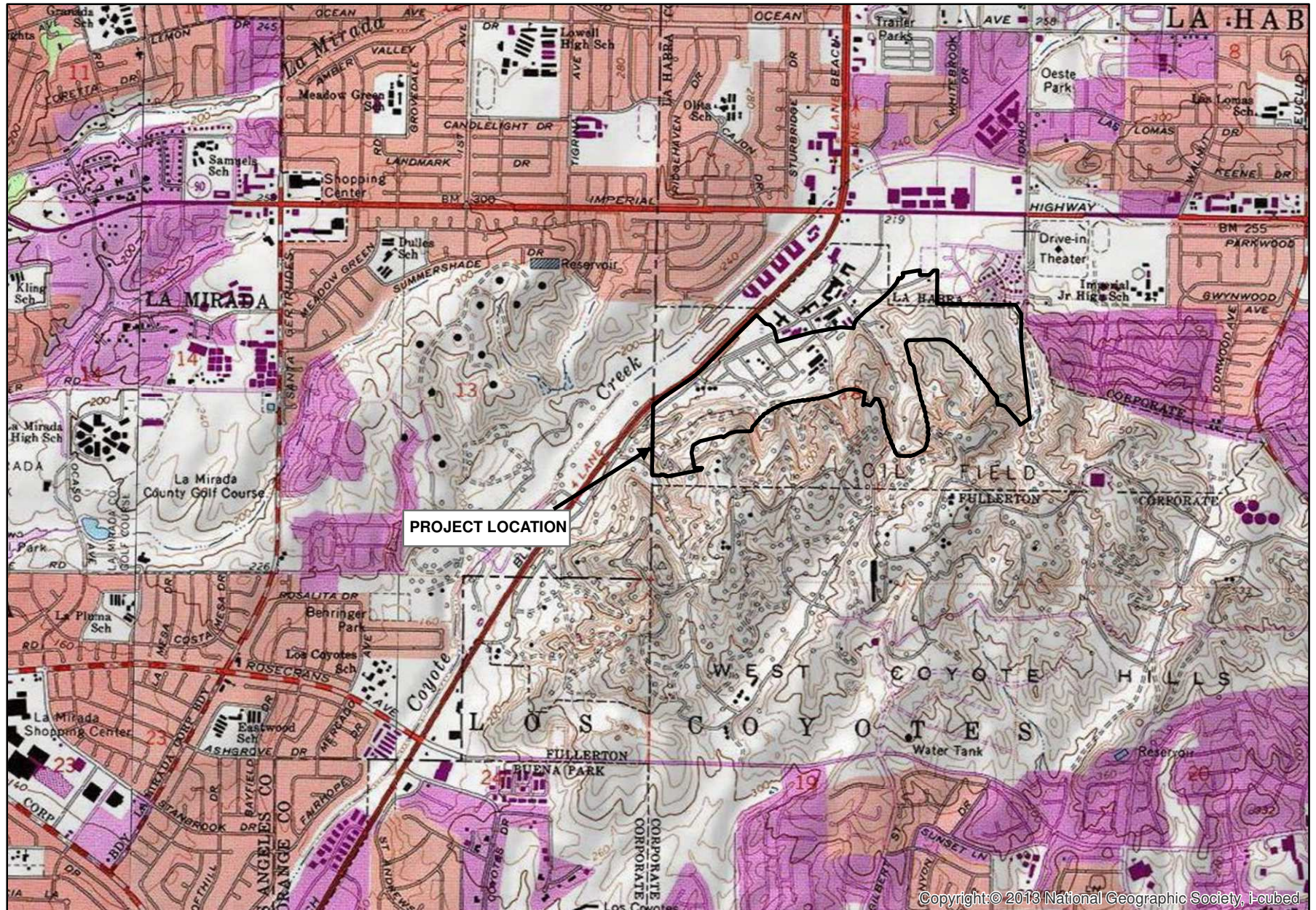
Regional Map

GLENN LUKOS ASSOCIATES

Exhibit 1



Adapted from USGS La Habra, CA quadrangle



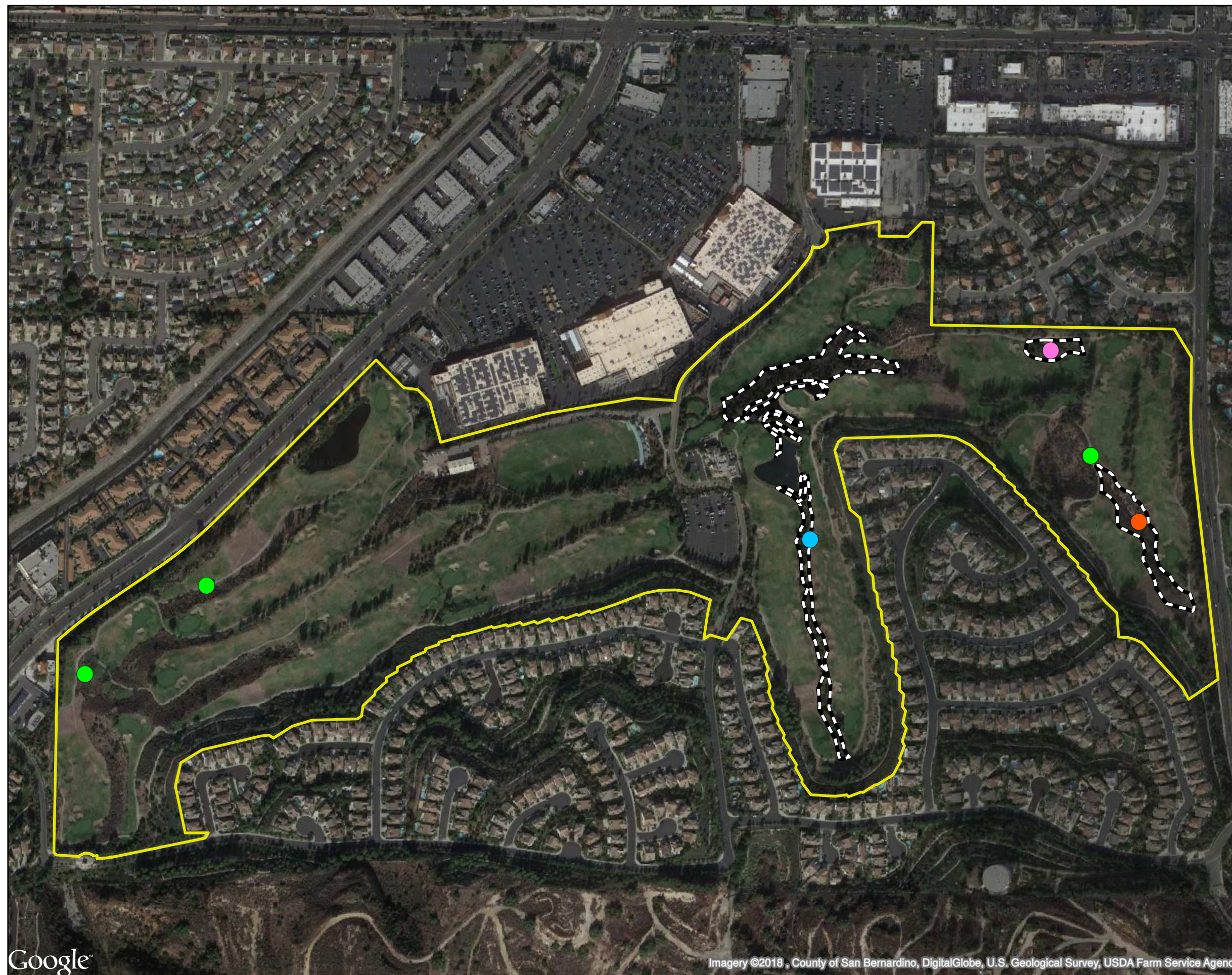
WESTRIDGE GOLF COURSE

Vicinity Map

GLENN LUKOS ASSOCIATES

Exhibit 2





- Project Boundary
- ▤ LBV Survey Area
- CAGN Single
- CAGN Pair
- Yellow Warbler
- Migrant LBV



1 inch = 450 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: C. Lukos, GLA
Date Prepared: July 19, 2018

WESTRIDGE GOLF COURSE

Least Bell's Vireo Survey Map

GLENN LUKOS ASSOCIATES



Exhibit 3

X:\0363-THE REST\1086-04WRGC\1086-4GIS\LBV\1086-4LBVLayout.mxd



Photograph 1: View of western portion of the Project site facing approximately north, depicting golf play areas and sparse ornamental vegetation.



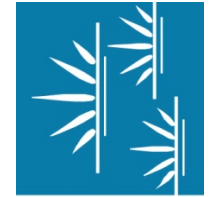
Photograph 2: View of western portion of Project site facing approximately northeast, depicting golf play areas with created coastal sage scrub in the foreground.



Photograph 3: View of eastern portion of Project site facing approximately west, depicting golf play areas and a portion of riparian habitat within the least bell's vireo focused survey area.



Photograph 4: View of eastern portion of Project site facing approximately north, depicting golf play areas and a portion of riparian habitat within the least bell's vireo focused survey area.



GLENN LUKOS ASSOCIATES

Exhibit 4

WESTRIDGE GOLF COURSE

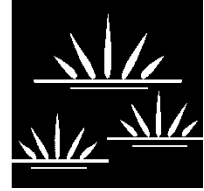
Site Photographs

Appendix B-5

Results of Protocol Surveys for the Western Pond Turtle

GLENN LUKOS ASSOCIATES

Regulatory Services



July 12, 2018

Andrew Han
Lennar
25 Enterprise
Suite 400
Aliso Viejo, California 92656

SUBJECT: Results of Protocol Surveys for the Western Pond Turtle at the Westridge Golf Club City of La Habra, Orange County, California

Dear Mr. Han:

This letter report documents the results of protocol presence/absence surveys conducted by Glenn Lukos Associates, Inc. (GLA) for the western pond turtle (*Emys marmorata*; WPT), a State of California Species of Special Concern at the above-mentioned property. Surveys were conducted from May 16, 2018 through July 5, 2018 in all areas of potentially suitable habitat in accordance with U.S. Fish and Wildlife Service (USFWS) guidelines. The western pond turtle was not detected at the property.

1.0 SITE LOCATION AND DESCRIPTION

The Westridge Golf Club (the Project) is located within the City of La Habra, Orange County, California [Exhibit 1 – Regional Map]. The Project site is located in Section 18, Township 3 South, Range 10 West, of the La Habra California USGS 7.5-minute topographical map (dated 1964, photorevised 1981) [Exhibit 2 – Vicinity Map]. Approximate Universal Transverse Mercator (UTM) coordinates for the site are 508846.74 mE and 37263600890.00 mN (Zone 8Z). The Project site is located south of Imperial Highway and east of Beach Boulevard, is bounded by South Idaho Street to the east, residential development and a small portion of undeveloped land to the south, Beach Boulevard and residential development to the west, and commercial and residential development to the north.

The Project site is an approximately 75-acre property which contains a number of created habitat areas intermixed with golf course play areas and open water features, including coastal sage scrub and riparian habitat. The Project site contains three artificially-constructed ponds: one pond is located in the western portion of the site and two ponds are located within the eastern portion of the site [Exhibit 3 – Western Pond Turtle Survey Area Map and Exhibit 4 – Site Photographs].

29 Orchard
Telephone: (949) 837-0404

■ Lake Forest

■ California 92630-8300
Facsimile: (949) 837-5834

2.0 METHODOLOGY

Focused protocol surveys for the WPT were conducted by GLA biologists Tony Bomkamp, Jeff Ahrens, and April Nakagawa as listed in Table 1. Surveys were conducted according to the survey guidelines issues by the 2006 USGS *Western Pond Turtle (Emys marmorata) Visual Survey Protocol for the Southcoast Ecoregion*¹. These guidelines stipulate that surveys should be conducted during the time of greatest pond turtle activity, typically during the breeding season (May – July).

Protocol surveys were conducted on June 5, 15, and 25, and July 5, 2018. All suitable areas were first surveyed from afar for presence of basking or underwater WPT using binoculars. Then, target areas were approached slowly and quietly on foot while listening for the any splash of water that might indicate the presence of unseen turtles. The water surface was visually surveyed with the aid of binoculars for presence of swimming turtles, and streamside refugia and banks were surveyed for presence of basking turtles.

Table 1. Summary of Survey Dates and Weather Data.

Date	Survey Time	Temperature (F°)	Cloud Cover (%)	Wind Speed (Mph)	Surveying Biologists
5/16/18	7:00A.M./ 8:45A.M.	57/61	Clear/Clear	0/0	TB/AN
6/5/18	7:00A.M./ 9:30A.M.	53/64	Overcast/ Overcast	0/0	AN
6/15/18	7:30A.M./ 11:00A.M.	67/74	Partly cloudy/ Partly cloudy	0/0	JA/AN
6/25/18	7:15A.M./ 10:45A.M.	66/71	Overcast/ Clear	0/0	AN
7/5/18	7:30A.M./ 11:00A.M.	68/84	Clear/Clear	1/0	AN

TB = Tony Bomkamp; AN = April Nakagawa; JA = Jeff Ahrens

¹ U.S. Department of the Interior, U.S. Geological Survey. 2006. *Western Pond Turtle (Emys marmorata) Visual Survey Protocol for the Southcoast Ecoregion*. Published guidelines by Western Ecological Research Center, 60 pages.

Andrew Han
Lennar
July 12, 2018
Page 3

3.0. RESULTS

Juvenile and adult red-eared sliders (*Trachemys scripta elegans*) were observed basking and swimming in both the northern and southern ponds on the eastern portion of the Project site. No turtles of any species were observed in the pond on the western portion of the site. No WPT were detected onsite during focused protocol surveys.

Additional aquatic species observed during the protocol surveys included the following: bullfrog (*Lithobates catesbeianus*) and mosquitofish (*Gambusia affinis*).

If you have any questions regarding the findings of this report, please contact me at (949) 340-7333.

I certify that the information in this survey report and attached exhibits fully and accurately represents our work.

GLENN LUKOS ASSOCIATES

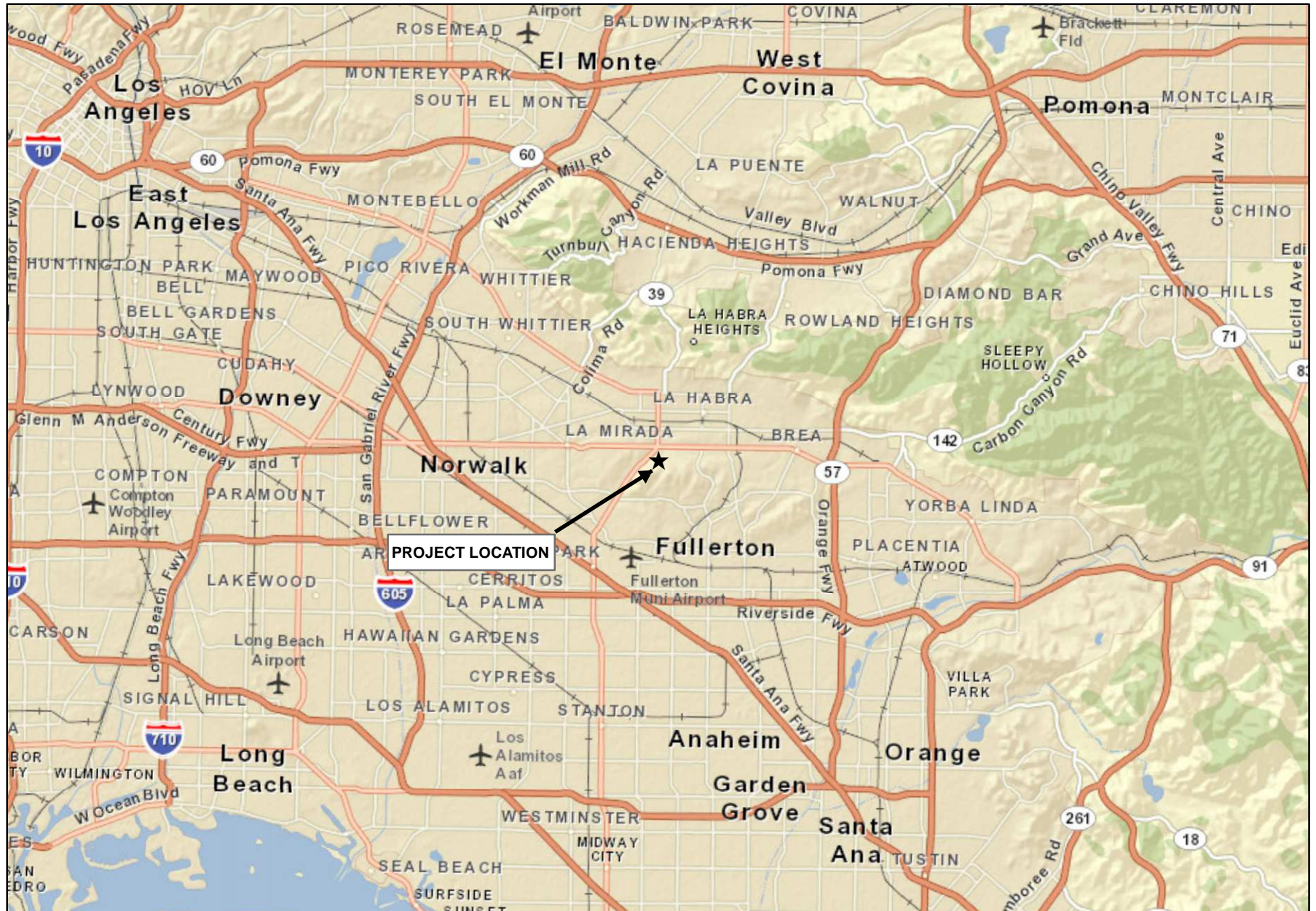
A handwritten signature in black ink that reads "Tony Bomkamp". The signature is written in a cursive, flowing style.

Tony Bomkamp
Senior Biologist

Source: ESRI World Street Map



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Miles



WESTRIDGE GOLF CLUB

Regional Map

GLENN LUKOS ASSOCIATES

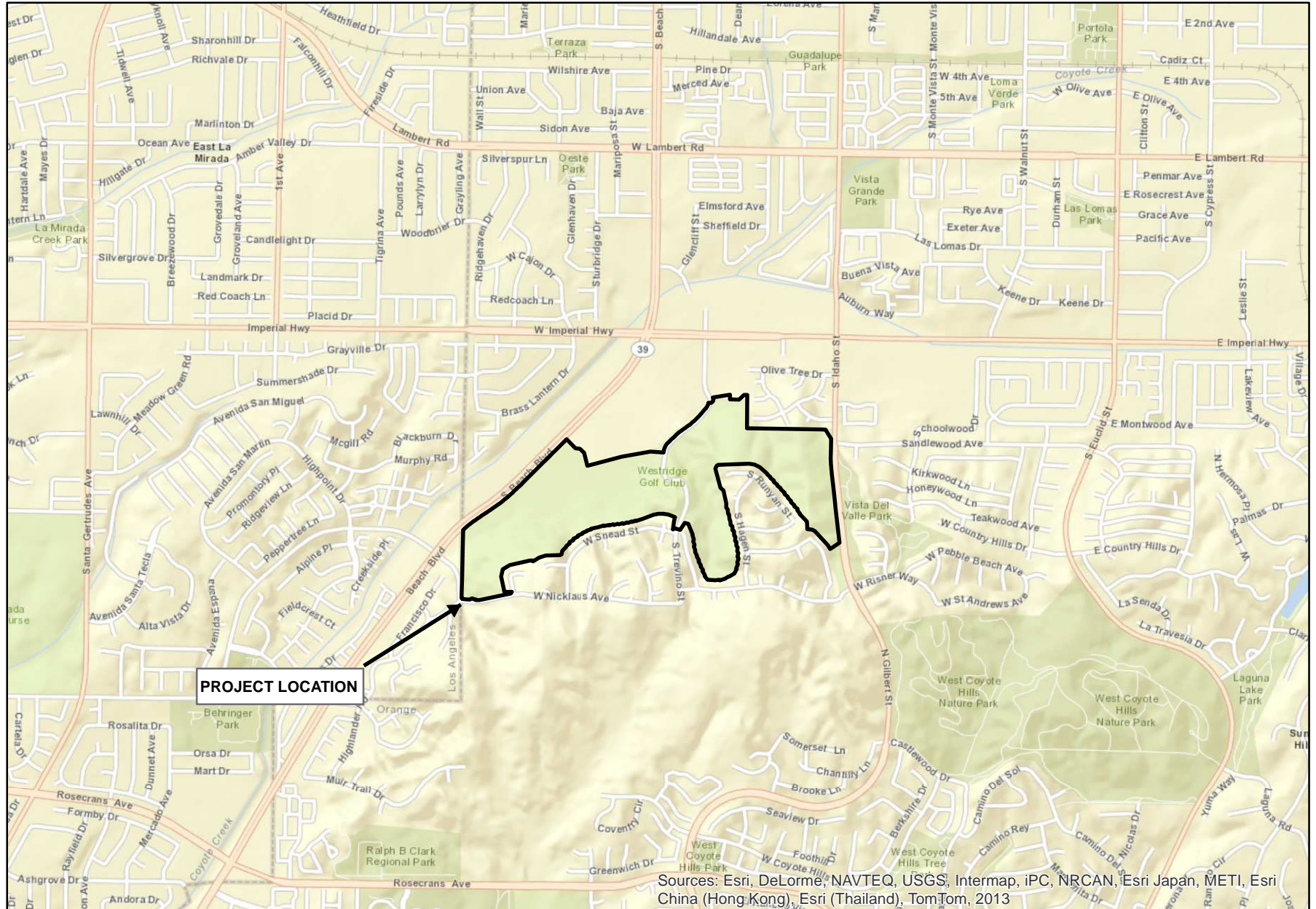
Exhibit 1



Source: ESRI World Street Map



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Sources: Esri, DeLorme, NAVTEQ, USGS, Intermap, IPC, NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, 2013

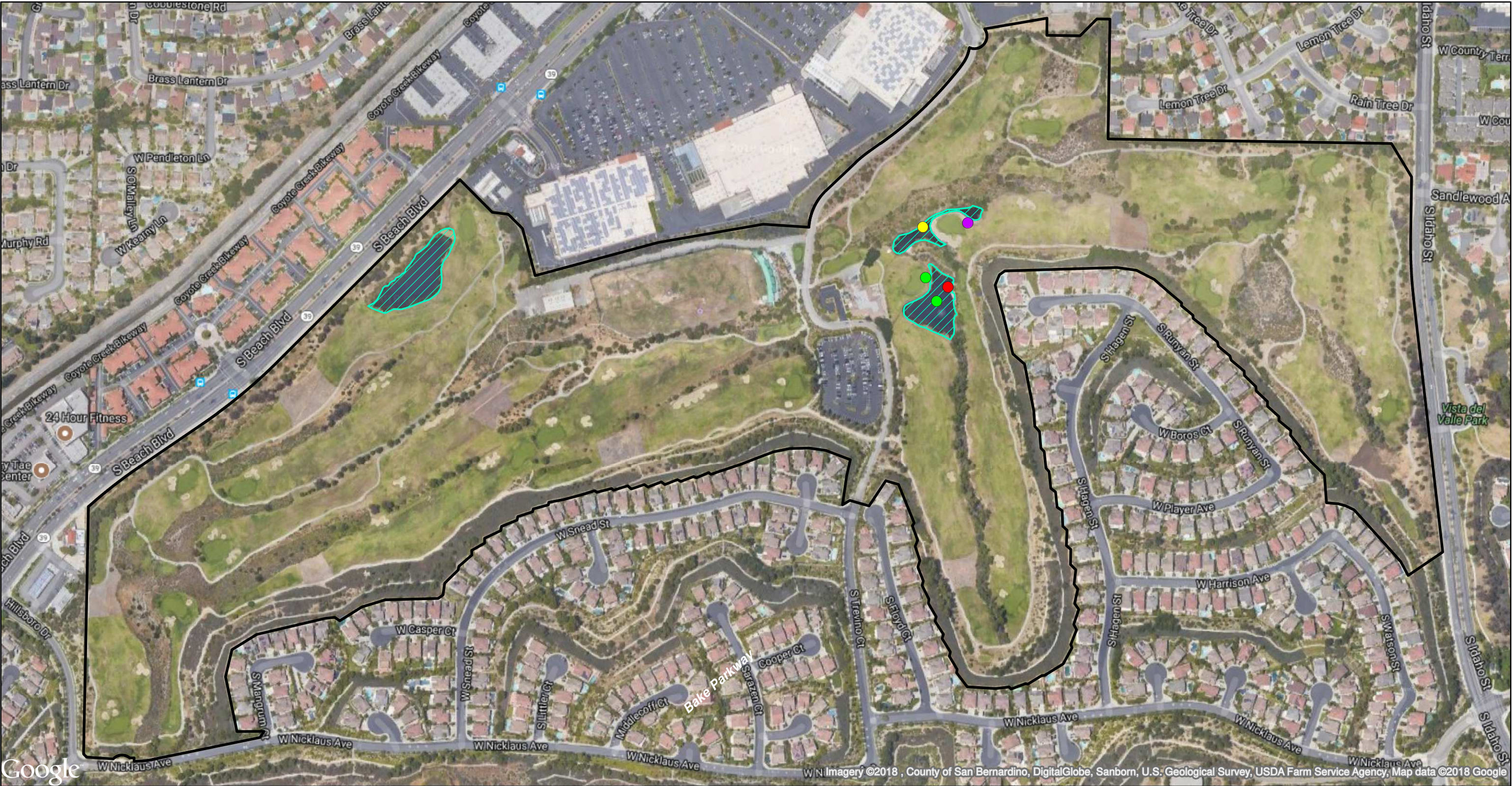
WESTRIDGE GOLF CLUB

Vicinity Map

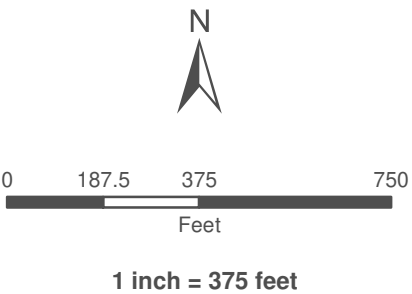
GLENN LUKOS ASSOCIATES

Exhibit 2





- Project Boundary
- Western Pond Turtle Survey Area
- Red-eared slider, 2 adults (July 5, 2018)
- Red-eared slider, 3 juveniles (July 5, 2018)
- Red-eared slider, 3 juveniles, 4 adults (June 15, 2018)
- Red-eared slider, 8 adults (June 25, 2018)



WESTRIDGE GOLF CLUB
Western Pond Turtle Survey Area Map

GLENN LUKOS ASSOCIATES
Exhibit 3



Photograph 1: View of northern artificial pond on eastern side of the Project site facing approximately west.



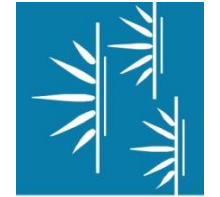
Photograph 2: View of southern artificial pond on eastern side of the Project site facing approximately west.



Photograph 3: View of artificial pond on western side of the Project site facing approximately northeast.



Photograph 4: Red-eared sliders (*Trachemys scripta elegans*) observed basking in the southern artificial pond on the eastern side of the Project site.



GLENN LUKOS ASSOCIATES

Exhibit 4

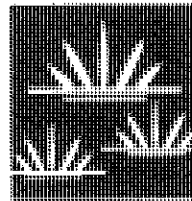
WESTRIDGE GOLF CLUB

Site Photographs

Appendix B-6
Results of Protocol Coastal California
Gnatcatcher Surveys

GLENN LUKOS ASSOCIATES

Regulatory Services



August 8, 2013

Susie Tharratt
Recovery Permit Coordinator
U.S. Fish and Wildlife Service
2177 Salk Avenue, Suite 250
Carlsbad, California 92008

SUBJECT: Results of Protocol Coastal California Gnatcatcher Surveys for the Westridge Golf Club, Located in La Habra, Orange County, California.

Dear Ms. Tharratt:

This letter report documents the results of protocol presence/absence surveys conducted by Glenn Lukos Associates, Inc. (GLA) for the federally listed threatened coastal California gnatcatcher (*Poliioptila californica californica*) at the above-mentioned property. Surveys were conducted from May 24th through June 28th, 2013 in all areas of potentially suitable habitat in accordance with U.S. Fish and Wildlife Service (USFWS) guidelines. Coastal California gnatcatchers were detected at the property, including two pairs and as many as two additional unpaired males.

I. SITE LOCATION AND DESCRIPTION

The Westridge Golf Club ("the Golf Club") is located within the City of La Habra in northern Orange County, California [Exhibit 1 – Regional Map]. The Property is located to east of Beach Boulevard and south of Imperial Highway [Exhibit 2 – Vicinity Map]. The site is located on the U.S. Geological Survey (USGS) La Habra, California quadrangle (dated 1964, photorevised 1981) at Section 18, Township 3 South, Range 10 West [Exhibit 3 – Gnatcatcher Survey Area]; although the USGS topography does not accurately represent the current conditions of the site. Approximate Universal Transmercator (UTM) coordinates for the property are 410654 mE and 3752782 mN (Zone 11S).

The Golf Club contains a number of created habitat areas intermixed with golf course play areas and open water features, including coastal sage scrub and riparian habitat. The site contains approximately 10.75 acres of coastal sage scrub, dominated by California brittlebush (*Encelia californica*), and coyote brush (*Baccharis pilularis*). Additional prominent species include California buckwheat (*Eriogonum fasciculatum*), coastal sagebrush (*Artemisia californica*), and

black sage (*Salvia mellifera*). Portions of the created sage scrub contain riparian shrubs such as mule fat (*Baccharis salicifolia*) and arroyo willow (*Salix lasiolepis*) as a result of irrigation.

II. METHODOLOGY

Protocol surveys for the coastal California gnatcatcher were performed in accordance with the 1997 USFWS guidelines, which stipulate that during the breeding season, six surveys shall be conducted in all areas of suitable habitat with at least seven days between site visits. The USFWS survey guidelines also stipulate that no more than 80 acres of suitable habitat shall be surveyed per biologist per day. The survey area contained approximately 10.75 acres of coastal sage scrub, and therefore less than 80 acres of suitable habitat for the gnatcatcher. As such, the site consisted of one survey polygon requiring one "survey-day" per week.

GLA biologists David Moskovitz (TE-084606-2) and Jeff Ahrens (TE-052159-4) conducted the presence/absence surveys. Surveys were conducted on May 24th and 31st, and June 7th, 14th, 21st, and 28th, 2013. Surveys were conducted by walking throughout the habitat patches, and walking along the edges of habitat adjacent to golf course play areas.

All surveys were conducted during the morning hours and were completed before 12:00 P.M. No surveys were conducted during extreme weather conditions (i.e., winds exceeding 15 miles per hour, rain, or temperatures in excess of 35°C). Table 1 provides a summary of gnatcatcher survey dates.

Table 1. Summary of Coastal California Gnatcatcher Survey Dates.

Date	Biologist	Start Time	End Time	Temp °F (start/end)	Wind Speed	Cloud Cover
May 24, 2013	David Moskovitz	0815	1115	65 / 71	0-1	cloudy/pt. cloudy
May 31, 2013	David Moskovitz	0800	1100	65 / 70	no wind	cloudy/pt. cloudy
June 7, 2013	David Moskovitz	0900	1115	66 / 70	no wind	cloudy/pt. cloudy
June 14, 2013	David Moskovitz	0900	1100	66 / 68	no wind	cloudy/pt. cloudy
June 21, 2013	Jeff Ahrens	0700	1000	61 / 74	0-2	pt. cloudy/clear
June 28, 2013	David Moskovitz	0845	1050	72 / 82	no wind	clear/clear

Susie Tharratt
U.S. Fish and Wildlife Service
August 8, 2013
Page 3 of 4

III. RESULTS

Coastal California gnatcatchers were detected at the Westridge Golf Club, including two pairs and as many as two unpaired males [Exhibit 4 – Gnatcatcher Location Map].

CAGN Pair 1

One gnatcatcher pair (CAGN Pair 1) was documented in the southwestern portion of the site between the 6th hole green and the 7th hole tee box, utilizing sage scrub dominated by California brittlebush. The male and/or female were observed on multiple occasions. Although juveniles were not observed with this pair, confirming successful breeding, the male was observed carrying food on at least two occasions.

CAGN Pair 2

A second gnatcatcher pair (CAGN Pair 2) was also documented in the western portion of the site, between the 2nd hole green and 8th hole tee box. The pair was utilizing habitat dominated by coyote brush, California brittlebush, and California buckwheat. At least two juveniles were confirmed with this pair on the final survey visit (June 28th).

CAGN Male 1

A single male gnatcatcher was observed on multiple occasions north of CAGN Pair 1 and west of CAGN Pair 2. The gnatcatcher was observed in this general location on four of the six survey visits, although it was documented flying between habitat areas closer to the Pair 1 location on two occasions. It is possible that the male gnatcatcher is one of the males associated with Pair 1 or Pair 2, though its detection in the same general location while also observing gnatcatchers at Pair 1 and 2 suggest that the male was a separate unpaired bird.

CAGN Male 2

An unpaired male gnatcatcher was observed on two of the six survey visits in the eastern portion of the Golf Club. A gnatcatcher was observed on June 21st within sage scrub habitat located between holes 14 and 15, and on June 28th in habitat between holes 11 and 12. Since a gnatcatcher was observed only one time in two separate areas in this portion of the golf course, it was determined that the bird was likely a single unpaired gnatcatcher utilizing multiple habitat patches within a larger area of the golf course.

Additional birds observed during the protocol surveys included the following: northern mockingbird (*Mimus polyglottos*), house finch (*Carpodacus mexicanus*), Allen's hummingbird

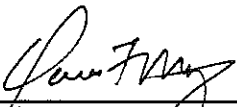
Susie Tharratt
U.S. Fish and Wildlife Service
August 8, 2013
Page 4 of 4

(*Selasphorus sasin*), Anna's hummingbird (*Calypte anna*), lesser goldfinch (*Carduelis psaltria*), song sparrow (*Melospiza melodia*), common yellowthroat (*Geothlypis trichas*), mourning dove (*Zenaida macroura*), Bewick's wren (*Thryomanes bewickii*), western bluebird (*Sialia mexicana*), black phoebe (*Sayornis nigricans*), wrentit (*Chamaea fasciata*), western kingbird (*Tyrannus verticalis*), Pacific slope flycatcher (*Empidonax difficilis*), cliff swallow (*Hirundo pyrrhonota*), barn swallow (*Hirundo rustica*), California towhee (*Melospiza crissalis*), spotted towhee (*Pipilo maculatus*), bushtit (*Psaltiriparus minimus*), Nuttall's woodpecker (*Picoides nuttallii*), red-tailed hawk (*Buteo jamaicensis*), Cooper's hawk (*Accipiter cooperi*), and western scrub jay (*Aphelocoma californica*).


If you have any questions regarding the findings of this report, please contact me at (949) 837-0404, ext. 42.

I certify that the information in this survey report and attached exhibits fully and accurately represents our work.

GLENN LUKOS ASSOCIATES, INC.

 TE 084606-2 8/8/13

David F. Moskovitz Permit # Date
Biologist

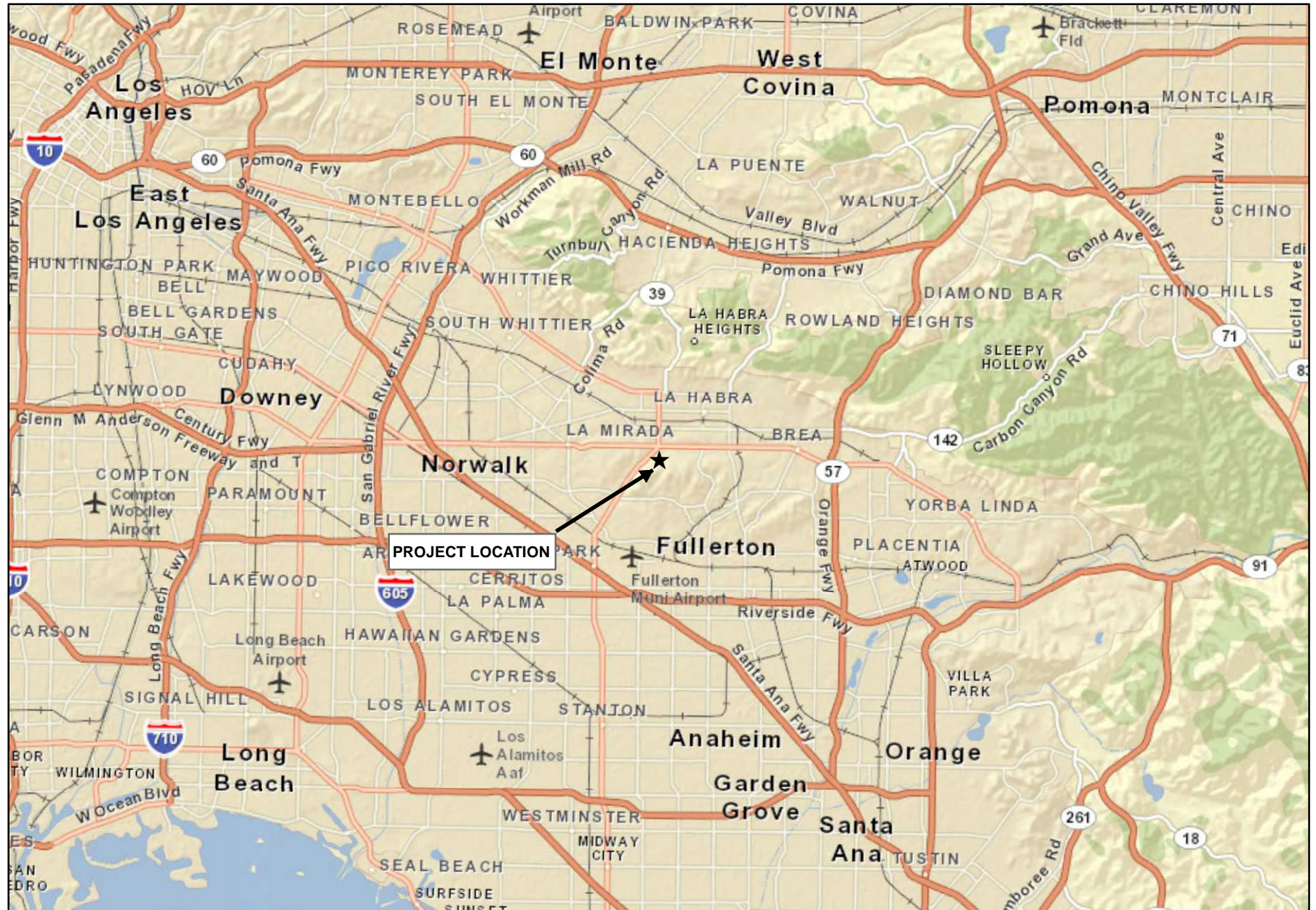
 TE 052159-4 8/8/13

Jeff Ahrens Permit # Date
Biologist

Source: ESRI World Street Map



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8
Miles



WESTRIDGE GOLF CLUB

Regional Map

GLENN LUKOS ASSOCIATES

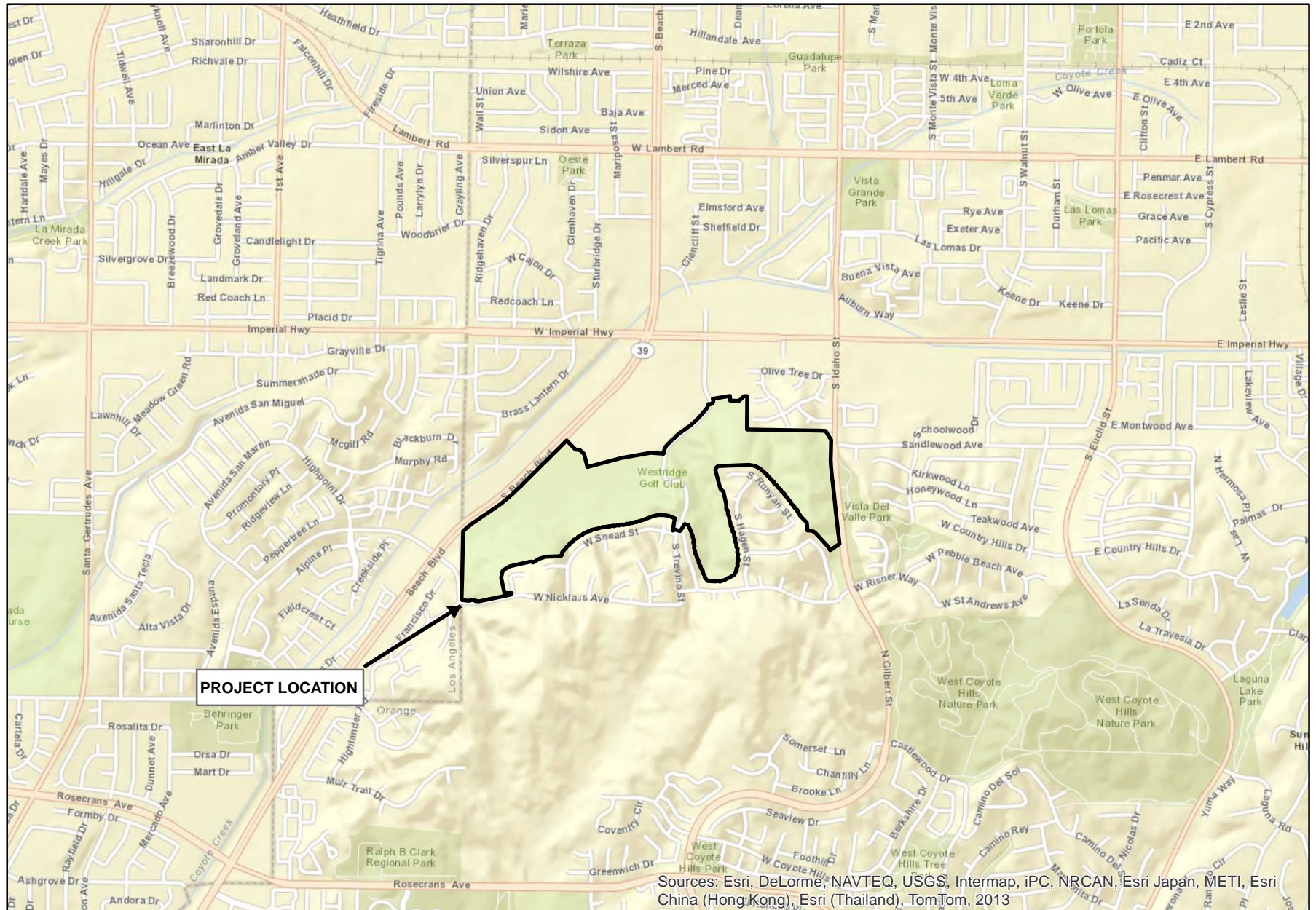
Exhibit 1



Source: ESRI World Street Map



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1,000
2,000
4,000
Feet



Sources: Esri, DeLorme, NAVTEQ, USGS, Intermap, IPC, NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, 2013

WESTRIDGE GOLF CLUB

Vicinity Map

GLENN LUKOS ASSOCIATES

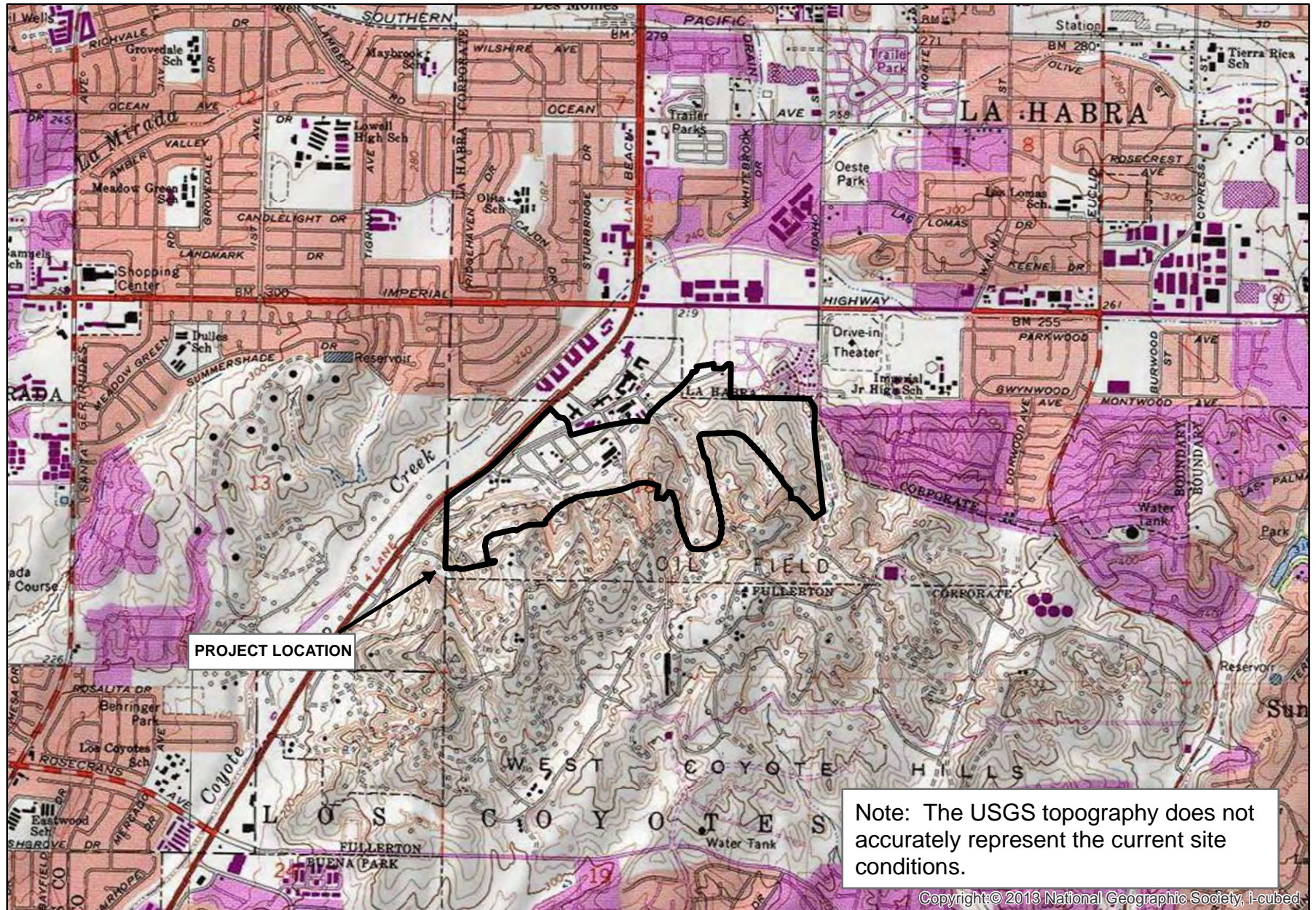
Exhibit 2



Adapted from USGS La Habra, CA quadrangle



0 1,000 2,000 4,000
Feet



WESTRIDGE GOLF CLUB

Gnatcatcher Survey Area

GLENN LUKOS ASSOCIATES








Exhibit 3



Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Legend

-  Project Boundary
-  CAGN Pair 1
-  CAGN Pair 2
-  CAGN Male 1
-  CAGN Male 2



0 225 450 900
Feet

WESTRIDGE GOLF CLUB

CAGN Location Map

GLENN LUKOS ASSOCIATES



Exhibit 4

X:\0363-THE REST\1086-01\WEST\1086-1\GIS\CAGN GIS\1086-1 CAGN.mxd

Mail to:
California Natural Diversity Database
California Dept. of Fish & Wildlife
1807 13th Street, Suite 202
Sacramento, CA 95811

Fax: (916) 324-0475 email: CNDDDB@wildlife.ca.gov

Date of Field Work (mm/dd/yyyy): 06/28/2013

For Office Use Only

Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Poliophtila californica californica*

Common Name: coastal California gnatcatcher

Species Found? ☒ Yes ☐ No If not, why? _____

Total No. Individuals 8 Subsequent Visit? ☒ yes ☐ no

Is this an existing NDDDB occurrence? ☒ no ☐ unk. Yes, Occ. # _____

Collection? If yes: _____ Number _____ Museum / Herbarium _____

Reporter: David Moskovitz

Address: 29 Orchard, Lake Forest, CA 92630

E-mail Address: dmoskovitz@wetlandpermitting.com

Phone: (949) 837-0404

Plant Information

Phenology: _____% vegetative _____% flowering _____% fruiting

Animal Information

adults 6 # juveniles 2 # larvae _____ # egg masses _____ # unknown _____
☐ wintering ☒ breeding ☒ nesting ☐ rookery ☐ burrow site ☐ other

Location Description (please attach map AND/OR fill out your choice of coordinates, below)

Habitat areas within Westridge Golf Club

County: Orange County Landowner / Mgr.: _____

Quad Name: La Habra Elevation: _____

T 3S R 10W Sec 18, _____ 1/4 of _____ 1/4, Meridian: H ☐ M ☐ S ☐ Source of Coordinates (GPS, topo. map & type): ArcGIS

T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: H ☐ M ☐ S ☐ GPS Make & Model _____

DATUM: NAD27 ☐ NAD83 ☐ WGS84 ☒ Horizontal Accuracy _____ meters/feet

Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☒ OR Geographic (Latitude & Longitude) ☐

Coordinates: 410654 mE, 3752782 mN

Habitat Description (plants & animals) plant communities, dominants, associates, substrates/soils, aspects/slope:

Animal Behavior (Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):

2 pairs and 2 unpaired males detected within Westridge Golf Club. 2 juveniles observed with one pair. Male observed carrying food to nest of second pair. The unpaired males were observed foraging and calling.

Please fill out separate form for other rare taxa seen at this site.

Site Information Overall site/occurrence quality/viability (site + population): ☐ Excellent ☐ Good ☒ Fair ☐ Poor

Immediate AND surrounding land use: Golf course, residential and commercial development

Visible disturbances:

Threats:

Comments:

Determination: (check one or more, and fill in blanks)

- ☐ Keyed (cite reference): _____
☐ Compared with specimen housed at: _____
☐ Compared with photo / drawing in: _____
☐ By another person (name): _____
☐ Other: _____

Photographs: (check one or more) Slide Print Digital

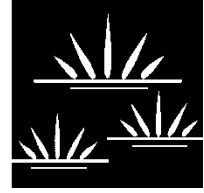
Plant / animal ☐ ☐ ☐
Habitat ☐ ☐ ☐
Diagnostic feature ☐ ☐ ☐

May we obtain duplicates at our expense? yes ☐ no ☐

Appendix B-7
Results of Focused Surveys for Special-
Status Bats

GLENN LUKOS ASSOCIATES

Regulatory Services



September 6, 2018

Andrew Han
Lennar
25 Enterprise
Suite 400
Aliso Viejo, California 92656

SUBJECT: Results of Focused Surveys for Special-Status Bats at the Westridge Golf Course,
City of La Habra, Orange County, California

Dear Mr. Han:

This letter report documents the results of focused surveys conducted by Glenn Lukos Associates, Inc. (GLA) for special-status bats at the above-mentioned property. Surveys were conducted from July 10, 2018 through July 30, 2018 in all areas of potentially suitable habitat, specifically to determine whether any trees on the site were potential roost sites. As detailed below, surveys were conducted visually at dusk to evaluate potential roost sites for potential use along with surveys using acoustic devices and associated computer software that have the ability to identify bats through vocalizations.

No roosts were detected during the surveys. Two special-status species were detected foraging or flying over the site and four other common species were detected either foraging or flying over the site.

1.0 SITE LOCATION AND DESCRIPTION

The Westridge Golf Course (the Project) is located within the City of La Habra, Orange County, California [Exhibit 1 – Regional Map]. The Project site is located in Section 18, Township 3 South, Range 10 West, of the La Habra California USGS 7.5 minute topographical map (dated 1964, photorevised 1981) [Exhibit 2 – Vicinity Map]. Approximate Universal Transverse Mercator (UTM) coordinates for the site are 508846.74 mE and 37263600890.00 mN (Zone 8Z). The Project site is located south of Imperial Highway and east of Beach Boulevard, is bounded by South Idaho Street to the east, residential development and a small portion of undeveloped land to the south, Beach Boulevard and residential development to the west, and commercial and residential development to the north [Exhibit 3 – Bat Survey Areas].

The Project site is an approximately 150-acre property, consisting of golf course uses, which also contains a number of limited areas of restored habitat intermixed with golf course play areas and open water features. These areas include coastal sage scrub, riparian habitats and emergent marsh growing on the edge of the golf course water features.

Specific to bats, the Project site contains approximately six acres of created riparian habitat, that include a limited number of sufficiently large individuals of black willow (*Salix gooddingii*), Fremont cottonwood (*Populus fremontii*), western sycamore (*Platanus racemosa*), and Mexican fan palm (*Washingtonia robusta*) with potential to provide roosting areas and exhibit the highest probability of supporting bat roosts.

2.0 METHODOLOGY

Focused surveys were conducted by GLA biologist Jeff Ahrens on July 10, 2018; GLA biologists Stephanie Cashin and April Nakagawa on July 23, and July 30, 2018; and Mr. Ahrens and Ms. Cashin on August 29, 2018. All surveys were conducted beginning at least 30 minutes before dusk, and extended for approximately two hours after full darkness. Potential roost trees were surveyed visually and with the aid of the Seek Thermal Pro during darkness looking for emerging bats. Acoustic surveys continued for approximately two hours after dark. Equipment included: (1) Wildlife Acoustics Echometer Touch 2 Pro bat detectors used to record bat echolocation calls.; (2) a Seek Compact Pro Thermal imager attached to an iPhone to assist in detecting emerging bats from existing roosts; and (3) Sonobat 4.2.2 bat analysis software to process acoustic files.

3.0. RESULTS

No roost sites were detected within potential tree species including Gooddingii's black willow, Fremont Cottonwood, western sycamore, and Mexican fan palm. A total of three bat species, none of which have special-status, were detected foraging or flying over the site including the Mexican free-tailed bat (*Tadarida brasiliensis*), big brown bat (*Eptesicus fuscus*), and California myotis (*Myotis californicus*).

In general, bat use of the site was lower than expected given the open water on the site associated the golf course water features and limited emergent vegetation; however, it is possible that use of pesticides and herbicides on the golf course limited insects which provide forage for bats. The following species are recorded by the California Natural Diversity Database as occurring in the La Habra California USGS 7.5 minute topographical map (dated 1964, photorevised 1981), or adjacent USGS 7.5 minute topographical maps.

TABLE 1: SPECIAL-STATUS BAT WITH POTENTIAL TO OCCUR			
Species Name	Status	Habitat Requirements	Potential for Occurrence
Big free-tailed bat <i>Nyctinomops macrotis</i>	Federal: None State: None CDFW: SSC WBWG: Medium	Occurs in low-lying arid areas in Southern California. Roosts in high cliffs or rocky outcrops.	Not expected to roost on site. Not detected roosting or foraging.
Hoary bat <i>Lasiurus cinereus</i>	Federal: None State: None CDFW: None WBWG: Medium	Prefers open habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding. Roosts in dense foliage of medium to large trees. Feeds primarily on moths. Requires water.	Not expected to occur. Not detected roosting or foraging.
Pallid Bat <i>Antrozous pallidus</i>	Federal: None State: None CDFW: SSC WBWG: High	Habitats with rocky, outcropped areas.	Not expected to roost on site. Not detected roosting or foraging.
Pocketed free-tailed bat <i>Nyctinomops femorosaccus</i>	Federal: None State: None CDFW: SSC WBWG: Medium	Rocky areas with high cliffs in pine-juniper woodlands, desert scrub, palm oasis, desert wash, and desert riparian.	Not expected to roost on site. Not detected roosting or foraging.
Western mastiff bat <i>Eumops perotis californicus</i>	Federal: None State: None CDFW: SSC WBWG: High	Prefers habitat edges and mosaics with trees that are protected from above and open from below with open areas for foraging. Roosts primarily in trees, 2-40 feet above ground, from sea level up through mixed conifer forests.	Not expected to occur. Not detected roosting or foraging.
Western yellow bat <i>Lasiurus xanthinus</i>	Federal: None State: None CDFW: SSC WBWG: High	Found in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats. Roosts in trees, particularly palms. Forages over water and among trees. Currently increasing throughout its range.	Potential to occur but not detected roosting or foraging on site.
Yuma myotis <i>Myotis yumanensis</i>	Federal: None State: None CDFW: None WBWG: Low	Optimal habitats are open forests and woodlands with sources of water over which to feed. Distribution is closely tied to bodies of water. Maternity colonies in caves, mines, buildings or crevices.	Not expected to occur. Not detected roosting or foraging.

Andrew Han
Lennar
September 6, 2018
Page 4 of 4

4.0. IMPACT ANALYSIS

The surveys did not detect bat roosts on the site and the project would not impact roosting bats, including special-status species. Because of the lack of roosting, impacts to potential foraging areas would not be significant. Construction of the project would not result in significant impacts to any special-status bats.

If you have any questions regarding the findings of this report, please contact me at (949) 340-7333.

I certify that the information in this survey report and attached exhibits fully and accurately represents our work.

GLENN LUKOS ASSOCIATES

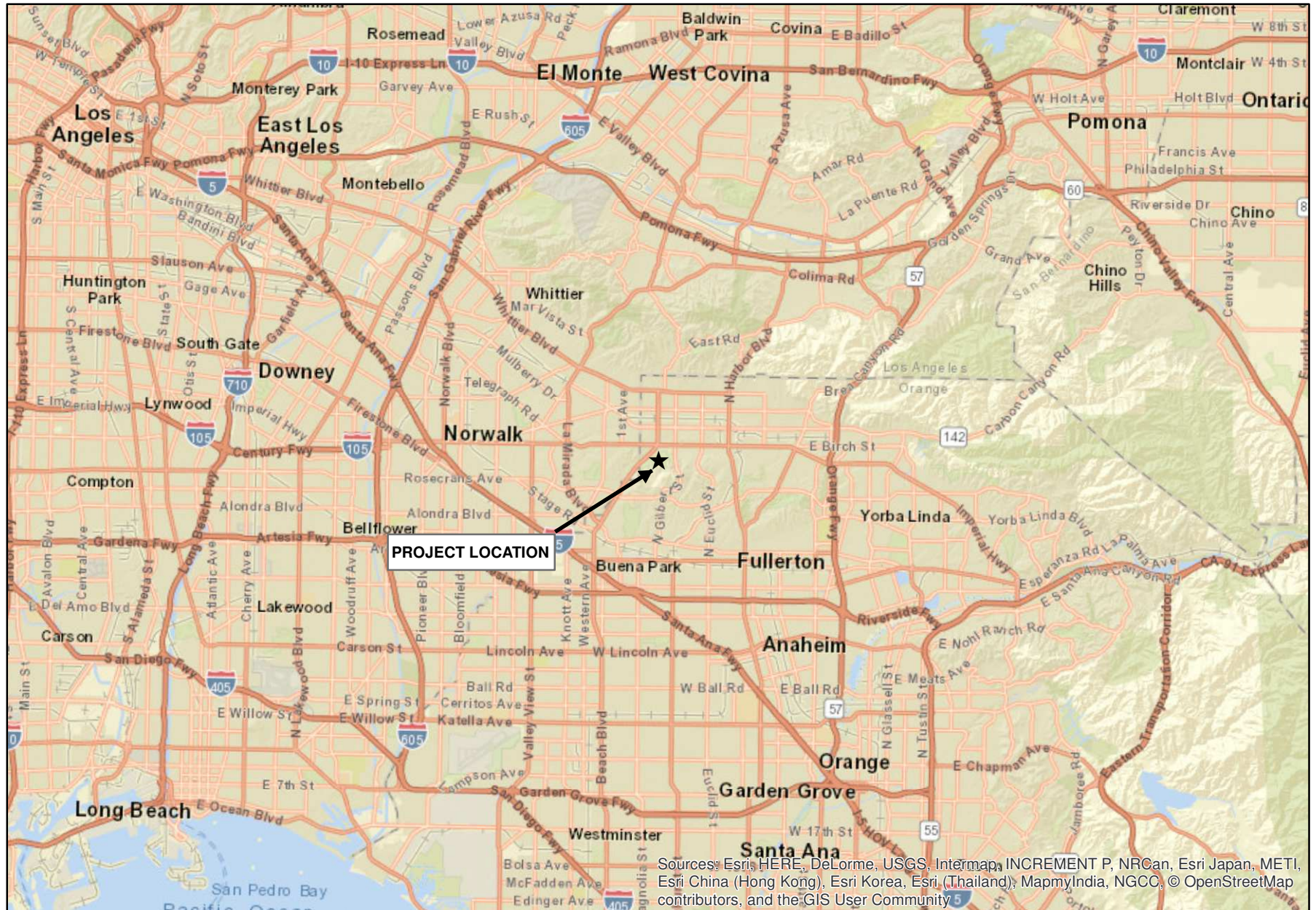
A handwritten signature in black ink that reads "Tony Bomkamp". The signature is written in a cursive, flowing style.

Tony Bomkamp
Technical Director/Senior Biologist

Source: ESRI World Street Map



0
2
4
8
Miles



Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

WESTRIDGE GOLF COURSE

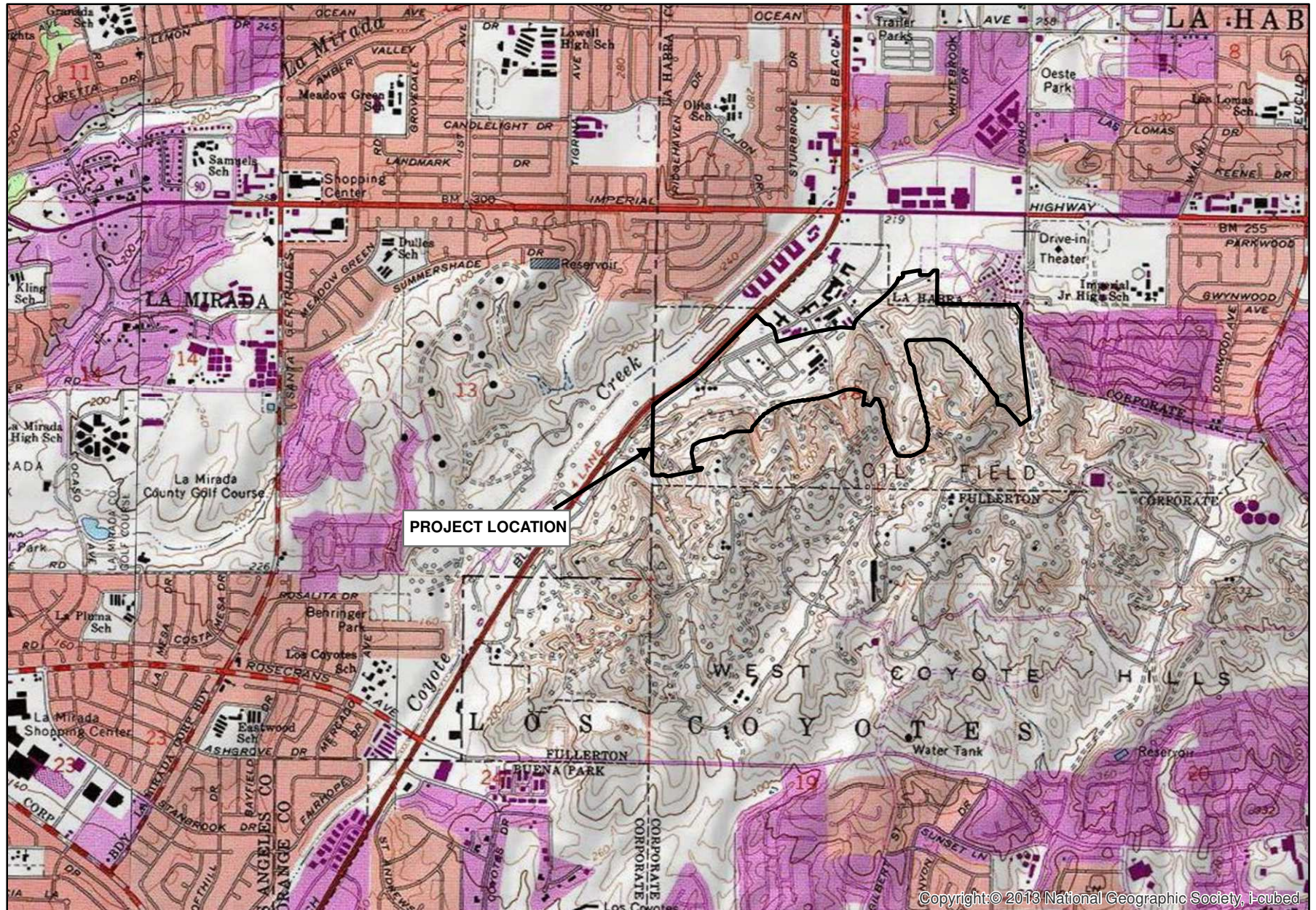
Regional Map

GLENN LUKOS ASSOCIATES

Exhibit 1



Adapted from USGS La Habra, CA quadrangle



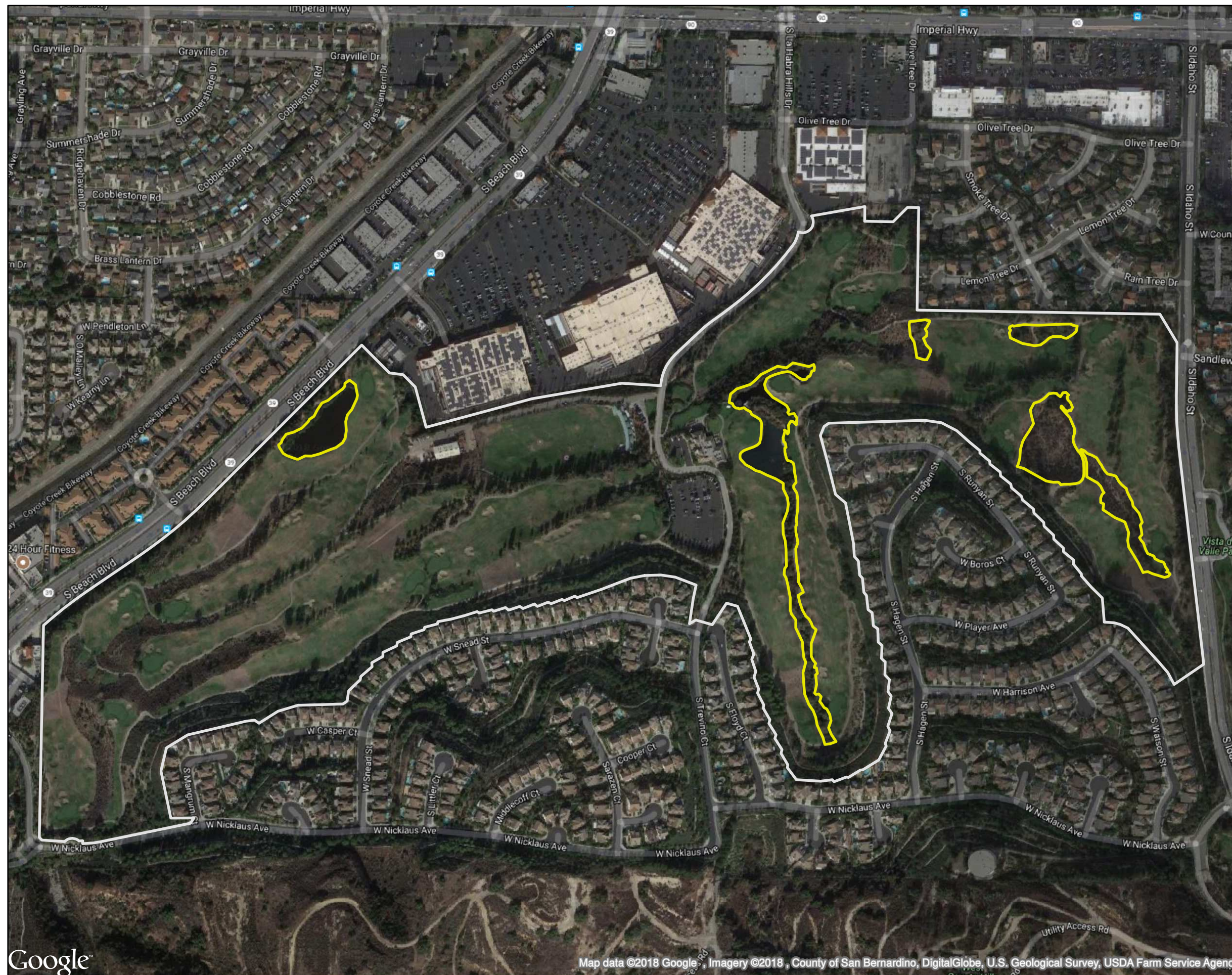
WESTRIDGE GOLF COURSE



Vicinity Map

GLENN LUKOS ASSOCIATES

Exhibit 2





-  Project Boundary
-  Survey Area



0 225 450 900
Feet

1 inch = 450 feet

Coordinate System: State Plane 6 NAD 83
Projection: Lambert Conformal Conic
Datum: NAD83
Map Prepared by: C. Lukos, GLA
Date Prepared: July 31, 2018

WESTRIDGE GOLF COURSE

Bat Survey Map

GLENN LUKOS ASSOCIATES



Exhibit 3

