

April 30, 2018

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VIA EMAIL
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Subject: Status Report for the Oak Woodland Habitat Revegetation/Mitigation Program for the Santa Anita Dam Riser Modification and Reservoir Sediment Removal Project, Los Angeles County, California

Dear Ms. Kwan:

This status report addresses March 2018 site conditions for the Los Angeles County Department of Public Works' (LACDPW's) 2014 *Oak Woodland Habitat Revegetation/Mitigation Program for the Santa Anita Dam Riser Modification and Reservoir Sediment Removal Project* (OWHRMP). The OWHRMP describes the creation of 5.5 acres of oak woodland habitat and 2.5 acres of sage scrub habitat as compensation for impacts associated with the Santa Anita Dam Riser Modification and Reservoir Sediment Removal Project. The creation of oak woodland and sage scrub habitat is required by Mitigation Measures BIO-D and BIO-E in the LACDPW's 2009 *Santa Anita Dam Riser Modification and Reservoir Sediment Removal Project Final Environmental Impact Report* and by the Streambed Alteration Agreement (Agreement, No. 1600-2008-0173-R5), which was granted by the California Department of Fish and Wildlife (CDFW) in 2009. The mitigation program includes a seven-year to ten-year maintenance and monitoring period that began after mitigation installation was completed in December 2014. The locations of the Upper, Middle, and Lower Sediment Placement Sites (SPS) are shown in Exhibits 1, 2, and 3. As detailed in the OWHRMP, final grading of the Lower SPS included the placement of approximately 30 feet of sediment (over the pre-existing condition) and the subsequent creation of dual, spiraling drainage channels to a relocated standpipe. The drainage design is intended to optimize retention and percolation of on-site precipitation and off-site inflows (from the eastern slopes). Final grading was completed by Quest Construction (for LACDPW) in October 2012.

The LACDPW retained Psomas to prepare the OWHRMP document in 2009 (including the performance of reference site surveys); to participate in community outreach efforts related to the OWHRMP; to provide biological monitoring and documentation services; and to implement the mitigation program. The reference site surveys were performed in existing oak woodland and sage scrub habitat areas on the Santa Anita Dam site for developing mitigation performance criteria. Psomas retained the following subcontractors/vendors: (1) S&S Seeds, Inc. (S&S) to collect site-specific native seeds (including oak acorns) and cuttings (cactus) in the Santa Anita Wash/Rio Hondo Sub-Watershed (started in 2011); (2) El Nativo Growers (ENG) and Rancho Santa Ana Botanic Garden (RSABG) to collect (ferns and rare oaks) and to propagate native container plants (started in 2012); (3) Cornerstone Studios, Inc. (Landscape Architect) to prepare irrigation plans and photo simulations for the mitigation site (2013); and (4) Nakae & Associates, Inc. (Nakae) to perform mitigation site preparation, installation, and long-term maintenance tasks. Site photographs are provided in Attachment A.

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SEED AND CUTTINGS COLLECTION

Psomas (Biological Monitor) and S&S started local seed collection tasks in June 2011. Seed collection in 2011 was limited to the LACDPW's Santa Anita Dam property; however, the LACDPW secured access in 2012 to off-site open space areas in the Cities of Arcadia and Monrovia for more extensive seed collection. Psomas Biologists have also collected small quantities of native seeds and rooted cuttings on the Santa Anita Dam property during native seed scouting activities. Most of the collected seed was applied to the mitigation site via hydroseeding or hand-broadcasting. A small portion of the collected seed material was used for container plant propagation.

Psomas/RSABG collected local seed (rare oaks) and cuttings (fern species) in October and November 2013. RSABG established fern "stock plants" (five different species with a minimum of ten individual plants each) in their nursery in 2013 (four species) and 2016 (a fifth species); the stock plants are used for ongoing rhizome cutting collection for vegetative propagation of four-inch fern container plants. RSABG propagated ferns and rare oaks for initial installation in 2014; however, a larger quantity of fern were installed in 2015/2016/2018 after niche planting sites were better established by improved canopy/shading from planted vegetation. Psomas and S&S also collected oak acorns (multiple species) in 2015 and 2017, and the acorns were directly sown on the mitigation site. No acorns were collected and planted on the site in 2016, due to very low crop production on oak trees in local wildlands, in order to (1) preserve vital forage values for wildlife; and (2) allow for local/natural re-seeding and regeneration of existing oak stands.

Psomas and S&S collected root and/or stem cuttings of several native plant species in the local sub-watershed in 2015, including California milkweed (*Asclepias californica*), California lace fern (*Aspidotis californica*), lance-leaf dudleya (*Dudleya lanceolata*), California fuchsia (*Epilobium canum* ssp. *canum*), thick-leaved yerba santa (*Eriodictyon crassifolium*), spiny redberry (*Rhamnus crocea*), hillside gooseberry (*Ribes californicum*), and puckered hedgenettle (*Stachys bullata*). Psomas collected local cuttings of the following plant species in 2016: California false indigo (*Amorpha californica*), California milkweed (*Asclepias californica*), California lace fern (*Aspidotis californica*), wrinkled rush (*Juncus rugulosus*), basket rush (*Juncus textilis*), California peony (*Paeonia californica*), and California rose (*Rosa californica*).

The cuttings of these species were delivered to RSABG for vegetative propagation. Psomas and S&S collected seeds of numerous native plant species in 2015 and 2016, with special emphasis on (1) herbaceous plant species and (2) plant species that did not yet occur on the mitigation site. For many species, only trace quantities of seed were collected (i.e., <0.05 pound) due to the low availability of seed in a drought year and to avoid over-collection of seed from a particular patch or population that would impact wildlife food sources and plant reseeding/regeneration. Psomas collected a trace quantity of cuttings of southern bunch leaf beardtongue (*Penstemon heterophyllus* var. *australis*) (a locally rare species in the subwatershed) on the Monrovia site in 2017. Psomas/S&S collected additional cuttings of ferns (multiple species) and California fuchsia on the Monrovia site in 2018.

Psomas/S&S collected cuttings (pads) of Vasey's prickly-pear (*Opuntia x vaseyi*) from the Middle SPS on the Santa Anita Dam site in June 2013 and in March 2018. The initial cactus pads (2013) were selected from a minimum of ten separate cactus patches and were delivered to ENG for propagation on the same day they were collected. S&S harvested the supplemental cactus pads (2018) from a minimum of 20 separate patches, under the supervision of Psomas' Biological Monitor.

A total of 114 native plant species (seed and/or cuttings) have been collected to date in the local Sub-Watershed; this represents a diversity of installed plant species that is nearly four times greater than the

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diversity of the conceptual plant/seed palettes (31 plant species) that were listed in the OWHRMP. The seed species and quantities installed to date on the mitigation site are listed in Attachment B of this document.

MITIGATION SITE PREPARATION

Psomas and Nakae (a licensed landscape contractor that specializes in habitat restoration) started mitigation site preparation tasks in September 2013. The mitigation site (Exhibit 3) includes oak woodland habitat establishment on the deck portion of the Lower SPS and sage scrub establishment in slope areas on the Lower SPS. Site preparation included the following tasks:

1. Preliminary flagging of existing native plants (especially “volunteer” oak seedlings) to be protected on the mitigation site and in adjacent Buffer Weed Abatement Areas 1 and 2.
2. The installation of erosion-control measures, including fully biodegradable fiber rolls on the slopes of the Lower SPS (i.e., the sage scrub site) and fiber rolls and sandbags (temporary check dams) in the dual drainages of the plateau area (oak woodland site).
3. The initial treatment (via Aquamaster™ herbicide) and/or removal of non-native plants from the mitigation site and adjacent buffer weed-abatement areas (including the slope that was manufactured by a development located adjacent to the Lower SPS).
4. The distribution and incorporation into the top two feet of topsoil (via heavy machinery) of a large volume of mulched native vegetation resulting from January 2011 construction activities at the Middle SPS.
5. The placement (in excavated pits) of a total of 14 artificial snags on the oak woodland site, consisting of large oak and sycamore trunks that were salvaged with a portion of the root tissue attached (for stability upon installation) during January 2011 construction activities.
6. The placement of several tons of conserved coarse woody debris (predominantly oak but also sycamore) on the oak woodland site, which was salvaged in January 2011.
7. The placement of many tons of boulders, rocks, and cobble on the oak woodland site, which were salvaged during sediment removal operations at Santa Anita Dam.
8. The installation of a temporary irrigation system, including overhead spray components (site-wide) and individual bubblers for each oak planting location.
9. The installation of temporary water tanks for wildlife (“drinkers”) adjacent to the Middle SPS.
10. The construction of a temporary eight-foot-high perimeter fence (wood posts and smooth wire) to exclude large mammals (only) to reduce herbivory during the initial oak establishment phase.
11. The installation of interpretive signage on the site, explaining the goals of the OWHRMP. The mitigation site preparation tasks listed above were completed in January 2014, with the exception of the signage, which was installed in June 2014.

Protective wire cages were installed around approximately 50 volunteer (naturally occurring) coast live oak seedlings (*Quercus agrifolia* var. *agrifolia*) in the weed-abatement buffer area to reduce herbivory impacts.

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Irrigation system installation included the construction of a new water meter by the City of Arcadia Public Works Services Department (PWSD) near the intersection of Highland Oaks Drive and East Woodland Avenue. Nakae installed a new gate valve in the same box as the PWSD meter, and a new backflow preventer device (caged) was installed in the same general location. Water is delivered to the Lower SPS via a four-inch mainline that extends north from the point of connection along the alignment of the Santa Anita Wash box channel.

MITIGATION SITE INSTALLATION–PHASE I (PLANT AND SEED MATERIALS)

Psommas/Nakae performed mitigation site installation tasks (native plant and seed materials) in January/February 2014. The Phase I installation included the following tasks: (1) planting coast live oak acorns (10 per planting hole), installing protective caging and shade cloth at each oak location, and placing conserved oak leaf mulch at each oak planting site; (2) installing native container plants (4,963 total plants, including 358 coast live oak planting locations); and (3) installing native seed mixes (hydroseeding and hand-broadcasting) totaling approximately 135 pounds and including 78 different seeded plant species.

The Biological Monitor marked the container planting locations using color-coded wire flags for each plant species and flagged the various seed mix application areas in the field. The planting/seeding area layouts roughly follow the conceptual planting plans provided in the OWRMP; in addition, designated polygons were flagged and planted with cactus and herbaceous species (which will be maintained on a long-term basis free of other shrub species) to improve vegetative diversity. Initial container plant installation was completed in January 2014, and Phase I seed mix installation was completed in early February 2014 (a small number of additional Phase I container plants were installed on the site in March/April 2014, as these species became available from the nursery).

MITIGATION SITE INSTALLATION–PHASE II (PLANT AND SEED MATERIALS)

Nakae installed a total of 1,973 additional container plants and approximately 25 pounds of additional native seed of numerous plant species (all locally obtained) on the 8.0-acre mitigation site in December 2014, in coordination with the Biological Monitor. The Phase II container plants included ferns and rare oaks propagated by RSABG, including Engelmann oak (*Quercus engelmannii*), San Gabriel oak (*Quercus durata* var. *gabrielensis*), and four species of native ferns (e.g., coffee fern [*Pellaea andromedifolia*]). Most of the Phase II container materials for fall planting were propagated by ENG and included a variety of native shrubs, herbs, vines, and succulent species, most of which did not previously occur on the mitigation site (e.g., chaparral clematis [*Clematis lasiantha*], giant wild-rye [*Elymus condensatus*], and California coffee berry [*Frangula californica* ssp. *californica*]). Additional native seed species (three total) installed in fall 2014 included stinging lupine (*Lupinus hirsutissimus*), distant phacelia (*Phacelia distans*), and wild Canterbury bells (*Phacelia minor*), which all bloomed/seeded over much of the oak woodland mitigation site in spring 2015 and 2016. A total of 81 native seed species and 40 native container plant/cutting species were installed on the site in 2014. A summary of all native container plants and seed mix species and quantities installed to date is provided in Attachment B.

MITIGATION MAINTENANCE

The long-term (seven-year to ten-year) maintenance program started on January 1, 2015. In addition to maintenance of the 8.0-acre mitigation sites, Buffer Weed Abatement Areas (Buffer Areas) 1 and 2 (3.28 total acres) were established to remove invasive weed seed sources in the vicinity of the mitigation site. Supplemental Buffer Areas 3a, 3b, and 4 (3.91 total acres) were added to the ongoing maintenance program in July 2016. The initial weed abatement tasks in Buffer Areas 3a and 4 included the girdling/treatment (with herbicide)/pruning of several non-native Shamel ash (*Fraxinus uhdei*) and

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Chinese pistache (*Pistacia chinensis*) trees. Most of these exotic trees were girdled/treated (rather than wholly removed) in order to retain beneficial snags for wildlife use. Acorn woodpeckers (*Melanerpes formicivorus*) are regularly observed using these snags during forays between the mitigation site and the pre-existing groves of mature coast live oak trees along the western property boundary. Nakae promptly treats or removes non-native plant species when observed during regular maintenance activities. To the extent practicable, weeds are removed prior to seed production/dispersal to avoid re-infestation of the site. Herbicide use is minimized in favor of hand-pulling of weeds whenever possible.

Nakae is monitoring some minor erosion on the off-site slopes to the east of the mitigation site (i.e., Buffer Area No. 1); however, there is no significant erosion on the mitigation site, and there has been no problematic trespassing or trash deposition in the vicinity. Nakae is maintaining the concrete down-drains and V-ditches to ensure they are clear of sediment and debris to facilitate the County's ongoing inspection of the Lower SPS' integrity.

As of March 12, 2018, the LACDPW website indicated that a total of 6.22 inches of precipitation was recorded (via gauge data) at Santa Anita Dam between October 1, 2017, and March 12, 2018. The normal seasonal total of precipitation at Santa Anita Dam is 26.21 inches for the period of October 1 to September 30. The precipitation gauge at Santa Anita Dam (approximately 1,400 feet elevation) would be expected to record substantially more precipitation than occurs at the project site (approx. 650 feet elevation). In addition, most seasonal rainfall in the region normally occurs in January and February; therefore, despite a few modest rain events in early March, the seasonal rainfall total was expected to be *well below normal* for 2017-2018.

Supplemental irrigation was suspended on the oak woodland (SPS deck) mitigation site from October 2016 to February 2018; however, due to acute/prolonged drought conditions, operation of the bubbler system (only) was resumed with LACDPW approval on February 28, 2018. It is anticipated that bubbler irrigation (infrequent, deep watering) will be applied to the oak woodland site approximately every three to four weeks until May 2018 to simulate late season rain events. Irrigation has not been applied to the sage scrub planting areas (SPS slopes) since June 9, 2015. The frequency of irrigation will be phased-out as soon as possible (based on year-to-year weather conditions) to foster adaptation of native plant species to the typical arid growing conditions in this region.

The Biological Monitor periodically coordinates with a representative of the San Gabriel Valley Vector Control District (SGVVCD) to discuss ongoing, potential mosquito vector issues associated with the drainage channels on the site. The SGVVCD typically performs vector control via the application of *Bacillus thuringiensis* (BTi), a bacterial/biological control material. SGVVCD applied a volatile mineral oil to control more mature mosquito larvae following a few past inspections (to maintain compliance with public health and safety codes); however, since project initiation, the LACDPW/Psomas have requested that SGVVCD use only BTi on the site (rather than other materials, to the extent practicable) to minimize adverse impacts on mitigation habitat (e.g., arthropod species diversity and abundance). The LACDPW is currently assessing the uneven settling of placed sediment in portions of the spiraling drainages that may require minor fill placement (via hand tools) to restore a consistent flow line from the inflow point to the outlet tower.

Nakae performed additional exotic plant species removal on the slopes to the east of the mitigation site in October 2014. The LACDPW obtained rights-of-entry from several private landowners to allow access for the voluntary removal of numerous invasive Mexican fan palms (*Washingtonia robusta*) and other non-native, perennial plant species. The east slope exotic vegetation removal was coordinated with the Biological Monitor to ensure that biological resources were not adversely impacted during these activities. The removal of these invasive plants from areas adjacent to the mitigation site will improve

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long-term mitigation site performance by eliminating a significant source of weed seeds that would otherwise infest the site on an ongoing basis.

SUPPLEMENTAL PLANTING AND SEEDING – 2015/2016

As noted above, the Biological Monitor monitored/coordinated the collection and propagation of supplemental seed and cuttings materials with RSABG and S&S in 2015 and 2016, including field collections from open space areas in the Cities of Monrovia and Sierra Madre, and on the County's Santa Anita Dam/Reservoir site located upstream of the mitigation site. Supplemental planting and seeding occurred in December 2015/February 2016, and a summary of these materials is provided in Tables 1 and 2. The supplemental container planting in 2015/2016 included primarily native ferns (309 plants) of several species; native grasses (641 plants); and a variety of native shrubs, perennials, and succulents, several of which did not previously occur on the mitigation site. Supplemental seeding of oak acorns occurred on the oak woodland site in December 2015 to provide added contingency plants (as needed) toward compliance with mitigation performance criteria. Seed of native herbaceous species was installed in designated shrub-free portions of the oak woodland and sage scrub mitigation sites in 2015/2016 to improve coverage and diversity of native herbs and grasses in these areas. The enhancement of herbaceous areas on the mitigation site improves overall ecological functions and values, including pollinator resources. A total of 60 packets of mixed herbaceous plant species were also prepared and installed in and immediately adjacent to numerous boulder and woody debris assemblages on the site in 2015/2016. Several of the plant species from the packets have already germinated in these niches, including Dudley's clarkia (*Clarkia dudleyana*) and cardinal larkspur (*Delphinium cardinale*). A total of 4.0 pounds of spectacular beardtongue seed (*Penstemon spectabilis* var. *spectabilis*), and trace amounts of seed of several other shrubs/annual/perennial plant species, were sown on the mitigation site in December 2016.

SUPPLEMENTAL PLANTING AND SEEDING – 2017/2018

A summary of the supplemental container plant species and quantities that were installed in January 2017 and February 2018 is provided in Table 1. In 2017, 569 supplemental container plants and cuttings (12 species) were installed, included native ferns (111 total plants of 5 different species); foothill needle grass (*Stipa lepida*, 218 plants); and a variety of native shrubs, perennials, and succulents, some of which did not previously occur on the mitigation site. In 2018, the supplemental container planting included ferns (65 plants); native grass (17 plants); native perennial herbs (6 plants); and native shrubs (125 plants). One of the container plant species that was installed in 2018 (southern bunch leaf beardtongue [*Penstemon heterophyllus* var. *australis*]), did not previously occur on the mitigation site. The hillside gooseberry (*Ribes californicum*, 65 plants) and California rose (*Rosa californica*, 60 plants) were primarily installed in protected niches along the created streambeds, where maturing planted trees and shrubs (and placed coarse woody debris and boulders) offer protection from afternoon shade. The 200 cactus pads that were collected on the Santa Anita site in February 2018 will be installed on south-facing slopes of the Lower SPS in spring 2018.

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**TABLE 1
 SUPPLEMENTAL CONTAINER PLANTS (2015 – 2018)**

Plant Species ^a		Container Size	Quantity				
Botanical Name	Common Name		Dec. 2015	Feb. 2016	Jan. 2017	Feb. 2018	Total
<i>Aspidotis californica</i> ^b	California lace fern	4-inch pot	0	6	0	0	6
<i>Dryopteris arguta</i>	sharp-toothed wood fern	4-inch pot	24	0	12	0	36
<i>Dudleya lanceolata</i> ^b	lance-leaved dudleya	4-inch pot	0	32	0	0	32
<i>Epilobium canum</i> ssp. <i>canum</i>	California fuchsia	3-inch x 6-inch tree-band	37	9	1	1	48
		1-gallon	3	0	0	0	3
<i>Eriodictyon crassifolium</i>	thick-leaved yerba santa	4-inch pot	2	0	0	0	2
		4-inch pot	0	0	155	0	155
<i>Juncus rugulosus</i> ^c	wrinkled rush	4-inch pot	0	0	71	0	71
<i>Juncus textilis</i>	basket rush	4-inch pot	0	0	8	0	8
<i>Paeonia californica</i> ^c	California peony	3-inch x 6-inch tree-band	0	0	8	0	8
<i>Pellaea andromedifolia</i>	coffee fern	4-inch pot	85	43	11	0	139
<i>Pellaea mucronata</i> var. <i>mucronata</i>	bird's-foot fern	4-inch pot	60	0	15	0	75
<i>Penstemon heterophyllus</i> var. <i>australis</i> ^d	southern bunch leaf beardtongue	3-inch x 6-inch tree-band	0	0	0	5	5
<i>Pentagramma triangularis</i> ^c	goldback fern	4-inch pot	0	0	2	0	2
<i>Polypodium californicum</i>	California polypody	4-inch pot	74	17	71	65	227
<i>Ribes californicum</i> ^b	hillside gooseberry	3-inch x 6-inch tree-band	24	5	2	65	96
<i>Rosa californica</i> ^c	California rose	3-inch x 6-inch tree-band	0	0	3	60	63
<i>Stachys bullata</i>	puckered hedgenettle	4-inch pot	110	25	0	0	135
<i>Stipa lepida</i> ^b	foothill needle grass	2-inch liner	200	441	218	17	867
Total			619	578	569	213	1,970

^a All container species were propagated from cuttings/seed collected in the Santa Anita Wash/Rio Hondo Sub-Watershed.
^b Plant species that did not occur on the OWHRMP site prior to Dec. 2015/Feb. 2016 planting.
^c Plant species that did not occur on the OWHRMP site prior to Jan. 2017 planting.
^d Plant species that did not occur on the OWHRMP site prior to Feb. 2018 planting.

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**TABLE 2
 SUPPLEMENTAL SEED SPECIES (DECEMBER 2015 AND DECEMBER 2016)**

Plant Species ^a		Quantity (Pounds)	
Botanical Name	Common Name	Dec. 2015	Dec. 2016
<i>Acer macrophyllum</i>	big-leaf maple	0.10	---
<i>Castilleja applegatei</i> ^b	Applegate's Indian paintbrush	trace	trace
<i>Clarkia dudleyana</i> ^b	Dudleya's clarkia	trace	---
<i>Clematis lasiantha</i>	chaparral clematis	0.25	---
<i>Delphinium cardinale</i> ^b	cardinal larkspur	trace	---
<i>Dudleya lanceolata</i> ^b	lance-leaved dudleya	trace	---
<i>Epilobium canum</i> ssp. <i>canum</i> ^b	California fuchsia	trace	---
<i>Erigeron foliosus</i> var. <i>foliosus</i> ^b	leafy daisy	trace	trace
<i>Eriophyllum confertiflorum</i> var. <i>confertiflorum</i> ^b	golden-yarrow	trace	trace
<i>Eulobus californicus</i>	California eulobus	0.82	---
<i>Hazardia squarrosa</i> var. <i>grindelioides</i>	grindelia-like saw-toothed goldenbush	trace	---
<i>Holodiscus discolor</i>	oceanspray	trace	trace
<i>Lathyrus vestitus</i> ^b	covered sweet pea	trace	---
<i>Lonicera subspicata</i> var. <i>johnstonii</i>	Johnston's honeysuckle	trace	0.05
<i>Lupinus concinnus</i>	bajada lupine	trace	---
<i>Lupinus hirsutissimus</i>	stinging lupine	3.41	---
<i>Lupinus longifolius</i>	long-leaved lupine	trace	---
<i>Lupinus truncatus</i>	cut leaf lupine	trace	---
<i>Malacothrix saxatilis</i>	rocky malacothrix	2.22	---
<i>Marah macrocarpa</i>	chilicothe	trace	---
<i>Mentzelia laevicaulis</i>	smooth-stemmed blazing star	trace	---
<i>Mimulus cardinalis</i>	red monkeyflower	---	trace
<i>Penstemon spectabilis</i> var. <i>spectabilis</i>	spectacular beardtongue	5.52	4.00
<i>Phacelia minor</i>	wild Canterbury bells	12.21	---
<i>Rhamnus crocea</i>	spiny redberry	---	0.05
<i>Rhamnus ilicifolia</i>	hollyleaf redberry	---	0.05
<i>Quercus agrifolia</i> var. <i>agrifolia</i> (acorns)	coast live oak	10.00	---
<i>Quercus chrysolepis</i> (acorns)	canyon live oak	1.00	---
<i>Quercus durata</i> var. <i>gabrielensis</i>	San Gabriel oak	0.10	---
<i>Quercus engelmannii</i> (acorns)	Engelmann oak	5.00	---
<i>Silene laciniata</i> ^b	torn catchfly	trace	trace
<i>Solidago velutina</i>	velvety goldenrod	trace	---
<i>Stephanomeria cichoriacea</i> ^b	silver rock-lettuce	trace	trace
<i>Stipa lepida</i>	foothill needle grass	0.06	---
Total		40.69	4.15

Trace: < 0.05 pounds of seed.

^a All seed species were collected in the Santa Anita Wash/Rio Hondo Sub-Watershed.

^b These herbaceous seed species (mixed) were carefully scratched into soil along the north and east edges of numerous boulder and woody debris assemblages in fall 2015 and 2016 (as listed).

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MITIGATION PERFORMANCE

The mitigation site supports an excellent diversity of plant and animal species and continues to develop vegetation structure/cover. A total of 142 native plant species have been observed on the site, including trees, shrubs, sub-shrubs, vines, succulents, herbs, grasses, ferns, spike-moss, and emergent plant species. Oak tree seedling survival currently exceeds 100 percent (compared to the quantities specified in the OWRMP) due to supplemental Phase II planting of oaks and additional germination of volunteer oaks on the site. Most of the oak saplings now exceed seven to eight feet in height. As the growing branch tips of these larger oaks have risen above deer browsing height, Nakae has removed the upper four feet of caging on the majority of oaks (within the enclosure fence) to enable the trees to assume a natural, spreading form. The lower two feet of temporary caging is being left in place as a long-term rodent deterrent.

Beneficial decay processes, including the growth of fungi (several species), have been observed in the coarse woody debris assemblages. These decay processes naturally occur in woodland habitats as a part of biological resource nutrient cycles. It is important to note that without the installation of the salvaged woody material, such processes would not otherwise occur on the mitigation site for many years. California ground squirrels (*Otospermophilus beecheyi*), rock wrens, native reptiles (including California striped racer [*Coluber lateralis lateralis*], a snake species), raptors, and other wildlife species are increasingly colonizing the created boulder and woody debris piles and perching on the installed snags. In addition, although invertebrate species have not been officially tracked, the harvester ant [*Pogonomyrmex* sp.], an important food source for many ground-dwelling vertebrate species, has been increasingly colonizing the site.

Five species of birds were observed nesting on the mitigation site in 2017: acorn woodpecker (*Melanerpes formicivorus*), California towhee (*Melospiza crissalis*), northern mockingbird (*Mimus polyglottos*), Bewick's wren (*Thryomanes bewickii*), and house wren (*Troglodytes aedon*). As of March 31, the five bird species listed above, in addition to bush tit (*Psaltriparus minimus*), were observed to be nesting on site during the 2018 nesting season. The Biological Monitor will continue to note wildlife species observed on the site and ensure that maintenance activities do not adversely impact sensitive biological resources. As of March 31, 2018, a total of 100 native vertebrate wildlife species (83 native bird species) were observed on the site, in addition to numerous native invertebrate species (e.g., butterflies, beetles, bees, dragonflies) since project initiation in September 2013. The compendia of all native plant and wildlife species observed on the site are provided in Attachments C and D, respectively.

Two 'camera traps' (motion-activated video cameras) were installed on and adjacent to the mitigation site in 2016 to provide enhanced, 24-hour wildlife observation data. Two western bluebird nest boxes (per National Audubon Society guidelines) and three mason bee nest houses were installed on the site. The LACDPW installed these items on a voluntary basis to enhance wildlife values and to enable more intensive monitoring of wildlife activities on the site. Wildlife species—including coyote (*Canis latrans*), bobcat (*Lynx rufus*), southern mule deer (*Odocoileus hemionus*), mountain lion (*Puma concolor*), common gray fox (*Urocyon cinereoargenteus*), and black bear (*Ursus americanus*)—have been observed using the two drinker tanks that were installed just northeast of the Lower SPS to provide a water source for wildlife.

Phase II installation was completed in December 2014, and the seven-year to ten-year mitigation maintenance clock began on January 1, 2015. The third quantitative survey of the mitigation site is being performed in April/May 2018, and the associated third annual monitoring report (AMR) will be completed in 2018. The CDFW has terminated the requirement for surveys of the reference site for the duration of the mitigation program. The quantitative surveys include the performance of vegetation

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quadrats and transects, the evaluation of all oak trees (mitigation site) by a Certified Arborist, site photographs from established photo stations, general wildlife surveys, and other performance analyses. The results of the second annual quantitative survey (performed in spring 2017) indicated that the mitigation site had already met or exceeded most of the seven- to ten-year performance standards in the OWHRMP. The planted oaks exhibit excellent growth and survival, and there is a diverse mosaic of associated understory vegetation. The placed substrate enhancements (natural snags, coarse woody debris, brush piles, boulder assemblages) provide valuable cover for wildlife species and habitat niches for the establishment of a variety of plant species (e.g., ferns).

Qualitative and quantitative monitoring will continue through Years 7 to 10 until the mitigation program has been signed off by the CDFW and the City of Arcadia. The LACDPW will post the Year Three AMR on their website at <http://www.dpw.lacounty.gov/wrd/Projects/SAHMP/>.

Please call Richard Lewis at (626) 351-2000 with any questions regarding this report.

Sincerely,

P S O M A S



Melissa A. Howe

Vice President, Resource Management



Richard B. Lewis, III

Senior Project Manager

Enclosures: Exhibit 1 – Project Vicinity
 Exhibit 2 – Sediment Placement Site Locations
 Exhibit 3 – Mitigation Site Location (Lower Sediment Placement Site)
 Attachment A – Site Photographs
 Attachment B – Installed Native Plant and Seed Materials
 Attachment C – Native Plant Compendium (September 2013 – March 2018)
 Attachment D – Wildlife Compendia (September 2013 – March 2018)

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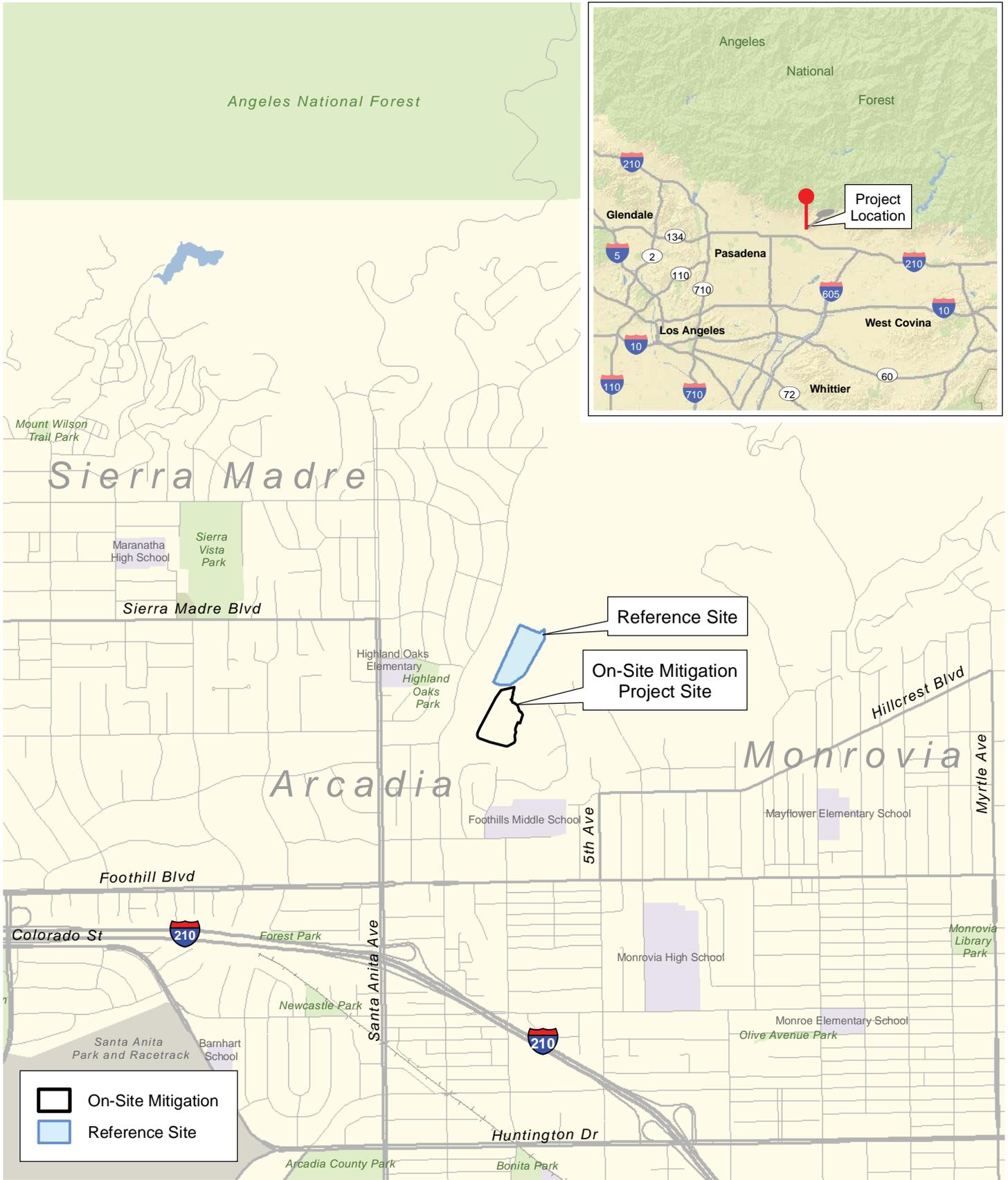
Santa Anita Dam Riser Modification and Reservoir Sediment Removal Project

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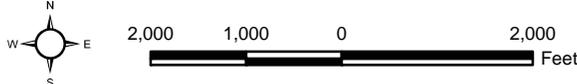


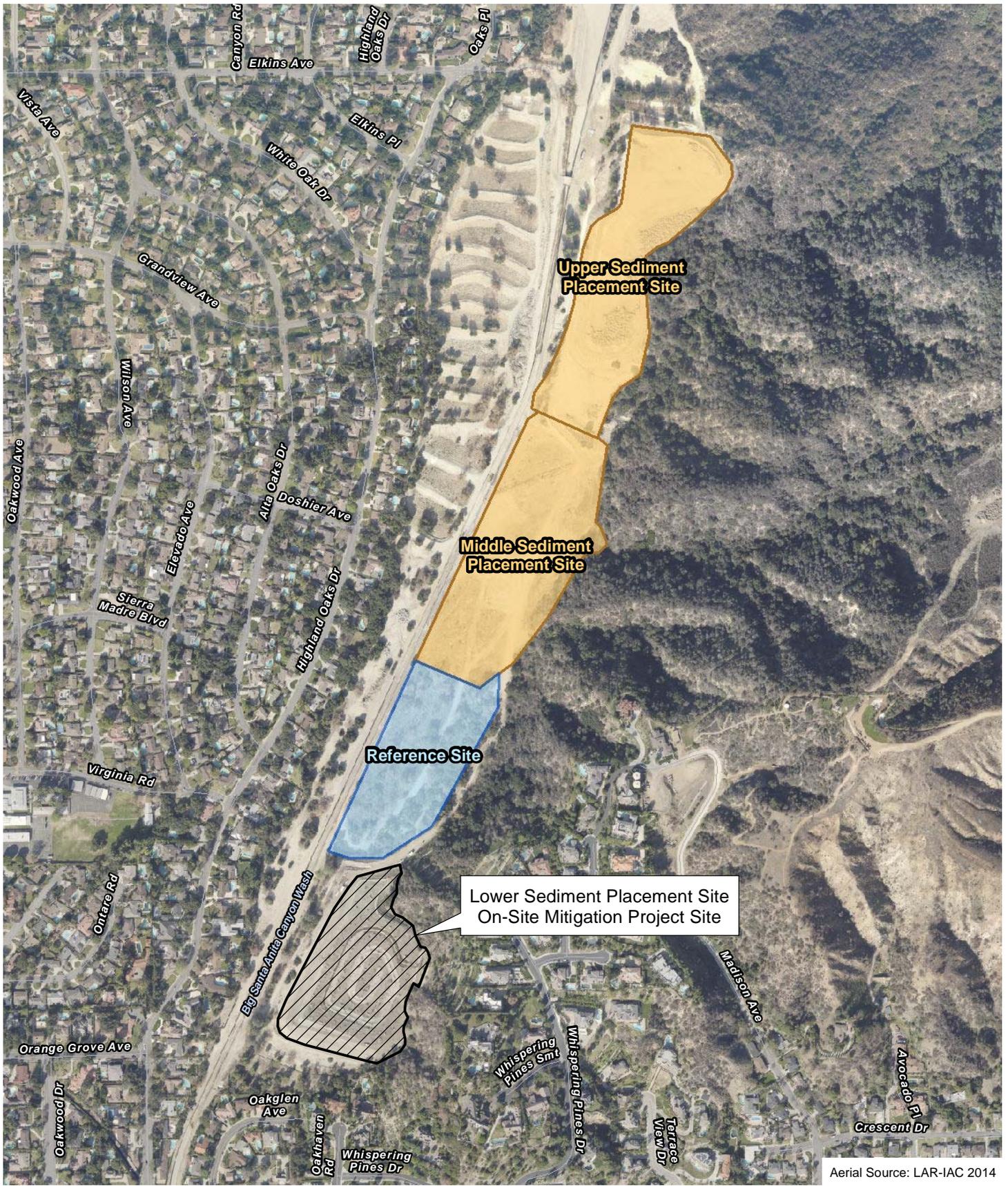
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Project Vicinity

Exhibit 1

Status Report: Oak Woodland Habitat Revegetation/Mitigation Program;
 Santa Anita Dam Riser Modification and Reservoir Sediment Removal Project

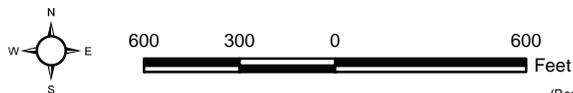




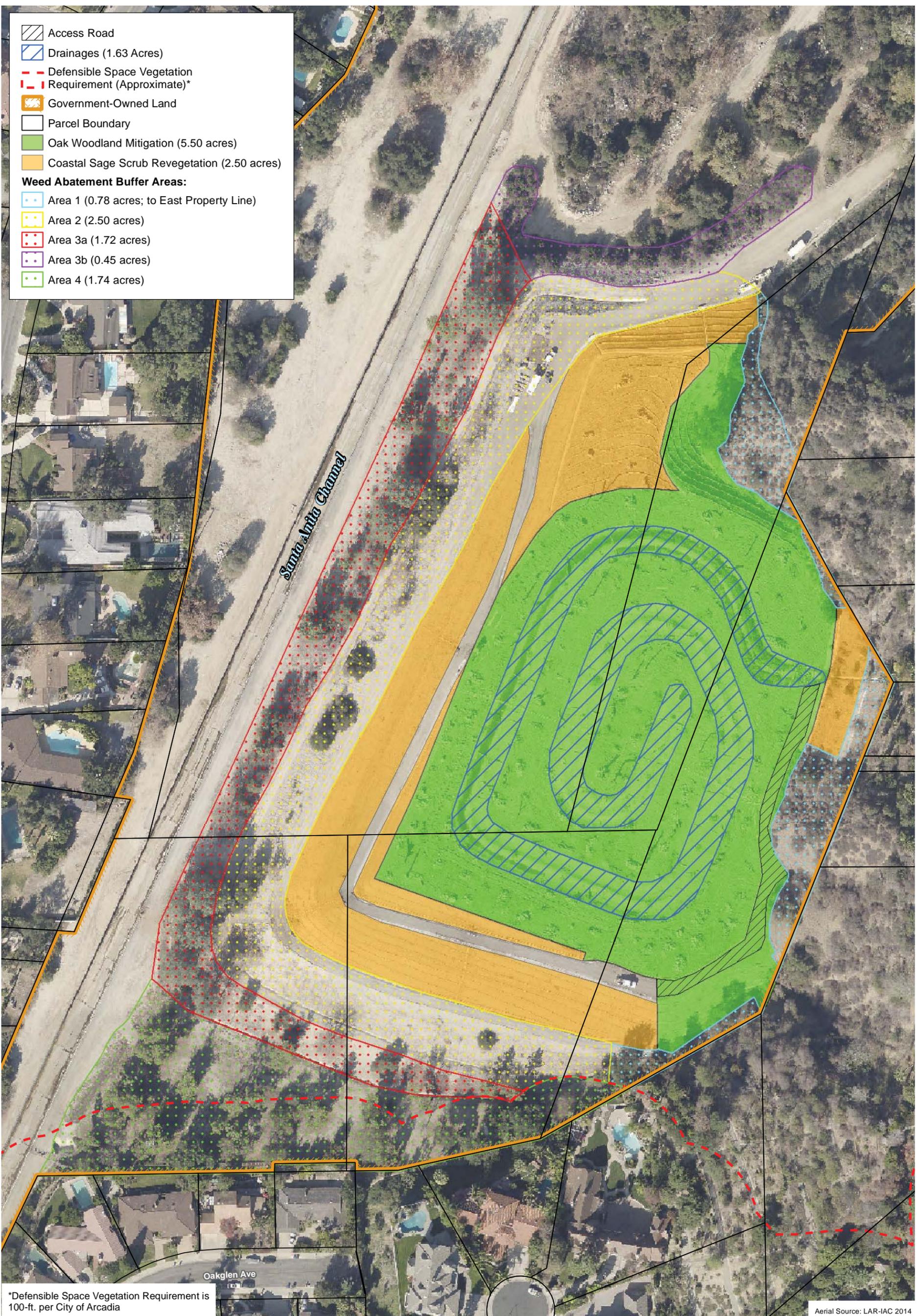
Sediment Placement Site Locations

Exhibit 2

Status Report: Oak Woodland Habitat Revegetation/Mitigation Program;
Santa Anita Dam Riser Modification and Reservoir Sediment Removal Project



-  Access Road
-  Drainages (1.63 Acres)
-  Defensible Space Vegetation Requirement (Approximate)*
-  Government-Owned Land
-  Parcel Boundary
-  Oak Woodland Mitigation (5.50 acres)
-  Coastal Sage Scrub Revegetation (2.50 acres)
- Weed Abatement Buffer Areas:**
-  Area 1 (0.78 acres; to East Property Line)
-  Area 2 (2.50 acres)
-  Area 3a (1.72 acres)
-  Area 3b (0.45 acres)
-  Area 4 (1.74 acres)



*Defensible Space Vegetation Requirement is 100-ft. per City of Arcadia

Aerial Source: LAR-IAC 2014

Mitigation Site Location (Lower Sediment Placement Site)

Exhibit 3

Status Report: Oak Woodland Habitat Revegetation/Mitigation Program;
 Santa Anita Dam Riser Modification and Reservoir Sediment Removal Project



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ATTACHMENT A
SITE PHOTOGRAPHS



August 2013. The Lower Sediment Placement Site (SPS), prior to mitigation implementation.



February 2018. Developing oak woodland and coastal sage scrub on the Lower SPS habitat creation site.

Site Photographs

Attachment A-1

*Status Report: Oak Woodland Habitat Revegetation/Mitigation Program
Santa Anita Dam Riser Modification and Reservoir Sediment Removal Project*





February 2018. Healthy planted oaks after one full year without substantial precipitation and 17 months after the cessation of irrigation. The surrounding understory vegetation is desiccated/dormant.



March 2018. A great blue heron is perched atop a placed natural snag (in the background) on the oak woodland habitat creation site. Healthy planted oaks are visible in the foreground.



February 2018. Healthy, diverse planted coastal sage scrub on the south-facing slope of the Lower Sediment Placement Site (SPS).



February 2018. Native vegetation is becoming established in the Weed Abatement Buffer Areas that surround the mitigation site.



February 2018. Psomas' subcontractor Nakae and Associates, Inc. (Restoration Contractor) installed supplemental container plants on the oak woodland creation site in February 2018, under the direction of Psomas' Restoration Ecologist.



February 2018. The Restoration Contractor conducted thorough weeding and other maintenance tasks on the mitigation site, following the performance of nesting bird surveys by Psomas Biologists.

Site Photographs

Status Report: Oak Woodland Habitat Revegetation/Mitigation Program
Santa Anita Dam Riser Modification and Reservoir Sediment Removal Project





March 2018. The central portion of the spiraling drainages is maintained to be unvegetated to facilitate access for inspection by the San Gabriel Valley Vector Control District.



February 2018. Newly planted hillside gooseberry (shrub) and California polypody (fern) plants on the oak woodland mitigation site.



April 2018. Recently planted southern bunch leaf beardtongue plants on the oak woodland mitigation site. Rancho Santa Ana Botanic Garden, Psomas' subcontractor, propagated these plants from trace cuttings that were carefully collected in the local subwatershed by Psomas' Restoration Ecologist.



February 2018. A planted naked partially-spiked honeysuckle (a vining shrub) clambering over placed boulders and woody debris on the oak woodland mitigation site.



March 2018. An abundance of new seedlings of distant phacelia (an annual wildflower) surround an assemblage of coarse woody debris that was placed on the oak woodland mitigation site in 2013.



February 2018. New growth on a California polypody (fern) plant that was installed on the mitigation site between 2014 and 2016.

Site Photographs

Status Report: Oak Woodland Habitat Revegetation/Mitigation Program
Santa Anita Dam Riser Modification and Reservoir Sediment Removal Project

ATTACHMENT B
INSTALLED NATIVE PLANT AND SEED MATERIALS
(JANUARY 2014–MARCH 2018)

**ATTACHMENT B
INSTALLED CONTAINER PLANTS AND CUTTINGS
(JANUARY 2014 – MARCH 2018)**

Container Plants and Cuttings Species		Container Plants and Cuttings Quantities					
Scientific Name	Common Name	Phase I (Jan/Feb 2014)	Phase II (Dec 2014)	Supplemental			Total
				2015/2016	2017	2018	
<i>Acmispon glaber</i> var. <i>glaber</i>	glabrous deerweed	400	0	0	0	0	400
<i>Acourtia microcephala</i> (cuttings)	small-headed acourtia	0	10	0	0	0	10
<i>Artemisia californica</i>	California sagebrush	1,050	0	0	0	0	1,050
<i>Artemisia douglasiana</i> (cuttings)	mugwort	10	0	0	0	0	10
<i>Artemisia douglasiana</i>	mugwort	0	100	0	0	0	100
<i>Asclepias californica</i> (cuttings)	California milkweed	0	10	0	0	0	10
<i>Aspidotis californica</i>	California lace fern	0	0	6	0	0	6
<i>Asclepias fascicularis</i> ^a	narrow-leaf milkweed	0	0	0	0	0	0
<i>Ceanothus leucodermis</i>	chaparral whitethorn	0	75	0	0	0	75
<i>Cercocarpus betuloides</i> var. <i>betuloides</i>	birch-leaf mountain-mahogany	0	50	0	0	0	50
<i>Clematis lasiantha</i>	chaparral clematis	0	200	0	0	0	200
<i>Dryopteris arguta</i>	sharp-toothed wood fern	0	5	24	12	0	41
<i>Dudleya lanceolata</i>	lance-leaved dudleya	0	0	32	0	0	32
<i>Elymus condensatus</i>	giant wild-rye	0	80	0	0	0	80
<i>Epilobium canum</i> ssp. <i>canum</i>	California fuchsia	0	0	46	1	1	48
<i>Eriodictyon crassifolium</i>	thick-leaved yerba santa	0	0	5	0	0	5
<i>Eriogonum fasciculatum</i> var. <i>foliolosum</i>	leafy California buckwheat	750	0	0	0	0	750
<i>Frangula californica</i> ssp. <i>californica</i>	California coffee berry	0	100	0	0	0	100
<i>Hesperoyucca whipplei</i>	Whipple's chaparral yucca	150	100	0	0	0	250
<i>Heteromeles arbutifolia</i>	toyon	55	0	0	0	0	55
<i>Juncus rugulosus</i>	wrinkled rush	0	0	0	155	0	155
<i>Juncus textilis</i> (containers and cuttings)	basket rush	10	0	0	71	0	81
<i>Keckiella cordifolia</i>	heart-leaved bush penstemon	0	271	0	0	0	271
<i>Lonicera subspicata</i> var. <i>denudata</i>	naked partially-spiked honeysuckle	0	20	0	0	0	20
<i>Malosma laurina</i>	laurel sumac	40	0	0	0	0	40
<i>Melica imperfecta</i>	little California melica	150	125	0	0	0	275
<i>Mimulus aurantiacus</i> var. <i>pubescens</i>	hairy bush monkeyflower	425	0	0	0	0	425

**ATTACHMENT B
INSTALLED CONTAINER PLANTS AND CUTTINGS
(JANUARY 2014 – MARCH 2018)**

Container Plants and Cuttings Species		Container Plants and Cuttings Quantities					
Scientific Name	Common Name	Phase I (Jan/Feb 2014)	Phase II (Dec 2014)	Supplemental			Total
				2015/2016	2017	2018	
<i>Opuntia xvaseyi</i>	Vasey's prickly-pear	200	100	0	0	0	300
<i>Paeonia californica</i> ^c	California peony	0	0	0	8	0	8
<i>Pellaea andromedifolia</i> (cuttings)	coffee fern	5	0	0	0	0	5
<i>Pellaea andromedifolia</i>	coffee fern	0	20	128	11	0	159
<i>Pellaea mucronata</i> var. <i>mucronata</i>	bird's-foot fern	0	5	60	15	0	80
<i>Penstemon heterophyllus</i> var. <i>australis</i> ^d	southern bunch leaf beardtongue	0	0	0	0	5	5
<i>Penstemon spectabilis</i> var. <i>spectabilis</i>	spectacular beardtongue	75	5	0	0	0	80
<i>Pentagramma triangularis</i> ^c	goldback fern	0	0	0	2	0	2
<i>Polypodium californicum</i>	California polypody	0	20	91	71	65	247
<i>Prunus ilicifolia</i> ssp. <i>ilicifolia</i>	holly-leaved cherry	0	50	0	0	0	50
<i>Pseudognaphalium californicum</i>	California cudweed	460	0	0	0	0	460
<i>Quercus agrifolia</i> var. <i>agrifolia</i> ^b	coast live oak	358	0	0	0	0	358
<i>Quercus agrifolia</i> var. <i>agrifolia</i> ^c	coast live oak	0	24	0	0	0	24
<i>Quercus engelmannii</i>	Engelmann oak	0	57	0	0	0	57
<i>Quercus durata</i> var. <i>gabrielensis</i>	San Gabriel oak	0	25	0	0	0	25
<i>Rhamnus ilicifolia</i>	hollyleaf redberry	0	31	0	0	0	31
<i>Rhus aromatica</i> (cuttings)	skunk bush	10	0	0	0	0	10
<i>Rhus ovata</i>	sugar bush	55	0	0	0	0	55
<i>Ribes aureum</i> var. <i>gracillimum</i>	graceful golden currant	100	275	0	0	0	375
<i>Ribes californicum</i>	hillside gooseberry	0	0	29	2	65	96
<i>Rosa californica</i> ^c	California rose	0	0	0	3	60	63
<i>Rubus ursinus</i> (cuttings)	California blackberry	10	0	0	0	0	10
<i>Salvia apiana</i>	white sage	250	150	0	0	0	400
<i>Salvia mellifera</i>	black sage	400	0	0	0	0	400
<i>Sambucus nigra</i> ssp. <i>caerulea</i>	blue elderberry	0	55	0	0	0	55
<i>Selaginella bigelovii</i>	Bigelow's spike-moss	0	10	0	0	0	10

**ATTACHMENT B
INSTALLED CONTAINER PLANTS AND CUTTINGS
(JANUARY 2014 – MARCH 2018)**

Container Plants and Cuttings Species		Container Plants and Cuttings Quantities					
Scientific Name	Common Name	Phase I (Jan/Feb 2014)	Phase II (Dec 2014)	Supplemental			Total
				2015/2016	2017	2018	
<i>Stachys bullata</i>	puckered hedgenettle	0	0	135	0	0	135
<i>Stipa lepida</i>	foothill needle grass	0	0	641	218	17	867
Total (52 Native Container Plant/Cuttings Species)		4,963	1,973	1,197	569	213	8,915

- ^a Seed for this species has yet to be obtained in the Santa Anita Wash/Rio Hondo Sub-Watershed for propagation.
^b Initial oak planting locations established via direct sown acorns/seedlings.
^c Supplemental planting of oaks in "T4" (deep 1-gallon) size.

TABLE B-2
SEED SPECIES COLLECTED/INSTALLED (JANUARY 2014 – MARCH 2018)

Scientific Name	Common Name	Pounds Collected	Seed Quantities (Collection Started in 2011)				Total Pounds Installed
			Sage Scrub Seed Mixes/Aspect		Hand-Seeding		
			South/West (2.0 acres)	North (0.54 acre)	Oak Woodland	Sage Scrub	
Initial/Conceptual OWRMP Seed Species (11 Total) Collected by S&S Seeds in the Santa Anita Wash/Rio Hondo Subwatershed and Used for Initial Hydroseeding and Hand-Seeding in January 2014 and December 2014							
<i>Acmispon glaber</i> var. <i>glaber</i>	glabrous deerweed	43.82	12.00	2.00	8.00	2.40	24.40
<i>Artemisia californica</i>	California sagebrush	81.78	8.00	2.00	—	—	10.00
<i>Camissoniopsis hirtella</i>	pubescent camissoniopsis	0.20	—	0.10	0.05	0.05	0.20
<i>Eriogonum fasciculatum</i> var. <i>foliolosum</i>	California buckwheat	81.95	20.00	5.00	—	—	25.00
<i>Hesperoyucca whipplei</i>	Whipple's chaparral yucca	42.34	1.00	—	—	2.00	3.00
<i>Mimulus aurantiacus</i> var. <i>pubescens</i>	soft orange monkeyflower	19.88	0.50	2.00	2.00	1.00	5.50
<i>Phacelia cicutaria</i>	cicuta-leaved phacelia	0.56	0.26	0.10	0.10	0.10	0.56
<i>Pseudognaphalium californicum</i>	California cudweed	5.54	1.00	1.00	2.00	1.34	5.34
<i>Quercus agrifolia</i> var. <i>agrifolia</i>	coast live oak	16.92	—	—	1.92	—	1.92
<i>Salvia mellifera</i>	black sage	13.14	1.00	1.00	1.00	—	3.00
<i>Sambucus nigra</i> ssp. <i>caerulea</i>	blue elderberry	6.07	—	—	1.00	0.50	1.50
Other Seed Species (27 Total) Collected to Date by S&S Seeds in the Santa Anita Wash/Rio Hondo Subwatershed (applied in 2014 and/or 2015)							
<i>Acer macrophyllum</i>	big-leaf maple	1.96	—	—	1.96	—	1.96
<i>Artemisia douglasiana</i>	mugwort	8.64	—	—	3.00	—	3.00
<i>Ceanothus leucodermis</i>	chaparral whitethorn	0.52	0.20	0.10	—	—	0.30
<i>Cercocarpus betuloides</i> var. <i>betuloides</i>	birch-leaf mountain-mahogany	4.92	1.00	0.50	—	—	1.50
<i>Chaenactis glabruiscula</i> var. <i>glabruiscula</i>	yellow pincushion	0.92	0.25	0.10	0.10	0.47	0.92
<i>Clarkia purpurea</i> ssp. <i>quadrivulnera</i>	four-spot	0.20	0.05	0.05	0.05	0.05	0.20
<i>Clematis lasiantha</i>	chaparral clematis	4.30	0.80	0.20	1.00	0.25	2.25
<i>Datura wrightii</i>	Wright's jimsonweed	0.56	0.20	0.16	0.10	0.10	0.56
<i>Eulobus californicus</i>	California eulobus	0.82	—	—	0.41	0.41	0.82
<i>Heteromeles arbutifolia</i>	toyon	5.78	—	—	1.00	—	1.00
<i>Lepidospartum squamatum</i>	scaly scale-broom	14.56	—	—	1.00	—	1.00
<i>Lupinus hirsutissimus</i>	stinging lupine	11.90	—	—	9.90	2.00	11.90
<i>Malacothrix saxatilis</i>	rocky malacothrix	2.22	—	—	1.11	1.11	2.22
<i>Oenothera elata</i> ssp. <i>hirsutissima</i>	hairy tall evening primrose	0.04	—	—	0.04	—	0.04
<i>Penstemon spectabilis</i> var. <i>spectabilis</i>	spectacular beardtongue	5.52	—	—	2.00	3.52	5.52
<i>Phacelia distans</i>	distant phacelia	0.96	—	—	0.96	—	0.96
<i>Phacelia minor</i>	wild Canterbury bells	18.36	—	—	10.15	8.21	18.36
<i>Phacelia ramosissima</i>	branching phacelia	2.40	—	—	2.40	—	2.40
<i>Prunus ilicifolia</i> ssp. <i>ilicifolia</i>	holly-leaved cherry	9.20	—	—	4.00	—	4.00
<i>Pseudognaphalium stramineum</i>	straw-colored cudweed	3.20	1.00	0.20	1.00	1.00	3.20
<i>Quercus agrifolia</i> var. <i>agrifolia</i> (2015)	coast live oak	10.00	—	—	10.00	—	10.00
<i>Rhamnus ilicifolia</i>	hollyleaf redberry	2.64	—	—	1.89	0.50	2.39
<i>Rhus ovata</i>	sugar bush	7.35	—	—	1.00	—	1.00
<i>Solanum douglasii</i>	Douglas' nightshade	0.02	—	—	0.02	—	0.02
<i>Stachys bullata</i>	puckered hedgenettle	0.01	—	—	0.01	—	0.01
<i>Stipa lepida</i>	foothill needle grass	0.16	—	—	0.03	0.03	0.06
<i>Umbellularia californica</i>	California bay	4.44	—	—	3.00	—	3.00
Total (38 Native Seed Species)		4431.84	47.26	14.51	672.20	25.04	159.01

TABLE B-2
SEED SPECIES COLLECTED/INSTALLED (JANUARY 2014 – MARCH 2018)

Seed Species (73 Total) Collected to Date by Psomas in the Santa Anita Wash/Rio Hondo Subwatershed (Small Quantities, <1.0 Pound Collected per Species, Except as Noted) and Installed on the Mitigation Sites in 2014, 2015, 2016, and/or 2017		
<p><i>Acer macrophyllum</i> (big-leaf maple), <i>Acourtia microcephala</i> (small-headed acourtia), <i>Adenostoma fasciculatum</i> var. <i>fasciculatum</i> (chamise), <i>Alnus rhombifolia</i> (white alder), <i>Amorpha californica</i> (California false indigo), <i>Arctostaphylos glauca</i> (big berry manzanita), <i>Brickellia californica</i> (California brickellbush), <i>Brickellia nevinii</i> (Nevin's brickellbush), <i>Castilleja applegatei</i> (Applegate's paintbrush), <i>Ceanothus leucodermis</i> (chaparral whitethorn), <i>Ceanothus oliganthus</i> (few-flowered California-lilac), <i>Cercocarpus betuloides</i> var. <i>betuloides</i> (birch-leaf mountain-mahogany), <i>Cirsium occidentale</i> var. <i>californicum</i> (California thistle), <i>Clarkia dudleyana</i> (Dudley's clarkia), <i>Clematis lasiantha</i> (chaparral clematis), <i>Corethrogyne filaginifolia</i> (filago-leaved sand-aster), <i>Datura wrightii</i> (Wright's jimsonweed), <i>Delphinium cardinale</i> (cardinal larkspur), <i>Dudleya lanceolata</i> (lance-leaved dudleya), <i>Elymus condensatus</i> (giant wild-rye), <i>Epilobium canum</i> ssp. <i>canum</i> (California fuchsia), <i>Ericameria parishii</i> var. <i>parishii</i> (Parish's goldenbush), <i>Erigeron foliosus</i> var. <i>foliosus</i> (leafy fleabane), <i>Eriodictyon crassifolium</i> (thick-leaved yerba santa), <i>Eriogonum elongatum</i> var. <i>elongatum</i> (long-stem wild buckwheat), <i>Eriophyllum confertiflorum</i> var. <i>confertiflorum</i> (golden-yarrow), <i>Frangula californica</i> ssp. <i>californica</i> (California coffee berry), <i>Galium angustifolium</i> ssp. <i>angustifolium</i> (narrow-leaved bedstraw), <i>Hazardia squarrosa</i> var. <i>grindelioides</i> (grindelia-like saw-toothed goldenbush), <i>Hesperoyucca whipplei</i> (Whipple's chaparral yucca), <i>Heteromeles arbutifolia</i> (toyon), <i>Heterotheca grandiflora</i> (telegraph weed), <i>Holodiscus discolor</i> (oceanspray), <i>Juncus rugulosus</i> (wrinkled rush), <i>Juncus textilis</i> (basket rush), <i>Keckiella cordifolia</i> (heart-leaved bush penstemon), <i>Lathyrus vestitus</i> (covered sweet pea), <i>Lepidospartum squamatum</i> (scaly scale-broom), <i>Linanthus californicus</i> (prickly phlox), <i>Lonicera subspicata</i> var. <i>denudata</i> (naked partially-spiked honeysuckle), <i>Lupinus concinnus</i> (bajada lupine), <i>Lupinus longifolius</i> (long-leaved lupine), <i>Lupinus truncatus</i> (cut leaf lupine), <i>Malacothrix saxatilis</i> (rocky malacothrix), <i>Marah macrocarpa</i> (chilicothe), <i>Melica imperfecta</i> (little California melica), <i>Mentzelia laevicaulis</i> (smooth-stemmed blazing star), <i>Mimulus aurantiacus</i> var. <i>pubescens</i> (soft orange monkeyflower), red monkeyflower (<i>Mimulus cardinalis</i>), <i>Mirabilis laevis</i> var. <i>crassifolia</i> (wishbone bush), <i>Paeonia californica</i> (California peony), <i>Penstemon spectabilis</i> var. <i>spectabilis</i> (spectacular beardtongue), <i>Phacelia cicutaria</i> (cicuta-leaved phacelia), <i>Phacelia ramosissima</i> (branching phacelia), <i>Pseudognaphalium bioletti</i> (Bioletti's cudweed), <i>Pseudognaphalium californicum</i> (California cudweed), <i>Pseudognaphalium canescens</i> (hairy cudweed), bigcone Douglas-fir (<i>Pseudotsuga macrocarpa</i>), <i>Quercus agrifolia</i> var. <i>agrifolia</i> (coast live oak; 3.0 lb), <i>Quercus chrysolepis</i> (canyon live oak; 1.0 lb), San Gabriel oak (<i>Quercus durata</i> var. <i>gabrielensis</i>), <i>Quercus engelmannii</i> (Engelmann oak; 8.0 lb), <i>Rhus ovata</i> (sugar bush), <i>Ribes aureum</i> var. <i>gracillimum</i> (graceful golden currant), <i>Salvia apiana</i> (white sage), <i>Salvia mellifera</i> (black sage), <i>Senecio flaccidus</i> var. <i>douglasii</i> (Douglas' threadleaf ragwort), <i>Silene laciniata</i> (torn catchfly), <i>Solidago velutina</i> (velvety goldenrod), <i>Stephanomeria cichoriacea</i> (silver rock-lettuce), <i>Stipa coronata</i> (crested needle grass), <i>Symphoricarpos</i> cf. <i>mollis</i> (creeping snowberry), <i>Umbellularia californica</i> (California bay).</p>		
Cuttings Species (24 Total) and Rare Oak Acorns (2 Species) Collected to Date by Psomas, Rancho Santa Ana Botanic Garden, and S&S Seeds in the Santa Anita Wash/Rio Hondo Subwatershed		
Scientific Name	Common Name	Notes
<i>Acourtia microcephala</i>	small-headed acourtia	Direct planting on mitigation site.
<i>Artemisia douglasiana</i>	mugwort	Direct planting on mitigation site.
<i>Asclepias californica</i>	California milkweed	For container plant propagation and direct planting on mitigation site.
<i>Aspidotis californica</i>	California lace fern	Rhizome cuttings for container plant propagation and direct planting on mitigation site.
<i>Chlorogalum pomeridianum</i>	afternoon soap plant	Direct planting on mitigation site.
<i>Dryopteris arguta</i>	sharp-toothed wood fern	Rhizome cuttings for container plant propagation (only).
<i>Dudleya lanceolata</i>	lance-leaved dudleya	For container plant propagation and direct planting on mitigation site.
<i>Epilobium canum</i> ssp. <i>canum</i>	California fuchsia	Container plant propagation (only).
<i>Juncus rugulosus</i>	wrinkled rush	Container plant propagation (only).
<i>Juncus textilis</i>	basket rush	Container plant propagation and direct planting on mitigation site.
<i>Paeonia californica</i>	California peony	Container plant propagation and direct planting on mitigation site.
<i>Pellaea andromedifolia</i>	coffee fern	Rhizome cuttings for container plant propagation and direct planting on mitigation site.
<i>Pellaea mucronata</i> var. <i>mucronata</i>	bird's-foot fern	Rhizome cuttings for container plant propagation (only).
<i>Pentagramma triangularis</i>	goldback fern	Container plant propagation (only).
<i>Penstemon heterophyllus</i> var. <i>australis</i>	southern bunch leaf beardtongue	Container plant propagation (only).
<i>Polypodium californicum</i>	California polypody	Rhizome cuttings for container plant propagation (only).
<i>Quercus durata</i> var. <i>gabrielensis</i>	San Gabriel oak	Container plant propagation (only)
<i>Quercus engelmannii</i>	Engelmann oak	Container plant propagation and direct planting on mitigation site.
<i>Rhamnus crocea</i>	spiny redberry	Container plant propagation (only).
<i>Rhus aromatica</i>	skunk bush	Direct planting on mitigation site.
<i>Ribes californicum</i>	hillside gooseberry	Container plant propagation (only).
<i>Ribes malvaceum</i>	leaf-shaped currant	Container plant propagation (only).
<i>Rosa californica</i>	California rose	Container plant propagation (only).
<i>Rubus ursinus</i>	California blackberry	Direct planting on mitigation site.
<i>Selaginella bigelovii</i>	Bigelow's spike-moss	Direct planting on mitigation site.
<i>Stachys bullata</i>	puckered hedgenettle	For container plant propagation and direct planting on mitigation site.
OWHRMP: Oak Woodland Habitat Revegetation/Mitigation Program for the Santa Anita Dam Riser Modification and Reservoir Sediment Removal Project; S&S: S&S Seeds; lb: pound.		

ATTACHMENT C
NATIVE PLANT COMPENDIUM
(SEPTEMBER 2013–MARCH 2018)

ATTACHMENT C
NATIVE PLANT COMPENDIUM (SEPTEMBER 2013 – MARCH 2018)

Species (142 Native Plant Species)		Special Status	Wetland Rank
Scientific Name	Common Name		
LYCOPHYTES			
SELAGINELLACEAE–SPIKE-MOSS FAMILY			
<i>Selaginella bigelovii</i>	Bigelow's spike-moss		
FERNS			
DRYOPTERIDACEAE–WOOD FERN FAMILY			
<i>Dryopteris arguta</i>	sharp-toothed wood fern		
POLYPODIACEAE–POLYPODY FAMILY			
<i>Polypodium californicum</i>	California polypody		
PTERIDACEAE–BRAKE FAMILY			
<i>Aspidotis californica</i>	California lace fern		
<i>Pellaea andromedifolia</i>	coffee fern		
<i>Pellaea mucronata</i> var. <i>mucronata</i>	bird's-foot fern		
<i>Pentagramma triangularis</i>	goldback fern		
CERATOPHYLLALES			
CERATOPHYLLACEAE–HORNWORT FAMILY			
<i>Ceratophyllum demersum</i>	submerged hortwort		OBL
EUDICOTS			
ADOXACEAE–MUSKROOT FAMILY			
<i>Sambucus nigra</i> ssp. <i>caerulea</i>	blue elderberry		FAC
ANACARDIACEAE–SUMAC FAMILY			
<i>Malosma laurina</i>	laurel sumac		
<i>Rhus aromatica</i>	skunk bush		FACU
<i>Rhus ovata</i>	sugar bush		
<i>Toxicodendron diversilobum</i>	western poison oak		FACU
APOCYNACEAE–DOGBANE FAMILY			
<i>Asclepias californica</i>	California milkweed		
ASTERACEAE–SUNFLOWER FAMILY			
<i>Acourtia microcephala</i>	small-headed acourtia		
<i>Ambrosia acanthicarpa</i>	annual bur-sage		
<i>Artemisia californica</i>	California sagebrush		
<i>Artemisia douglasiana</i>	mugwort		FAC
<i>Baccharis pilularis</i> ssp. <i>consanguinea</i>	coyote brush		
<i>Baccharis salicifolia</i> ssp. <i>salicifolia</i>	mule fat		FAC
<i>Brickellia californica</i>	California brickellbush		FACU
<i>Chaenactis glabriuscula</i> var. <i>glabriuscula</i>	yellow pincushion		
<i>Cirsium occidentale</i>	cobwebby thistle		
<i>Corethrogyne filaginifolia</i>	filago-leaved sand-aster		
<i>Deinandra fasciculata</i>	fascicled tarplant		FACU
<i>Encelia californica</i>	California encelia		
<i>Ericameria nauseosa</i>	rubber rabbitbrush		
<i>Ericameria parishii</i> var. <i>parishii</i>	Parish's goldenbush		
<i>Erigeron canadensis</i>	horseweed		FACU
<i>Eriophyllum confertiflorum</i> var. <i>confertiflorum</i>	golden-yarrow		

ATTACHMENT C
NATIVE PLANT COMPENDIUM (SEPTEMBER 2013 – MARCH 2018)

Species (142 Native Plant Species)		Special Status	Wetland Rank
Scientific Name	Common Name		
<i>Hazardia squarrosa</i> var. <i>grindelioides</i>	grindelia-like saw-toothed goldenbush		
<i>Helianthus annuus</i>	annual sunflower		FACU
<i>Heterotheca grandiflora</i>	telegraph weed		
<i>Heterotheca sessiliflora</i> ssp. <i>fastigiata</i>	upright sessileflower goldenaster		
<i>Lasthenia gracilis</i>	common goldfields		
<i>Lepidospartum squamatum</i>	scaly scale-broom		FACU
<i>Logfia filaginoides</i>	California cottonrose		
<i>Malacothrix saxatilis</i>	rocky malacothrix		
<i>Pseudognaphalium biolettii</i>	Bioletti's cudweed		
<i>Pseudognaphalium californicum</i>	California cudweed		
<i>Pseudognaphalium canescens</i>	hairy cudweed		FACU
<i>Pseudognaphalium stramineum</i>	straw-colored cudweed		FAC
<i>Senecio flaccidus</i> var. <i>douglasii</i>	Douglas' threadleaf ragwort		
BORAGINACEAE–BORAGE FAMILY			
<i>Cryptantha intermedia</i> var. <i>intermedia</i>	intermediate cryptantha		
<i>Eriodictyon crassifolium</i>	thick-leaved yerba santa		
<i>Eriodictyon parryi</i>	poodle-dog bush		
<i>Eucrypta chrysanthemifolia</i> var. <i>chrysanthemifolia</i>	chrysanthemum-leaved eucrypta		
<i>Phacelia cicutaria</i>	cicuta-leaved phacelia		
<i>Phacelia distans</i>	distant phacelia		OBL
<i>Phacelia minor</i>	wild Canterbury bells		
<i>Phacelia ramosissima</i>	branching phacelia		FACU
BRASSICACEAE–MUSTARD FAMILY			
<i>Cardamine oligosperma</i>	few-flowered bitter-cress		FAC
CACTACEAE–CACTUS FAMILY			
<i>Opuntia xvaseyi</i>	Vasey's prickly-pear		
<i>Opuntia littoralis</i>	seaside prickly pear		
CAPRIFOLIACEAE–HONEYSUCKLE FAMILY			
<i>Lonicera subspicata</i> var. <i>denudata</i>	naked partially-spiked honeysuckle		
CARYOPHYLLACEAE–PINK FAMILY			
<i>Silene laciniata</i>	torn catchfly		
CONVOLVULACEAE–MORNING-GLORY FAMILY			
<i>Calystegia macrostegia</i>	large-bracted morning-glory		
CRASSULACEAE–STONECROP FAMILY			
<i>Dudleya lanceolata</i>	lance-leaved dudleya		
CUCURBITACEAE–GOURD FAMILY			
<i>Marah macrocarpa</i>	chilicothe		
EUPHORBIACEAE–SPURGE FAMILY			
<i>Euphorbia polycarpa</i>	smallseed sandmat		
FABACEAE–LEGUME FAMILY			
<i>Acmispon brachycarpus</i>	short fruit deervetch		
<i>Acmispon glaber</i> var. <i>glaber</i>	glabrous deerweed		
<i>Acmispon maritimus</i> var. <i>maritimus</i>	coastal deervetch		

ATTACHMENT C
NATIVE PLANT COMPENDIUM (SEPTEMBER 2013 – MARCH 2018)

Species (142 Native Plant Species)		Special Status	Wetland Rank
Scientific Name	Common Name		
<i>Acmispon strigosus</i>	strigose deervetch		
<i>Lupinus concinnus</i>	bajada lupine		
<i>Lupinus hirsutissimus</i>	stinging lupine		
<i>Lupinus longifolius</i>	long-leaved lupine		
<i>Lupinus succulentus</i>	arroyo lupine		
<i>Lupinus truncatus</i>	cut leaf lupine		
FAGACEAE–OAK FAMILY			
<i>Quercus agrifolia</i> var. <i>agrifolia</i>	coast live oak		
<i>Quercus chrysolepis</i>	canyon live oak		
<i>Quercus durata</i> var. <i>gabrielensis</i>	San Gabriel oak	CRPR 4.2	
<i>Quercus engelmannii</i>	Engelmann oak	CRPR 4.2	
GROSSULARIACEAE–GOOSEBERRY FAMILY			
<i>Ribes aureum</i> var. <i>gracillimum</i>	graceful golden currant		FAC
<i>Ribes californicum</i>	hillside gooseberry		
LAMIACEAE–MINT FAMILY			
<i>Salvia apiana</i>	white sage		
<i>Salvia columbariae</i>	chia		
<i>Salvia mellifera</i>	black sage		
<i>Stachys bullata</i>	puckered hedgenettle		
LOASACEAE–BLAZING STAR FAMILY			
<i>Mentzelia laevicaulis</i>	smooth-stemmed blazing star		
LYTHRACEAE–LOOSESTRIFE FAMILY			
<i>Ammannia coccinea</i>	scarlet ammania		OBL
NYCTAGINACEAE–FOUR O'CLOCK FAMILY			
<i>Mirabilis laevis</i> var. <i>crassifolia</i>	wishbone bush		
ONAGRACEAE–EVENING PRIMROSE FAMILY			
<i>Camissoniopsis hirtella</i>	pubescent camissoniopsis		
<i>Clarkia dudleyana</i>	Dudley's clarkia		
<i>Clarkia purpurea</i> ssp. <i>quadrivulnera</i>	four-spot		
<i>Epilobium brachycarpum</i>	tall annual willowherb		
<i>Epilobium canum</i> ssp. <i>canum</i>	California fuchsia		
<i>Epilobium ciliatum</i> ssp. <i>ciliatum</i>	fringed willowherb		FACW
<i>Eulobus californicus</i>	California eulobus		
<i>Oenothera elata</i> ssp. <i>hirsutissima</i>	hairy tall evening primrose		FACW
OXALIDACEAE–OXALIS FAMILY			
<i>Oxalis californica</i>	California wood-sorrel		
PAPAVERACEAE–POPPY FAMILY			
<i>Eschscholzia californica</i>	California poppy		
PHRYMACEAE–LOPSEED FAMILY			
<i>Mimulus aurantiacus</i> var. <i>pubescens</i>	orange monkeyflower		FACU
<i>Mimulus cardinalis</i>	red monkeyflower		FACW
<i>Mimulus guttatus</i>	red-dotted monkeyflower		OBL
<i>Mimulus pilosus</i>	downy monkeyflower		

ATTACHMENT C
NATIVE PLANT COMPENDIUM (SEPTEMBER 2013 – MARCH 2018)

Species (142 Native Plant Species)		Special Status	Wetland Rank
Scientific Name	Common Name		
PLANTAGINACEAE–PLANTAIN FAMILY			
<i>Keckiella cordifolia</i>	heart-leaved bush penstemon		
<i>Penstemon heterophyllus</i> var. <i>australis</i>	southern bunch leaf beardtongue		
<i>Penstemon spectabilis</i> var. <i>spectabilis</i>	spectacular beardtongue		
<i>Penstemon spectabilis</i> var. <i>subviscosus</i>	glandular spectacular beardtongue		
PLATANACEAE–SYCAMORE FAMILY			
<i>Platanus racemosa</i>	western sycamore		FAC
POLEMONIACEAE–PHLOX FAMILY			
<i>Linanthus californicus</i>	prickly phlox		
POLYGONACEAE–BUCKWHEAT FAMILY			
<i>Eriogonum elongatum</i> var. <i>elongatum</i>	long-stem wild buckwheat		
<i>Eriogonum fasciculatum</i> var. <i>foliolosum</i>	leafy California buckwheat		
<i>Persicaria lapathifolia</i>	willow weed		FACW
RANUNCULACEAE–BUTTERCUP FAMILY			
<i>Clematis lasiantha</i>	chaparral clematis		
<i>Delphinium cardinale</i>	cardinal larkspur		
RHAMNACEAE–BUCKTHORN FAMILY			
<i>Ceanothus leucodermis</i>	chaparral whitethorn		
<i>Ceanothus oliganthus</i>	few-flowered California-lilac		
<i>Frangula californica</i> ssp. <i>californica</i>	California coffee berry		
<i>Rhamnus crocea</i>	spiny redberry		
<i>Rhamnus ilicifolia</i>	hollyleaf redberry		
ROSACEAE–ROSE FAMILY			
<i>Cercocarpus betuloides</i> var. <i>betuloides</i>	birch-leaf mountain-mahogany		
<i>Heteromeles arbutifolia</i>	toyon		
<i>Prunus ilicifolia</i> ssp. <i>ilicifolia</i>	holly-leaved cherry		
<i>Rosa californica</i>	California rose		FAC
<i>Rubus ursinus</i>	California blackberry		FAC
RUBIACEAE–COFFEE FAMILY			
<i>Galium angustifolium</i> ssp. <i>angustifolium</i>	narrow-leaved bedstraw		
<i>Galium aparine</i>	goose grass		FACU
SALICACEAE–WILLOW FAMILY			
<i>Populus fremontii</i> ssp. <i>fremontii</i>	Fremont cottonwood		FAC
<i>Salix exigua</i> var. <i>hindsiana</i>	Hinds' willow		FACW
<i>Salix gooddingii</i>	Goodding's black willow		FACW
<i>Salix laevigata</i>	red willow		FACW
<i>Salix lasiolepis</i>	arroyo willow		FACW
SOLANACEAE–NIGHTSHADE FAMILY			
<i>Datura wrightii</i>	Wright's jimsonweed		
<i>Solanum americanum</i>	American nightshade		FACU
<i>Solanum douglasii</i>	Douglas' nightshade		FAC
<i>Solanum xanti</i>	Xantus' nightshade		

ATTACHMENT C
NATIVE PLANT COMPENDIUM (SEPTEMBER 2013 – MARCH 2018)

Species (142 Native Plant Species)		Special Status	Wetland Rank		
Scientific Name	Common Name				
URTICACEAE–NETTLE FAMILY					
<i>Urtica dioica</i> ssp. <i>holosericea</i>	hoary nettle		FAC		
VERBENACEAE–VERVAIN FAMILY					
<i>Verbena lasiostachys</i>	woolly-flowered vervain		FAC		
MONOCOTS					
AGAVACEAE–AGAVE FAMILY					
<i>Hesperoyucca whipplei</i>	Whipple's chaparral yucca				
CYPERACEAE–SEDGE FAMILY					
<i>Cyperus eragrostis</i>	lovegrass flatsedge		FACW		
JUNCACEAE–RUSH FAMILY					
<i>Juncus rugulosus</i>	wrinkled rush		OBL		
<i>Juncus textilis</i>	basket rush		FACW		
<i>Juncus xiphioides</i>	iris-leaved rush		OBL		
POACEAE–GRASS FAMILY					
<i>Elymus condensatus</i>	giant wild-rye		FACU		
<i>Eragrostis mexicana</i> ssp. <i>virescens</i>	Chilean love grass		FACU		
<i>Festuca microstachys</i>	small fescue				
<i>Leptochloa fusca</i>	sprangletop				
<i>Melica imperfecta</i>	little California melica				
<i>Stipa coronata</i>	crested needle grass				
<i>Stipa lepida</i>	foothill needle grass				
TYPHACEAE–CATTAIL FAMILY					
<i>Typha domingensis</i>	southern cattail		OBL		
<p>USFWS: U.S. Fish and Wildlife Service; CDFW: California Department of Fish and Wildlife; CRPR: California Rare Plant Rank; Cal-IPC: California Invasive Plant Council</p> <p>LEGEND:</p> <p>* = Non-native species cf. = appears similar to, species cannot be confirmed 100% due to phenological condition</p> <p>Special Status:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <p>Federal (USFWS): FE = Endangered FT = Threatened</p> </td> <td style="width: 50%; vertical-align: top;"> <p>State (CDFW): SE = Endangered ST = Threatened SR = Rare</p> </td> </tr> </table> <p>CRPR – California Rare Plant Rank</p> <p>1A. Presumed extirpated in California and either rare or extinct elsewhere 1B. Rare, Threatened, or Endangered in California and elsewhere 2A. Presumed extirpated in California, but more common elsewhere 2B. Rare, Threatened, or Endangered in California, but more common elsewhere 3. Plants about which we need more information - a review list 4. Plants of limited distribution - a watch list</p> <p>Threat Code Extensions</p> <p>None Plants lacking any threat information .1 Seriously threatened in California (over 80% of occurrences threatened/high degree and immediacy of threat) .2 Moderately threatened in California (20–80% of occurrences threatened/moderate degree and immediacy of threat) .3 Not very threatened in California (<20% of occurrences threatened/low degree and immediacy of threat or no current threats known)</p> <p>Special status designations updated on 12/21/2014</p>				<p>Federal (USFWS): FE = Endangered FT = Threatened</p>	<p>State (CDFW): SE = Endangered ST = Threatened SR = Rare</p>
<p>Federal (USFWS): FE = Endangered FT = Threatened</p>	<p>State (CDFW): SE = Endangered ST = Threatened SR = Rare</p>				

ATTACHMENT D
VERTEBRATE WILDLIFE COMPENDIA
(SEPTEMBER 2013 – MARCH 2018)

**ATTACHMENT D-1
NATIVE VERTEBRATE WILDLIFE COMPENDIUM (SEPTEMBER 2013 – MARCH 2018)**

Species (Vertebrates): 100 Total Native Species (Cumulative)		Special Status	2013	2014	2015	2016	2017	2018	Cumulative
AMPHIBIANS									
AMPHIBIA–AMPHIBIANS									
HYLIDAE–TREEFROGS									
<i>Pseudacris hypochondriaca</i>	Baja California treefrog				X	X	X	X	X
Subtotal: Native Amphibian Species			0	0	1	1	1	1	1
LEPIDOSAURIA–LIZARDS AND SNAKES									
PHRYNOSOMATIDAE–SPINY LIZARDS									
<i>Sceloporus occidentalis</i>	western fence lizard		X	X	X	X	X	X	X
<i>Uta stansburiana</i>	common side-blotched lizard		X	X	X	X	X	X	X
TEIIDAE–WHIPTAIL LIZARDS									
<i>Aspidoscelis tigris stejnegeri</i>	San Diegan tiger whiptail	SSC	X	X	X	X	X		X
COLUBRIDAE–COLUBRID SNAKES									
<i>Coluber lateralis lateralis</i>	California striped racer			X	X	X			X
<i>Coluber flagellum piceus</i>	red racer					X			X
<i>Pituophis catenifer</i>	gophersnake					X			X
VIPERIDAE–VIPERS AND PITVIPERS									
<i>Crotalus oreganus helleri</i>	southern Pacific rattlesnake				X	X			X
Subtotal: Native Reptile Species			3	4	5	7	3	2	7
BIRDS									
AVES–BIRDS									
ANATIDAE–SWAN, GOOSE, AND DUCK FAMILY									
<i>Branta canadensis</i>	Canada goose				X		X		X
ODONTOPHORIDAE–NEW WORLD QUAIL FAMILY									
<i>Callipepla californica</i>	California quail			X	X	X	X		X
COLUMBIDAE–PIGEONS AND DOVES									
<i>Patagioenas fasciata</i>	band-tailed pigeon				X	X	X	X	X
<i>Zenaidura macroura</i>	mourning dove		X	X	X	X	X	X	X
APODIDAE–SWIFTS									
<i>Aeronautes saxatalis</i>	white-throated swift			X	X	X	X	X	X

NATIVE VERTEBRATE WILDLIFE COMPENDIUM (SEPTEMBER 2013 – MARCH 2018)

Species (Vertebrates): 100 Total Native Species (Cumulative)		Special Status	2013	2014	2015	2016	2017	2018	Cumulative
TROCHILIDAE–HUMMINGBIRDS									
<i>Archilochus alexandri</i>	black-chinned hummingbird				X		X		X
<i>Calypte anna</i>	Anna's hummingbird		X	X	X	X	X	X	X
<i>Calypte costae</i>	Costa's hummingbird				X		X		X
<i>Selasphorus rufus</i>	rufous hummingbird				X	X			X
<i>Selasphorus sasin</i>	Allen's hummingbird		X	X	X	X	X	X	X
<i>Selasphorus sp.</i>	Allen's/rufous hummingbird			X	X	X	X	X	X
CHARADRIIDAE–PLOVERS									
<i>Charadrius vociferus</i>	killdeer		X	X ^a	X	X		X	X
ARDEIDAE–HERONS									
<i>Ardea herodias</i>	great blue heron				X		X		X
CATHARTIDAE–NEW WORLD VULTURES									
<i>Cathartes aura</i>	turkey vulture			X	X	X	X		X
ACCIPITRIDAE–HAWKS, KITES, EAGLES, AND ALLIES									
<i>Accipiter cooperii</i>	Cooper's hawk		X	X	X	X	X		X
<i>Buteo jamaicensis</i>	red-tailed hawk		X	X	X	X	X	X	X
PICIDAE–WOODPECKERS									
<i>Melanerpes lewis</i>	Lewis's woodpecker		X	X					X
<i>Melanerpes formicivorus</i>	acorn woodpecker			X ^a	X				
<i>Picoides nuttallii</i>	Nuttall's woodpecker				X	X			X
<i>Picoides pubescens</i>	downy woodpecker				X				X
<i>Colaptes auratus</i>	northern flicker			X	X	X	X	X	X
FALCONIDAE–FALCONS									
<i>Falco sparverius</i>	American kestrel			X	X	X	X	X	X
<i>Falco columbarius</i>	merlin			X				X	X
TYRANNIDAE–TYRANT FLYCATCHERS									
<i>Contopus sordidulus</i>	western wood-pewee				X				X
<i>Empidonax traillii</i>	willow flycatcher				X				X
<i>Empidonax difficilis</i>	Pacific-slope flycatcher				X		X		X
<i>Sayornis nigricans</i>	black phoebe		X	X	X	X	X	X	X
<i>Sayornis saya</i>	Say's phoebe			X	X		X		X
<i>Myiarchus cinerascens</i>	ash-throated flycatcher			X	X	X	X		X

NATIVE VERTEBRATE WILDLIFE COMPENDIUM (SEPTEMBER 2013 – MARCH 2018)

Species (Vertebrates): 100 Total Native Species (Cumulative)		Special Status	2013	2014	2015	2016	2017	2018	Cumulative
<i>Tyrannus vociferans</i>	Cassin's kingbird			X	X	X	X		X
<i>Tyrannus verticalis</i>	western kingbird			X	X				X
VIREONIDAE–VIREOS									
<i>Vireo gilvus</i>	warbling vireo				X				X
CORVIDAE–JAYS AND CROWS									
<i>Aphelocoma californica</i>	California scrub-jay		X	X	X	X	X	X	X
<i>Corvus brachyrhynchos</i>	American crow				X		X		X
<i>Corvus corax</i>	common raven		X	X	X	X	X	X	X
HIRUNDINIDAE–SWALLOWS									
<i>Tachycineta bicolor</i>	tree swallow						X		X
<i>Stelgidopteryx serripennis</i>	northern rough-winged swallow			X	X	X	X		X
<i>Hirundo rustica</i>	barn swallow				X	X			X
AEGITHALIDAE–BUSHTITS									
<i>Psaltriparus minimus</i>	bushtit		X	X	X	X ^a	X ^a	X	X
TROGLODYTIDAE–WRENS									
<i>Salpinctes obsoletus</i>	rock wren			X	X	X	X	X	X
<i>Catherpes mexicanus</i>	canyon wren			X					X
<i>Troglodytes aedon</i>	house wren		X	X	X	X	X ^a	X ^a	X
<i>Thryomanes bewickii</i>	Bewick's wren		X	X	X	X	X ^a	X ^a	X
POLIOPTILIDAE–GNATCATCHERS AND GNATWRENS									
<i>Polioptila caerulea</i>	blue-gray gnatcatcher			X			X	X	X
REGULIDAE–KINGLETS									
<i>Regulus calendula</i>	ruby-crowned kinglet			X	X		X		X
SYLVIIDAE–SYLVIID WARBLERS									
<i>Chamaea fasciata</i>	wrentit			X	X	X	X	X	X
TURDIDAE–THRUSHES AND ROBINS									
<i>Sialia mexicana</i>	western bluebird			X	X	X	X	X	X
<i>Catharus guttatus</i>	hermit thrush				X	X	X		X
<i>Turdus migratorius</i>	American robin			X	X	X	X	X	X
MIMIDAE–THRASHERS									
<i>Toxostoma redivivum</i>	California thrasher					X	X	X	X
<i>Mimus polyglottos</i>	northern mockingbird		X	X	X	X	X ^a	X ^a	X

NATIVE VERTEBRATE WILDLIFE COMPENDIUM (SEPTEMBER 2013 – MARCH 2018)

Species (Vertebrates): 100 Total Native Species (Cumulative)		Special Status	2013	2014	2015	2016	2017	2018	Cumulative
BOMBYCILLIDAE–WAXWINGS									
<i>Bombycilla cedrorum</i>	cedar waxwing				X	X	X	X	X
MOTACILLIDAE–PIPITS									
<i>Anthus rubescens</i>	American pipit		X						X
PTILOGONATIDAE–SILKY-FLYCATCHERS									
<i>Phainopepla nitens</i>	phainopepla			X		X	X		X
FRINGILLIDAE–FINCHES									
<i>Haemorhous mexicanus</i>	house finch		X	X	X	X	X	X	X
<i>Spinus pinus</i>	pine siskin				X				X
<i>Spinus psaltria</i>	lesser goldfinch		X	X	X	X	X	X	X
<i>Spinus lawrencei</i>	Lawrence’s goldfinch				X				X
<i>Spinus tristis</i>	American goldfinch			X	X		X		X
PASSERELLIDAE–NEW WORLD SPARROWS									
<i>Aimophila ruficeps</i>	rufous-crowned sparrow			X		X	X	X	X
<i>Pipilo maculatus</i>	spotted towhee		X	X	X	X	X	X	X
<i>Melospiza crissalis</i>	California towhee		X	X	X	X ^a	X ^a	X ^a	X
<i>Chondestes grammacus</i>	lark sparrow				X	X			X
<i>Melospiza melodia</i>	song sparrow		X	X	X	X	X	X	X
<i>Melospiza lincolni</i>	Lincoln’s sparrow			X		X	X		X
<i>Zonotrichia leucophrys</i>	white-crowned sparrow		X	X	X	X	X	X	X
<i>Zonotrichia atricapilla</i>	golden-crowned sparrow					X	X		X
<i>Junco hyemalis</i>	dark-eyed junco				X	X	X	X	X
ICTERIDAE–BLACKBIRDS									
<i>Sturnella neglecta</i>	western meadowlark			X					X
<i>Molothrus ater</i>	brown-headed cowbird				X		X		X
<i>Icterus cucullatus</i>	hooded oriole			X	X	X	X	X	X
<i>Icterus bullockii</i>	Bullock’s oriole			X	X	X	X		X
PARULIDAE–WOOD-WARBLERS									
<i>Oreothlypis celata</i>	orange-crowned warbler				X	X	X	X	X
<i>Oreothlypis ruficapilla</i>	Nashville warbler					X			X
<i>Geothlypis tolmiei</i>	MacGillivray’s warbler				X				X
<i>Geothlypis trichas</i>	common yellowthroat		X	X ^a			X	X	X

NATIVE VERTEBRATE WILDLIFE COMPENDIUM (SEPTEMBER 2013 – MARCH 2018)

Species (Vertebrates): 100 Total Native Species (Cumulative)		Special Status	2013	2014	2015	2016	2017	2018	Cumulative
<i>Setophaga petechia</i>	yellow warbler				X				X
<i>Setophaga coronata</i>	yellow-rumped warbler		X	X	X	X	X	X	X
<i>Setophaga occidentalis</i>	hermit warbler				X				X
<i>Cardellina pusilla</i>	Wilson's warbler				X	X	X	X	X
CARDINALIDAE–CARDINALS, GROSBEAKS, AND ALLIES									
<i>Piranga ludoviciana</i>	western tanager				X				X
<i>Pheucticus melanocephalus</i>	black-headed grosbeak			X			X		X
<i>Passerina caerulea</i>	blue grosbeak				X				X
<i>Passerina amoena</i>	lazuli bunting				X		X		X
Subtotal: Native Bird Species			23	49	68	51	60	40	83
MAMMALS									
MAMMALIA–MAMMALS									
DIDELPHIDAE–AMERICAN OPOSSUM FAMILY									
<i>Didelphia virginiana</i>	Virginia opossum						X		X
SCIURIDAE–SQUIRRELS									
<i>Otospermophilus beecheyi</i>	California ground squirrel			X	X	X	X	X	X
<i>Tamias merriami</i>	Merriam's chipmunk						X		X
FELIDAE–CAT FAMILY									
<i>Lynx rufus</i>	bobcat						X		X
CANIDAE–DOGS, WOLVES, FOXES									
<i>Canis latrans</i>	coyote				X	X	X		X
<i>Urocyon cinereoargenteus</i>	common gray fox					X	X		X
MEPHITIDAE–SKUNKS									
<i>Mephitis mephitis</i>	striped skunk					X	X		X
PROCYONIDAE–PROCYONIDS									
<i>Procyon lotor</i>	northern raccoon						X		X
CERVIDAE–DEER									
<i>Odocoileus hemionus</i>	southern mule deer		X	X	X	X	X		X
Subtotal: Native Mammal Species			1	2	3	5	9	1	9
Total: Native Vertebrate Species			27	55	77	64	73	44	100
^a Bird species observed nesting on the site; SSC = California Species of Special Concern									

**ATTACHMENT D-2
NON-NATIVE VERTEBRATE WILDLIFE COMPENDIUM (SEPTEMBER 2013 TO MARCH 2018)**

Species (Vertebrates)		2013	2014	2015	2016	2017	2018	Cumulative
AVES–BIRDS								
COLUMBIDAE–PIGEONS AND DOVES								
<i>Streptopelia decaocto</i>	Eurasian collared-dove			X				X
PSITTACIDAE–PARROTS								
<i>Amazona viridigenalis</i>	red-crowned parrot			X	X	X	X	X
PYCNONOTIDAE–BULBULS								
<i>Pycnonotus jocosus</i>	red-whiskered bulbul					X		X
STURNIDAE–STARLINGS								
<i>Sturnus vulgaris</i>	European starling			X		X	X	X
PASSERIDAE–OLD WORLD SPARROWS								
<i>Passer domesticus</i>	house sparrow			X				X
ESTRILDIDAE–WAXBILLS AND MANNIKINS								
<i>Lonchura punctulata</i>	nutmeg mannikin	X	X		X			X
MAMMALS								
MAMMALIA–MAMMALS								
URSIDAE–BEARS								
<i>Ursus americanus</i> *	black bear		X		X		X	X
* Although native to the State of California, black bear (<i>Ursus americanus</i>) was introduced to the San Gabriel Mountains (SGM) by the California Department of Fish and Wildlife in 1933 following the local (SGM) extirpation of the now-extinct California subspecies of the grizzly bear (<i>Ursos arctos californicus</i>) in 1894.								