

3.2 BIOLOGICAL RESOURCES

3.2 Biological Resources

This section describes the existing biological resource conditions in the project area. This section also addresses the potential environmental impacts to biological resources from implementation of the conceptual water transaction program and demonstrates the effectiveness of the proposed project (i.e., the proposed General Plan policies and amendments) in reducing or mitigating environmental impacts of a conceptual water transaction program. Biological resources considered in the environmental analysis include special-status species,¹ sensitive natural communities,² riparian habitat, federal and state wetlands, and wildlife corridors.

3.2.1 Scoping Comments

CDFW and WBC provided comments on biological resources during the EIR scoping process. These comments and the location where each comment is addressed in this section are provided in Table 3.2-1, below.

Table 3.2-1 Biological Resources Scoping Comments

Agency	Comment	Location in Biological Resources Section
CDFW	Identify flora and fauna within and adjacent to the project sites	Appendix C describes the surveys that were conducted for the project and the results of those surveys. Because of limitations in access to survey private land, vegetation communities and associated wildlife were defined in Section 3.2.2.
CDFW	Identify all rare, threatened, and endangered species and their habitats	Rare, threatened, and endangered species and their habitat requirements are listed in Appendix C, Table C-8. Additional information is provided in Section: Special-Status Species, p. 3.2-23, for those species that have suitable habitat in the project area.
CDFW	Address cumulative impacts	Cumulative impacts are addressed in Section 5.0.

¹ Special-status species are defined as those species listed, proposed, or under review as endangered or threatened under the federal Endangered Species Act (ESA) or CESA. Additional listings for plants include those listed as rare under the California Native Plant Protection Act and/or included on CDFW's most recent Special Vascular Plants, Bryophytes, and Lichens List with a California Rare Plant Rank (CRPR) of 1, 2, 3, or 4 (CDFW, 2018a). Additional listings for wildlife include those designated as a Species of Special Concern by CDFW; designated as Fully Protected under the California Fish and Game Code (Sections 3511, 4700, 5050, and 5515); and/or protected under the federal Bald and Golden Eagle Protection Act.

² Sensitive natural communities are defined as those natural community types with a state ranking of S1 (critically imperiled), S2 (imperiled), or S3 (vulnerable).

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Agency	Comment	Location in Biological Resources Section
CDFW	Consult the appropriate databases	The biological resources databases that were consulted in preparation of this biological resource analysis are listed in Section 3.2.2.
WBC	When the Conservancy acquires water rights, the Conservancy revegetates where needed with active restoration for a period of at least two years in order to ensure that there are no fugitive dust issues. Primary restoration goals for stewardship activities address three main issues: fugitive dust abatement, soil stabilization, and noxious weed control. Improved habitat is addressed where appropriate and possible. Establishing arid-land vegetation that can ultimately survive without supplemental irrigation is the long-term goal for the Land Stewardship Program.	Addressed in Impact Biology-1

3.2.2 Existing Environment

The following section contains information on the environmental setting for biological resources in the project area as well as the methods that were used to obtain data on the environmental setting.

Survey Methods and Sources of Information

Literature Reviews

The following information and spatial data sources were reviewed to define general biological resources in the project area:

- West Walker River Basin Watershed Assessment (MCCDD, 2007)
- Walker River Vegetation (Bay, 2009)
- Potential Environmental Impacts of a Water Transaction Program (Stillwater Sciences, 2014)
- Feasibility Assessment of a Water Transaction Program (Shannon Peterson Ciotti and Partners, 2014)
- USDA National Resources Conservation Service (NRCS) Plants Database (USDA-NRCS, 2019)
- Jepson Flora Project (Jepson eFlora, 2019)
- California Invasive Plant Council (Cal-IPC, 2019)
- USFWS National Wetlands Inventory (NWI)

The list of special-status species and sensitive natural communities known or with the potential to occur in the project area was developed by querying the following resources:

- USFWS’s Information for Planning and Consultation (IPaC) portal (USFWS, 2018; USFWS, 2019)

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- CDFW's California Natural Diversity Database (CNDDDB) (CDFW, 2018b)
- National Marine Fisheries Service (NMFS), West Coast Region, California Species List Tool (NMFS, 2018)
- California Native Plant Society (CNPS) online Inventory of Rare and Endangered Vascular Plants of California (CNPS, 2019)

The database queries for USFWS, CNDDDB, and CNPS were each based on a search of the USGS 7.5-minute quadrangles covering the project area and the adjacent quadrangles (Appendix C). The database query results are provided in Appendix C.

The USFWS online database of USFWS and NMFS critical habitat designations (USFWS, 2018) was used to determine if critical habitat for any federally listed species occurs in the project area. No critical habitat has been designated in the project area for any federally listed species.

Surveys and Vegetation Mapping

Details on biological survey and vegetation mapping methods are provided in Appendix C. A vegetation ecologist and wildlife ecologist conducted a reconnaissance survey of the project area in August 2018 to document vegetation community composition, general vegetation conditions, and wildlife species in publicly accessible areas and in the few privately owned areas of the project area where the team had explicit access permission from landowners. During this field visit, dominant plant species were recorded at 61 points in meadow areas of Bridgeport (36 points) and Antelope (25 points) Valleys. The data collected in August 2018 supplements the data previously collected at 86 points by Stillwater Sciences in August 2013.

Because vegetation at many of the meadow points did not conform to existing alliances, canonical correlation analysis of both physical conditions and plant species composition at the 33 plots visited in 2013 was used to identify and assign coarser cover types to herbaceous plant communities in the project area (Stillwater Sciences, 2014). Observations at the 2018 data collection points were used to refine vegetation type definitions and species composition descriptions that were developed in 2013.

Existing Soils and Topography

Soil types within the project area consist primarily of granitic- and volcanic-derived alluvium. Soil textures range from clay to sand, and fine loam is the most common texture in the project area. The second most common texture in the project area is sand, although some of the loams have high coarse content. Mindlebaugh loam is the predominant soil type within Antelope Valley and is composed of stratified silty clay loam to fine sandy loam (Figure 3.2-1) (USDA, 2017). The Mindlebaugh soil series consists of very deep, somewhat poorly drained soils formed in alluvium (USDA, 2017). Greenbrae gravelly sandy loam and Holbrok very gravelly loamy sand are the other main soil types within Antelope Valley. The Mostval complex is the predominant soil type in Bridgeport Valley, followed closely by the Murain association (Figure 3.2-2). The Mostval soil series is similar to the Mindlebaugh soil series, and consists of very deep, somewhat poorly drained soils formed in alluvium. Commonly found along terraces and within floodplains throughout Eastern California, the Mostval soil series has a soil texture that

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ranges from stratified extremely cobbly coarse sand to fine sandy loam (UC Davis, 2017). Areas of clay soil occur near the reservoirs (Figure 3.2-1 and Figure 3.2-2). Bridgeport Valley soils are predominantly poorly to somewhat poorly drained, whereas Antelope Valley soils are most often considered “well drained” (NRCS Soil Survey Staff, 2014). Surface slopes generally increase along the valley edges, with more sloped areas along the southern valley borders (Figure 3.2-3 and Figure 3.2-4). Based upon United States Department of Agriculture (USDA) Soil Survey Geographic Database (SSURGO) queries (NRCS Soil Survey Staff, 2014) and digital elevation model (DEM) analysis (USGS, 2014), the extent and distribution of different soil textures and surface slope areas in Antelope and Bridgeport Valleys are summarized in Table 3.2-2 Soil Texture and Surface Slope Classes in Bridgeport Valley

Table 3.2-2 Soil Texture and Surface Slope Classes in Bridgeport Valley

Characteristic	Information Source	Categories	Total Acreage	Percent of Total
Soil texture class	SSURGO dominant soil texture class	Sands	6,428	32
		Loams and silt loams	11,648	58
		Clay and fine silt	50	<1
		Unknown	1,927	10
		Total	20,053	100
Surface slope	30-m ² DEM	0–3%	18,255	91
		3–5%	1,799	9
		Total	20,053	100

Sources: (NRCS Soil Survey Staff, 2014; USGS, 2014)

Vegetation Types

Vegetation and crop cover types that occur in the project area are summarized in Table 3.2-3. Areas of bare ground consist of bare mineral soil, much of which is located adjacent to the sagebrush–rabbitbrush scrub matrix as well as along the reservoir shorelines. Areas of water-moist ground are characterized by wet surface soils or standing water.

Approximately a quarter of the Antelope Valley area is covered by moist meadow vegetation communities and cover types. A large portion of Antelope Valley was mapped as sagebrush–rabbitbrush scrub and bare ground, which commonly form a habitat mosaic. Dry grass vegetation communities also mix at fine spatial scales with the scrub and bare ground cover types. Moist meadow and wet sedge vegetation communities together comprise around a third of the Antelope Valley area, and emergent marsh and riparian cover types (mixed riparian forest and willow–rose scrub) make up almost 9 percent of Antelope Valley’s mapped area (Table 3.2-3 and Figure 3.2-5).

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Approximately two-thirds of Bridgeport Valley is mapped as moist meadow and wet sedge. Sagebrush–rabbitbrush scrub, bare ground, and dry grass comprise just over a quarter of the Bridgeport Valley area. Riparian areas comprise just over one percent of the Bridgeport Valley mapped area (Table 3.2-3 and Figure 3.2-6). Vegetation types that occur in Antelope and/or Bridgeport Valleys are described in Table 3.2-4.

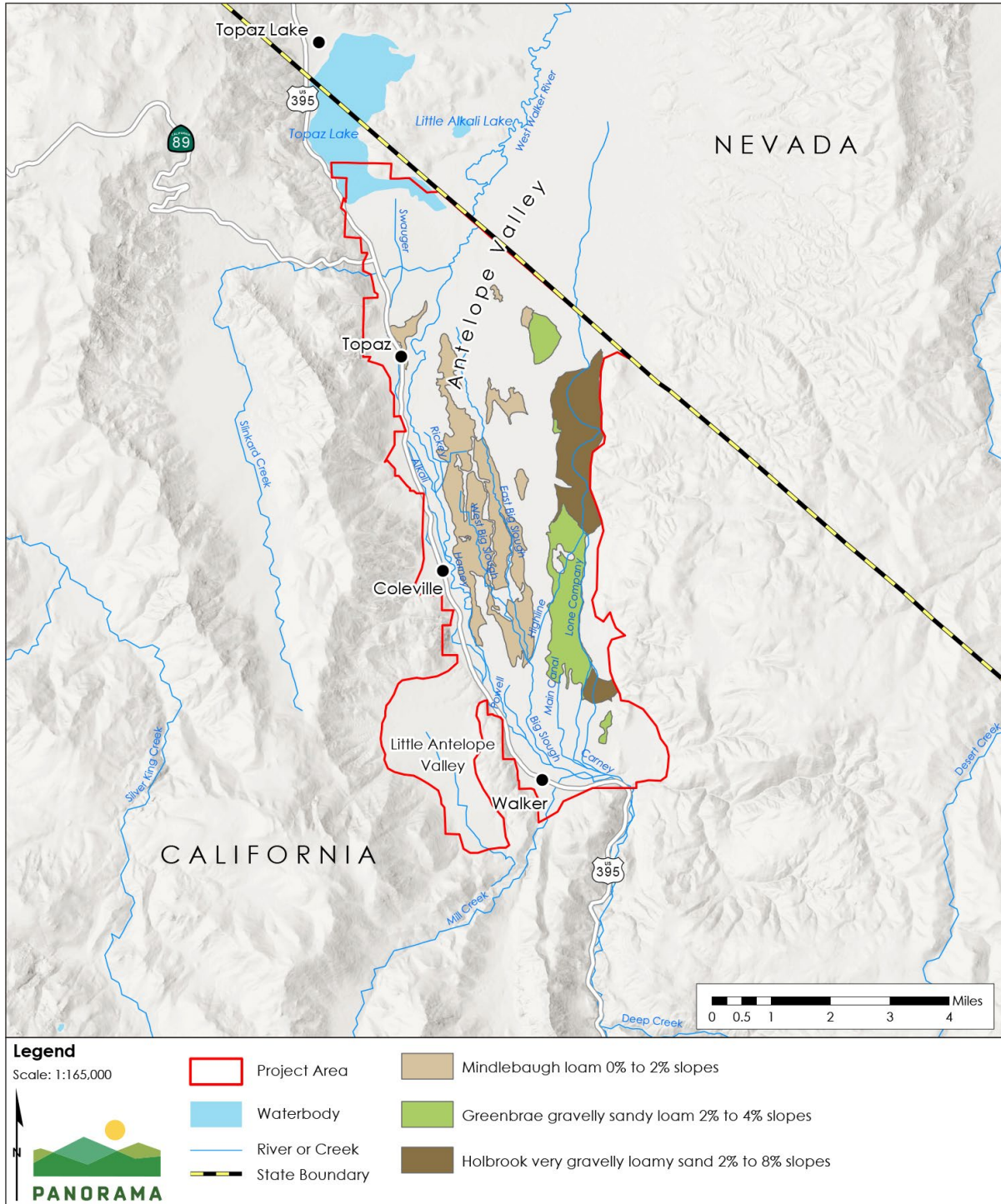
Table 3.2-3 Acreage and Percent of Each Cover Type Mapped in the Project Area

Vegetation Group	Antelope		Bridgeport	
	Total Area (Acres)	Percent of Study Area	Total Area (Acres)	Percent of Study Area
Irrigated Habitats				
Alfalfa–Row Crop	2,823	11.0%	0	0%
Wetland Habitats				
Emergent Marsh	1,007	3.9%	0	0%
Mixed Riparian Forest	79	0.3%	3	0.02%
Wet Sedge	2,379	9.2%	5,484	27.1%
Willow–Rose Scrub	657	2.6%	265	1.3%
Moist Meadow	5,702	22.1%	7,661	37.8%
Upland/Non-Irrigated Habitats				
Conifer Forest and Woodland	15	0.1%	139	0.7%
Dry Grass	2,879	11.2%	2,864	14.1%
Sagebrush–Rabbitbrush Scrub	1,574	6.1%	1,152	5.7%
Total Vegetative Cover	17,114	66.4%	17,568	87%
Additional Cover Types				
Bare Ground	7,464	29.0%	1,325	6.5%
Developed Areas	472	1.8%	164	0.8%
Roads	173	0.7%	77	0.4%
Water–Moist Ground	558	2.2%	1,130	5.6%
Total Cover	25,780	100%	20,265	100%

Sources: (US Geological Survey 2013, U.S. Geological Survey 2016, Tele Atlas North America, Inc. 2018, Stillwater 2016)

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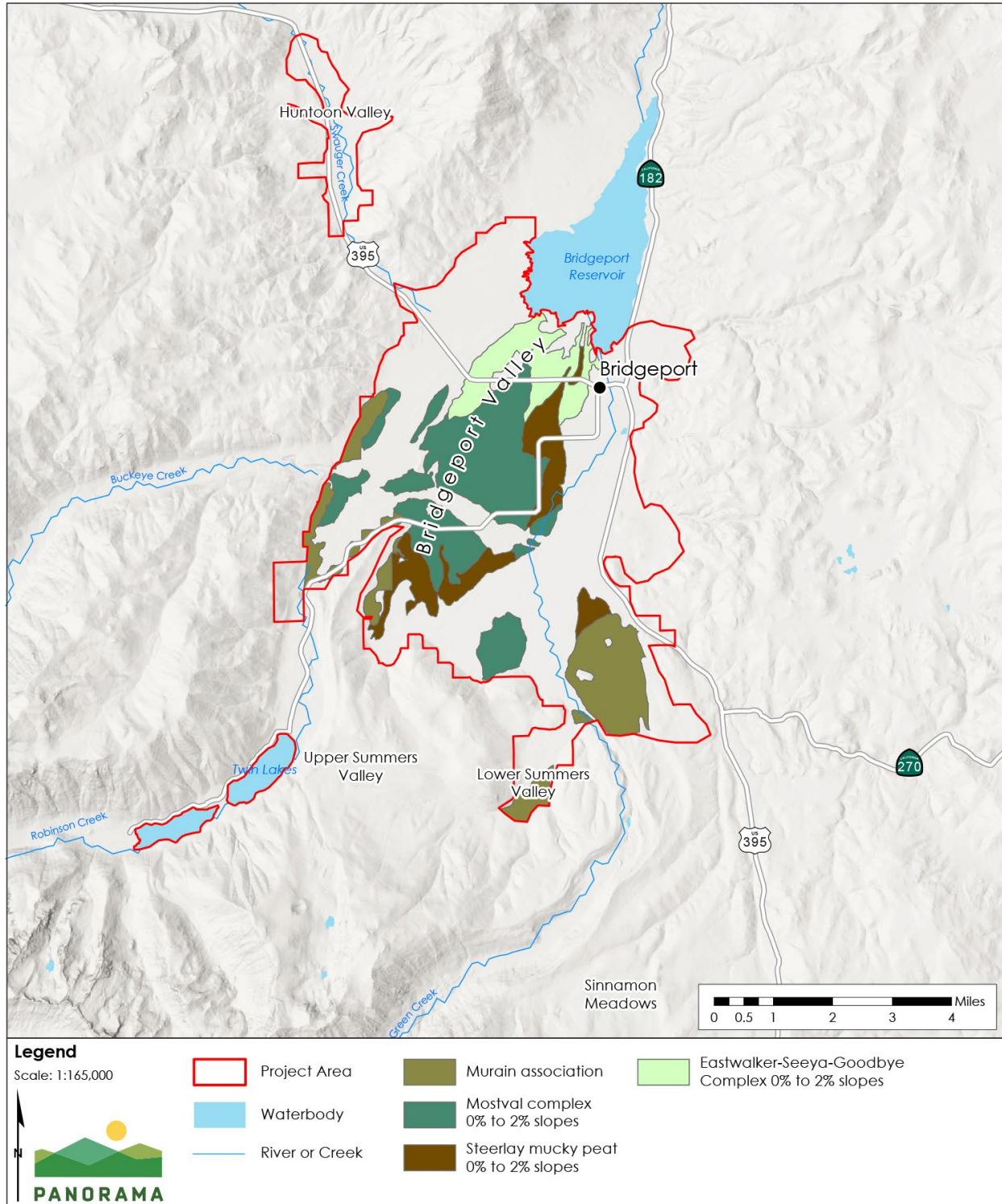
Figure 3.2-1 Surface Soil Types in Antelope Valley



Sources: (US Geological Survey 2013, U.S. Geological Survey 2016, Tele Atlas North America, Inc. 2018, US Department of Agriculture Natural Resources Conservation Service 2018)

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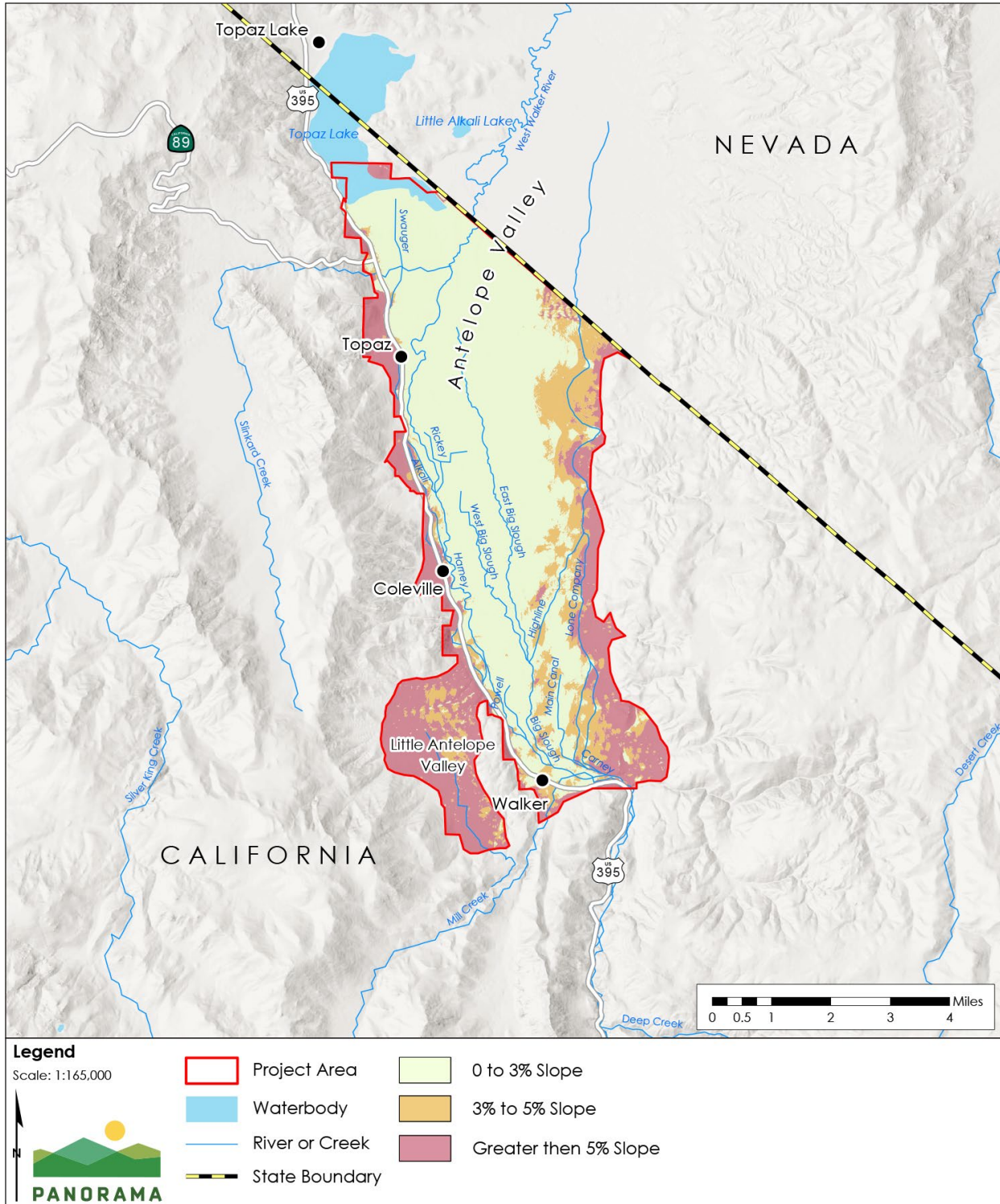
Figure 3.2-2 Surface Soil Types in Bridgeport Valley



Sources: (US Geological Survey 2013, U.S. Geological Survey 2016, Tele Atlas North America, Inc. 2018, US Department of Agriculture Natural Resources Conservation Service 2018)

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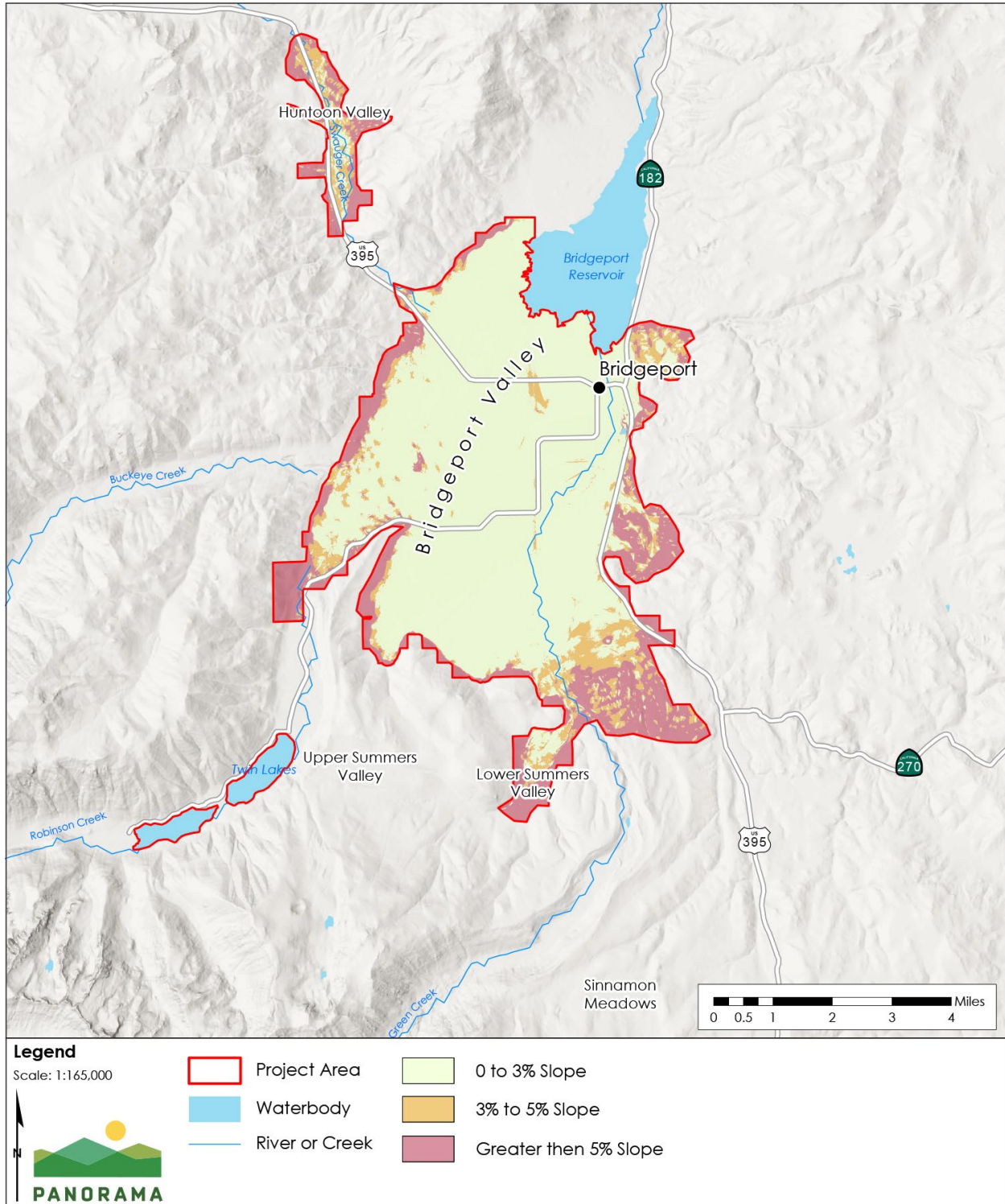
Figure 3.2-3 Surface Slopes in Antelope Valley



Sources: (US Geological Survey 2013, U.S. Geological Survey 2016, Tele Atlas North America, Inc. 2018)

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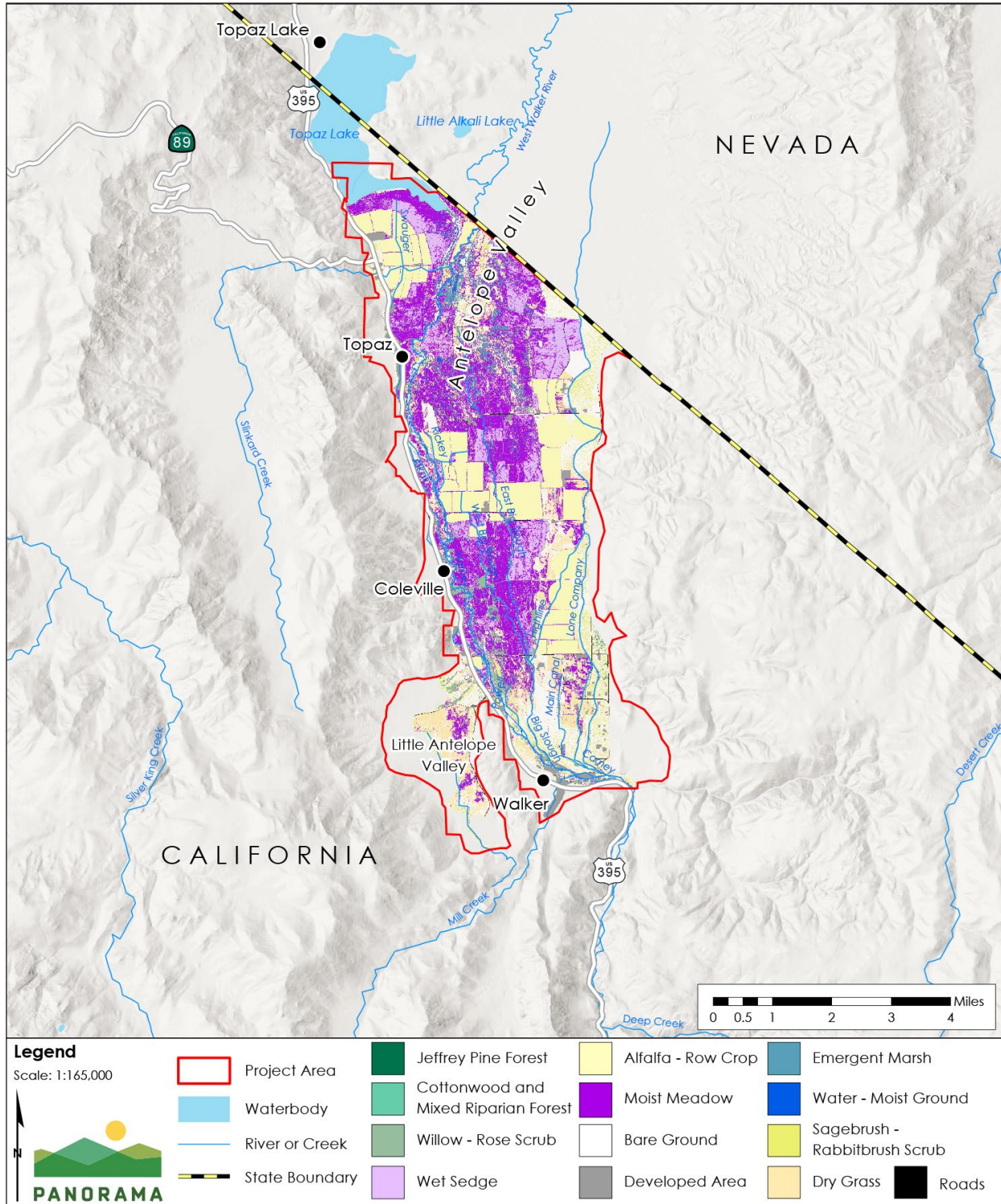
Figure 3.2-4 Surface Slopes in Bridgeport Valley



Sources: (US Geological Survey 2013, U.S. Geological Survey 2016, Tele Atlas North America, Inc. 2018)

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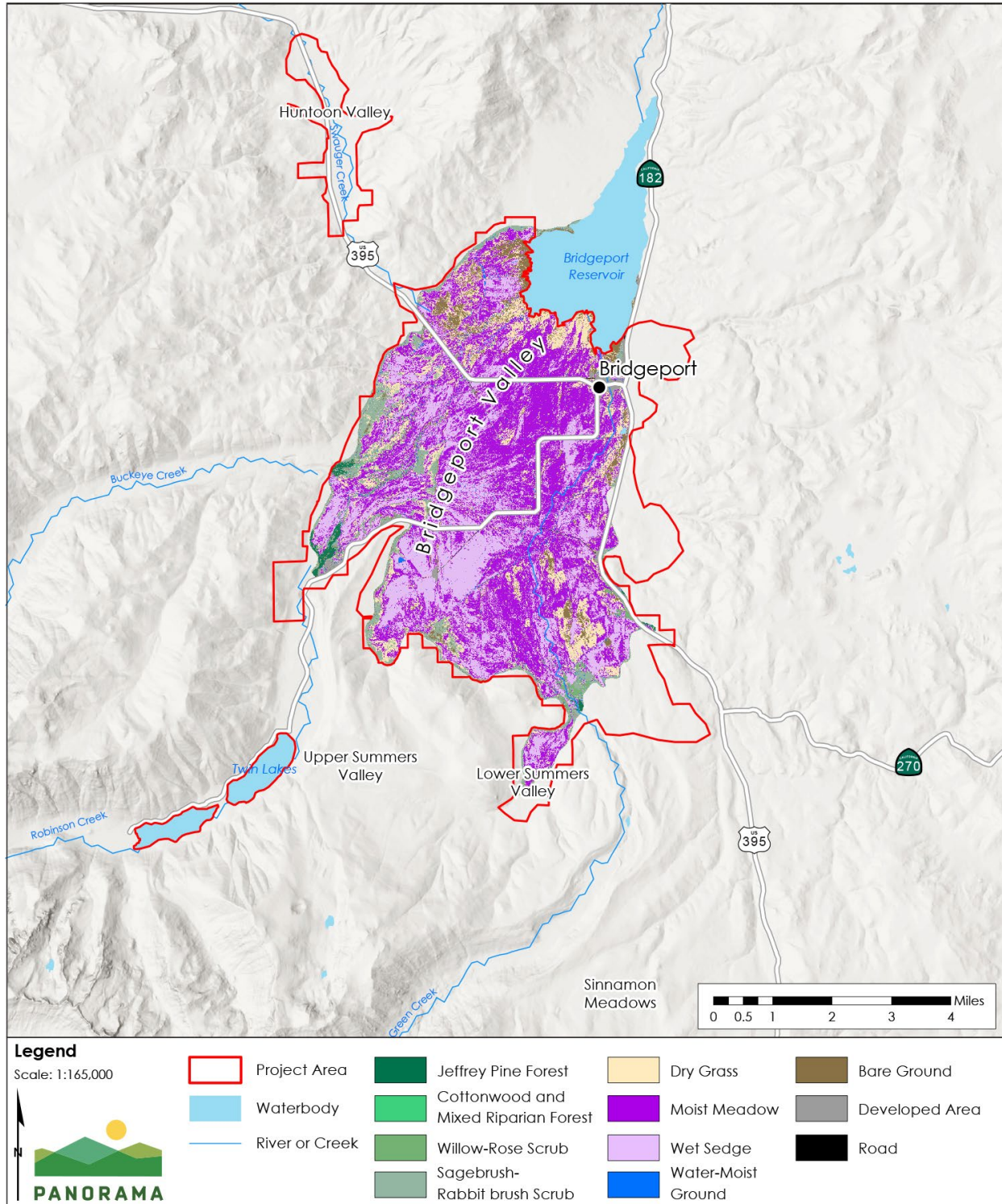
Figure 3.2-5 Antelope Valley Vegetation Communities and Cover Types



Sources: (US Geological Survey 2013, U.S. Geological Survey 2016, Tele Atlas North America, Inc. 2018, Stillwater 2016)

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Figure 3.2-6 Bridgeport Valley Vegetation Communities and Cover Types



Sources: (US Geological Survey 2013, U.S. Geological Survey 2016, Tele Atlas North America, Inc. 2018, Stillwater 2016)

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Table 3.2-4 Vegetation Community Descriptions

Vegetation Community/ Cover Type	Description
Agricultural	
Alfalfa-Row Crop	Areas where the soil is actively managed and crop rotations are employed. The most common crops grown in Antelope Valley include alfalfa, hay, and row crops.
Wetlands	
Emergent Marsh	Occurs in seasonally or semi-permanently flooded oxbows or backwaters of an active channel and are typically dominated by bulrush (<i>Schoenoplectus acutus</i>), cattail (<i>Typha spp.</i>), and Baltic rush (<i>balticus subsp. ater</i>). Depending on composition in specific areas, this vegetation may include hardstem and California bulrush marshes, cattail marshes, or Baltic and Mexican rush marshes. Hardstem and California bulrush marsh is a sensitive natural community.
Mixed Riparian Forest	Dominant species include a mix of willows (coyote willow, red willow, Pacific willow, and arroyo willow) and cottonwoods (Fremont cottonwood and black cottonwood). Fremont cottonwood is more common in the main valleys, and black cottonwood is more common in the upper reaches. Herbaceous species include spikerush (<i>Eleocharis sp.</i>), bentgrass (<i>Agrostis spp.</i>) including creeping bentgrass (<i>A. stolonifera</i>), sedges (<i>Carex spp.</i>) including Southern beaked sedge (<i>C. utriculata</i>), tules and bulrushes (<i>Schoenoplectus spp.</i>), and cattails (<i>Typha spp.</i>). The following riparian alliances within the project area are sensitive natural communities: red willow thickets, shining willow groves, Fremont cottonwood forest, and black cottonwood forest.
Wet Sedge	Characterized by wet surface soils or standing water, this vegetation type is dominated by sedges including Nebraska sedge (<i>Carex nebrascensis</i>), wooly sedge (<i>C. pellita</i>) and water sedge (<i>C. aquatalis</i>), and rushes including Baltic rush, Mexican rush (<i>Juncus mexicanus</i>), and Sierra rush (<i>Juncus nevadensis</i>). Associated species include bentgrass (<i>Agrostis spp.</i>) including creeping bentgrass (<i>A. stolonifera</i>), mustard (<i>Brassica sp.</i>), beardless wild rye (<i>Elymus tritichoides</i>), pennyroyal (<i>Mentha pulegium</i>), seep monkeyflower (<i>Erythranthe guttata</i>), pull-up muhly (<i>Muhlenbergia filiformis</i>), and Parry's aster (<i>Symphotrichum foliaceum var. parryi</i>). Water sedge and lakeshore sedge meadows and Sierra rush marshes are sensitive natural communities that have been documented in the project area.
Willow-Rose Scrub	Willow-Rose Scrub is characterized by patches of coyote willow (<i>Salix exigua</i>), often mixed with Woods' rose (<i>Rosa woodsii</i>), along irrigation canals or ditches and in low spots of meadows or pastures with water close to or at the surface. Pacific willow (<i>Salix lasiandra</i>) and arroyo willow (<i>S. lasiolepis</i>) may be interspersed. Herbaceous vegetation, mostly graminoids, frequently occur under the shrub canopy. Depending on which species is dominant, this vegetation can be described as sandbar willow thickets or interior rose thickets; interior rose thicket is a sensitive natural community.

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Vegetation Community/ Cover Type	Description
Moist Meadow	Occurs in areas where surface soils are moist or wet to the touch in late summer but do not have standing water and have very low percent cover of bare mineral soil. Dominant graminoids include bentgrass, beardless ryegrass (<i>Elymus triticoides</i>), squirreltail, common velvet grass (<i>Holcus lanatus</i>), pull-up muhly (<i>Muhlenbergia filiformis</i>), cultivated timothy (<i>Phleum pratense</i>), and rushes (<i>Juncus</i> spp.) including Baltic rush and Mexican rush. Dominant forbs include western blue flag (<i>Iris missouriensis</i>), prickly lettuce (<i>Lactuca serriola</i>), white sweetclover (<i>Melilotus albus</i>), knotweed (<i>Polygonum aviculare</i>), annual beardgrass (<i>Polypogon monspeliensis</i>), curly dock, and Scotch thistle (<i>Onopordum acanthium</i> subsp. <i>acanthium</i>). This vegetation may include Ashy ryegrass–creeping ryegrass turfs, which is a sensitive natural community.
Uplands	
Conifer Forest and Woodland	Occur primarily along the fringes of the project areas on well-drained and non-irrigated lands. Forested areas in Bridgeport Valley are dominated by Jeffrey pine (<i>Pinus jeffreyi</i>), with lodgepole pine (<i>Pinus contorta</i> subsp. <i>murrayana</i>) sometimes present. The understory includes sagebrush and other species associated with the sagebrush–rabbitbrush vegetation type. Areas adjacent to streams can also include cottonwood (<i>Populus</i> spp.). Dry upland slopes in Antelope Valley include pinyon pine (<i>Pinus monophylla</i>) and juniper (<i>Juniperus osteosperma</i>) woodlands intermixed with sagebrush.
Dry Grass	Characterized by surface soils that are dry to the touch in late summer and have modest to high (5 to 50 percent) percent cover of bare mineral soil. Typical plant species found in dry grass include bentgrass (<i>Agrostis</i> spp.), bromes (<i>Bromus</i> spp.) including cheat grass (<i>Bromus tectorum</i>), squirreltail (<i>Elymus elymoides</i>), chicory (<i>Cichorium intybus</i>), curlycup gumweed (<i>Grindelia squarrosa</i> var. <i>serrulata</i>), prickly lettuce (<i>Lactuca serriola</i>), curly dock (<i>Rumex crispus</i>), and prickly sow thistle (<i>Sonchus asper</i> subsp. <i>asper</i>). Approximately half of the Dry Grass plots also included over 10 percent cover of rabbit brush (<i>Ericameria nauseosa</i>) or, less often, sagebrush (<i>Artemisia tridentata</i> or <i>A. cana</i>). This vegetation type may include bent grass–tall fescue meadows, squirreltail patches, and cheatgrass–medusahead grassland. None of these dry grassland communities that have been documented in the project area are sensitive natural communities.
Sagebrush-rabbitbrush scrub	Shrub cover exceeds 50 percent, and the inter-shrub area is occupied by either bare ground or the dry grass vegetation type. Dominant vegetation includes big sagebrush (<i>Artemisia tridentata</i>) and white rabbitbrush (<i>Ericameria nauseosa</i> var. <i>hololeuca</i>); some areas also include significant cover of antelope bitterbrush (<i>Purshia tridentata</i>). Associates include cheat grass (<i>Bromus tectorum</i>), Jerusalem oak (<i>Dysphania botrys</i>), squirreltail (<i>Elymus elymoides</i>), curlycup gum (<i>Grindelia squarrosa</i> var. <i>serrulata</i>), white sweetclover (<i>Melilotus albus</i>), and Russian thistle (<i>Salsola tragus</i>). This vegetation type may include rubber rabbitbrush scrub or big sagebrush alliances; neither are sensitive natural communities.

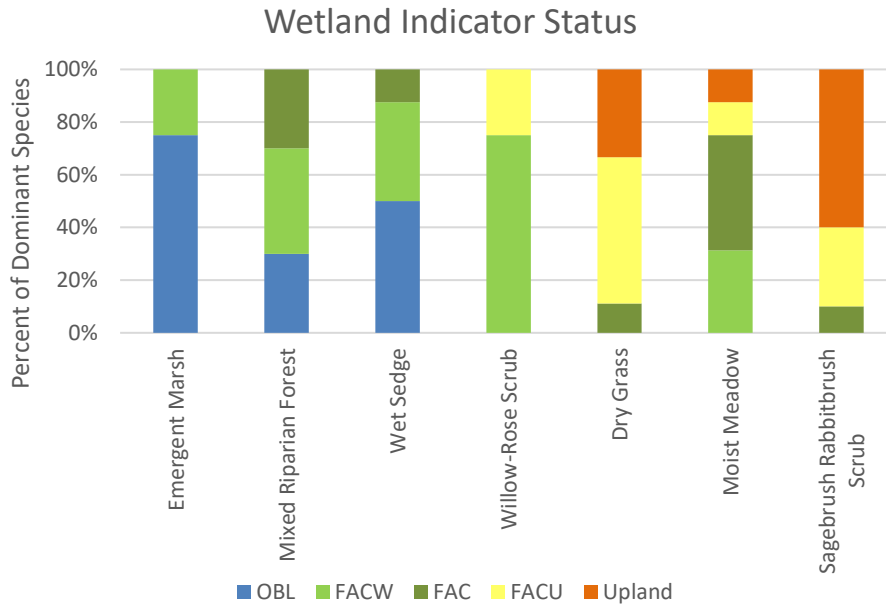
Source: (CNPS, 2019)

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Vegetation Sensitivity to Water Availability

Each vegetation type has dominant species with varying tolerances to drought conditions and a range of water demand levels. Results from the literature review on species' wetland indicator status³ (Lichvar, Banks, Kirchner, & Melvin., 2016), moisture use (USDA-NRCS, 2019), and drought tolerance (USDA-NRCS, 2019) are summarized in Figure 3.2-7, Figure 3.2-8, and Figure 3.2-9.

Figure 3.2-7 Wetland Indicator Status for Representative Species in Each Vegetation Type



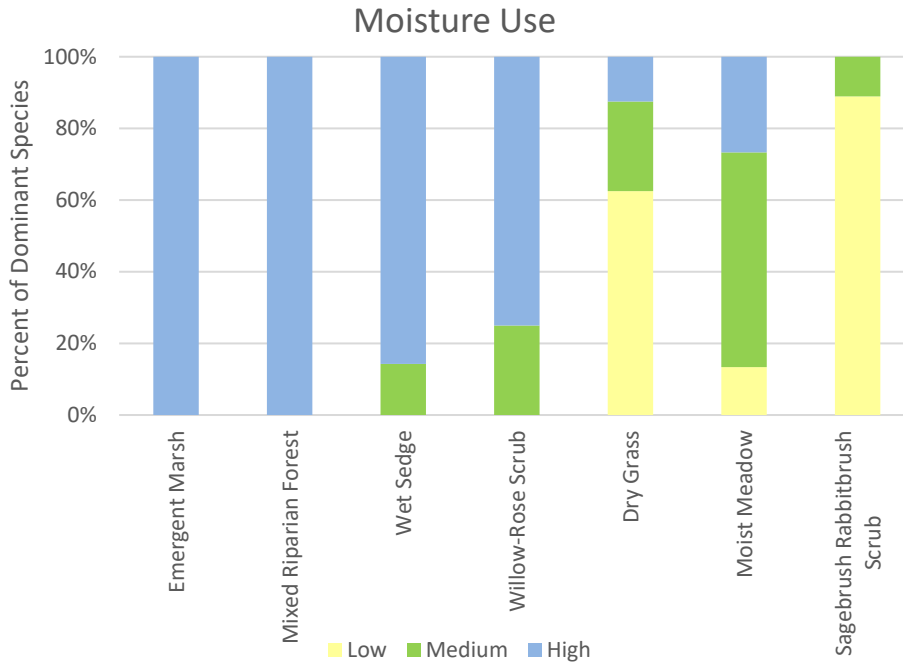
Sources: (Lichvar, Banks, Kirchner, & Melvin., 2016)

³ Indicator Status Definitions (Lichvar, Banks, Kirchner, & Melvin., 2016):

- OBL = Obligate, almost always occurs in wetlands (>99% probability of occurrence)
- FACW = Facultative wetland, usually occurs in wetlands (66%–99% probability)
- FAC = Facultative, equally likely to occur in wetlands or nonwetlands (34%–66% probability)
- FACU = Facultative upland, usually occurs in nonwetlands, but occasionally in wetlands (1%–33% probability)
- UPL = Obligate upland, almost never occurs in wetlands (<1% probability); these species are specified because they are rated FACU or wetter in at least one Corps Region.

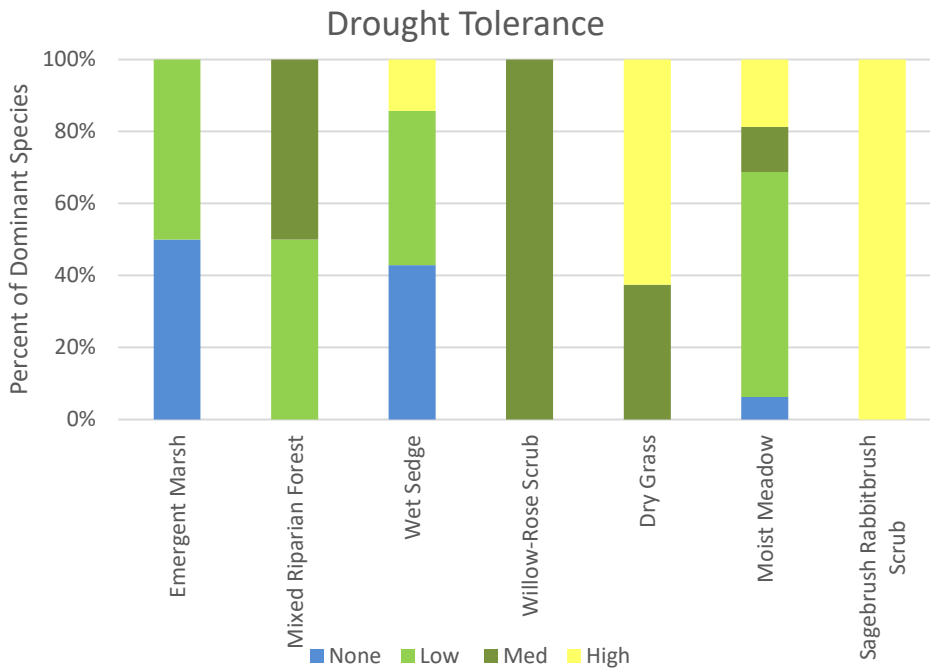
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Figure 3.2-8 Moisture Use for Representative Species



Source: (USDA-NRCS, 2019)

Figure 3.2-9 Drought Tolerance for Representative Species within Each Vegetation Type



Source: (USDA-NRCS, 2019)

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The expected vulnerability of each vegetation type to reduced water availability during the growing season was determined from the moisture use and sensitivity to drought (Figure 3.2-8 and Figure 3.2-9). Vulnerability rankings for the vegetation types correspond to their water dependency. The drought vulnerability ranking of each vegetation type is listed in Table 3.2-5. The area of each vegetation type and vulnerability to water availability in each HRU within the project area is provided in Table 3.2-6.

Table 3.2-5 Vulnerability to Reduced Water Availability Rankings by Vegetation Type

Vegetation Type	Vulnerability ^{a, b, c}
Emergent Marsh	1
Wet Sedge	1
Moist Meadow	2
Mixed Riparian Forest	2
Willow–Rose Scrub	2
Dry Grass	3
Sagebrush–Rabbitbrush Scrub	3

Notes:

- ^a 1 = high water dependence/vulnerability
- ^b 2 = moderate water dependence/vulnerability
- ^c 3 = low water dependence/vulnerability

Emergent Marsh and Wet Sedge

Emergent marsh and wet sedge vegetation types include species that primarily have a wetland indicator status⁴ of obligate or facultative wetland (Figure 3.2-7), have a high water demand (Figure 3.2-8), and no to low tolerance for drought (Figure 3.2-9). Emergent marsh and wet sedge vegetation types are dependent on water availability in order to exist, have little to no tolerance to drought, and respond quickly to drought conditions.

⁴ Indicator Status Definitions (Lichvar, Banks, Kirchner, & Melvin., 2016):

- OBL = Obligate, almost always occurs in wetlands (>99% probability of occurrence)
- FACW = Facultative wetland, usually occurs in wetlands (66%–99% probability)
- FAC = Facultative, equally likely to occur in wetlands or nonwetlands (34%–66% probability)
- FACU = Facultative upland, usually occurs in nonwetlands, but occasionally in wetlands (1%–33% probability)
- UPL = Obligate upland, almost never occurs in wetlands (<1% probability); these species are specified because they are rated FACU or wetter in at least one Corps Region.

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Table 3.2-6 Plant Communities/Cover Types in the Project Area by HRU and Vulnerability

Vulnerability	High			Medium		Low		Alfalfa– Row Crops	Total in HRU (All Cover Types)	Total Non- Agricultural Potentially Impacted
	Emergent Marsh	Wet Sedge	Moist Meadow	Mixed Riparian Forest	Willow–Rose Scrub	Dry Grass	Sagebrush– Rabbitbrush Scrub			
Antelope Valley										
Alkali HRU	3.7	5.3	74.3	1.7	0.6	83.1	-	-	206.4	85.5
Big Slough HRU	677.5	1,852.7	3,542.2	3.7	118.1	1,138.6	94.0	1,434.0	9,855.8	1,440a
Carney HRU	0.2	0.1	10.2	-	6.3	28.0	0.8	263.0	316.3	16.8
Hardy HRU	-	0.2	2.1	-	1.3	33.5	0.2	-	57.0	3.6
Highline HRU	-	0.1	0.8	-	-	0.7	-	256.2	258.8	0.9
Little Antelope Valley HRU	14.3	2.2	98.3	1.2	3.7	383.3	8.9	-	662.4	119.7
Lone Company HRU	3.7	3.0	68.2	-	9.3	130.2	5.9	-	272.7	84.2
Main Canal HRU	0.3	1.3	10.1	-	1.1	36.4	0.1	-	97.8	12.8
Powell HRU	15.6	2.0	51.1	1.8	46.4	24.2	17.9	-	181.1	117.5
Rickey and Private HRU	18.6	14.4	158.5	-	0.4	59.7	3.8	182.7	493.0	193.6
Swauger HRU	92.9	363.6	868.4	0.3	11.6	192.7	2.1	647.1	2,277.4	1,336.8
West Goodnough & Harney HRU	7.9	26.0	131.8	2.9	12.6	45.1	0.9	24.2	266.5	181.2
Total Antelope Valley	835	2,271	5,016	12	211	2,156	135	2,807	14,945	1,440^a

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Vulnerability	High			Medium		Low		Alfalfa– Row Crops	Total in HRU (All Cover Types)	Total Non- Agricultural Potentially Impacted
	Emergent Marsh	Wet Sedge	Moist Meadow	Mixed Riparian Forest	Willow–Rose Scrub	Dry Grass	Sagebrush– Rabbitbrush Scrub			
Total Bridgeport Valley (No HRUs)	-	5,484	7,661	265	3	2,864	1,152	-	20,265	1,842 ^a
Grand Totals	835	7,755	12,677	277	214	5,020	1,287	2,807	35,210	3,282

Notes:

^a The total acreage of the unit exceeds the amount that would be acquired by the conceptual program; therefore, the acreage listed is the maximum that could be acquired.

Pink shading indicates vegetation types that are likely to decrease in extent, and blue shading indicates vegetation types that are likely increases in extent with a long-term or permanent reduction in irrigation.

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Mixed Riparian Forest

Approximately 40 percent of the representative species in mixed riparian forest have a wetland indicator status of facultative wetland; the remaining species are evenly distributed between facultative and obligate indicator statuses (Figure 3.2-7). While all representative species within the mixed riparian forest vegetation type have a high demand for water (Figure 3.2-8), species' response to drought is split between low and medium tolerance to drought conditions (Figure 3.2-9). Mixed riparian forest areas are sensitive to water availability for growth, health, and regeneration but likely can recover from short-term drought.

Willow Rose-Scrub

Approximately 75 percent of the representative species in willow rose–scrub vegetation type have a wetland indicator status of facultative wetland (Figure 3.2-7) and a high demand for water (Figure 3.2-8), and all of the representative species are moderately drought tolerant (Figure 3.2-9). Similar to the mixed riparian forest vegetation type, these areas are sensitive to water availability for growth, health, and regeneration but likely can recover from short-term drought.

Moist Meadow

Most representative species within moist meadow vegetation type are classified as facultative or facultative wetland (Figure 3.2-7), use a medium to high amount of water (Figure 3.2-8), and exhibit a low drought tolerance (Figure 3.2-9). Moist meadow areas are somewhat less sensitive to water availability than mixed riparian forest and willow rose–scrub, but also less drought tolerant.

Sagebrush-Rabbitbrush Scrub and Dry Grass

Most representative species within sagebrush–rabbitbrush scrub and dry grass vegetation type have a wetland indicator status of upland or facultative upland (Figure 3.2-7), use little water (Figure 3.2-8), and have a high tolerance to drought conditions (Figure 3.2-9); therefore these areas are not expected to be as affected by reduced water availability.

Jurisdictional Waters

A formal wetland delineation of the project area has not been conducted. Potential wetlands include areas classified as emergent marsh, mixed riparian forest, wet sedge, willow–rose scrub, and portions of areas classified as moist meadow.

Target Invasive Plant Species

Target invasive plant species include those classified by Cal-IPC as high, moderate, limited, and watch species as well as species of concern to cattle ranchers due to palatability and/or toxicity issues. Several target invasive plant species occur within the project area (Table 3.2-7).

3.2 BIOLOGICAL RESOURCES

Table 3.2-7 Target Invasive Plant Species Observed within the Project Area and their Associated Habitats

Scientific Name	Common Name	Cal-IPC Status ^a	Arid West Indicator Status ^b	Potential Habitats								
				Alfalfa – Row Crop	Emergent Marsh	Mixed Riparian Forest	Wet Sedge	Willow–Rose Scrub	Conifer Forest and Woodland	Dry Grass	Moist Meadow	Sagebrush–Rabbitbrush Scrub
<i>Agrostis stolonifera</i>	creeping bentgrass	Limited	FACW	✓	✓	✓	✓	✓			✓	
<i>Bromus tectorum</i>	cheat grass	High	NL						✓	✓		✓
<i>Centaurea solstitialis</i>	yellow star-thistle	High	NL			✓		✓	✓	✓	✓	✓
<i>Centaurea diffusa</i>	diffuse knapweed	Moderate	NL					✓	✓	✓		✓
<i>Centaurea stoebe subsp. micranthos</i>	spotted knapweed	High	NL						✓	✓		✓
<i>Cirsium arvense</i>	Canada thistle	Moderate	FACU	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Cirsium vulgare</i>	bull thistle	Moderate	FACU	✓		✓		✓	✓	✓	✓	✓
<i>Elaeagnus angustifolia</i>	Russian olive	Moderate	FAC	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Holcus lanatus</i>	common velvet grass	Moderate	FAC	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Iris missouriensis</i>	western blue flag	None	FACW	✓	✓	✓	✓	✓			✓	
<i>Lactuca serriola</i>	prickly lettuce	None	FACU	✓		✓	✓	✓	✓	✓	✓	✓

3.2 BIOLOGICAL RESOURCES

Scientific Name	Common Name	Cal-IPC Status ^a	Arid West Indicator Status ^b	Potential Habitats								
				Alfalfa – Row Crop	Emergent Marsh	Mixed Riparian Forest	Wet Sedge	Willow–Rose Scrub	Conifer Forest and Woodland	Dry Grass	Moist Meadow	Sagebrush–Rabbitbrush Scrub
<i>Lepidium draba</i>	heart-podded hoary cress	Moderate	NL	✓				✓	✓		✓	✓
<i>Lepidium latifolium</i>	perennial pepperweed	High	FAC	✓					✓	✓	✓	✓
<i>Mentha pulegium</i>	pennyroyal	Moderate	OBL	✓	✓	✓	✓					
<i>Onopordum acanthium subsp. acanthium</i>	Scotch thistle	High	NL			✓				✓		✓
<i>Polypogon monspeliensis</i>	rabbitfoot grass	Limited	FACW	✓	✓	✓	✓				✓	
<i>Rumex crispus</i>	curly dock	Limited	FAC	✓	✓	✓	✓				✓	
<i>Salsola tragus</i>	Russian thistle	Limited	FACU			✓			✓	✓		
<i>Verbascum thapsus</i>	woolly mullein	Limited	FACU	✓		✓		✓	✓	✓	✓	✓

3.2 BIOLOGICAL RESOURCES

Scientific Name	Common Name	Cal-IPC Status ^a	Arid West Indicator Status ^b	Potential Habitats								
				Alfalfa –Row Crop	Emergent Marsh	Mixed Riparian Forest	Wet Sedge	Willow–Rose Scrub	Conifer Forest and Woodland	Dry Grass	Moist Meadow	Sagebrush–Rabbitbrush Scrub

Notes:

^a Status:

High: These species have severe ecological impacts, exhibit moderate to high rates of dispersal and establishment, and most are widely distributed ecologically.

Moderate: These species have substantial but moderate ecological impacts and exhibit moderate to high rates of dispersal, though establishment is generally dependent upon ecological disturbance, and their distribution ranges from limited to widespread.

Limited: These species are invasive, but their ecological impacts are minor. They exhibit low to moderate rates of invasiveness and their distribution is generally limited, though the species may be locally persistent and problematic.

^b NL: Not Listed, these species are considered UPL for wetland delineation purposes.

3.2 BIOLOGICAL RESOURCES

Special-Status Species

Special-Status Plants

The results of the USFWS, CNDDDB, and CNPS database queries for special-status plants are described in Appendix C, Table C-8. Special-status plant species that were documented in the project vicinity but have an elevation range that is higher than the project area, or that occur within habitats not represented in the project area, were considered absent from the project area. Special-status plant species that have a potential to occur in the project area are identified in Table 3.2-8. Actual presence of special-status plant species within the project area is unknown because it was infeasible to conduct focused surveys for special-status plants within the entire project area; therefore, it is assumed that the species could occur within portions of the project area based on the presence of suitable habitat.

Special-Status Wildlife

The results of the special-status wildlife database queries are provided in Appendix C, Table C-9. The potential for these species to occur in the project area was evaluated based on the species' known distribution, documented occurrences, and suitability of habitat. The habitat requirements for the special-status wildlife species listed in Appendix C were compared with habitat conditions in the project area, resulting in the following categories of likelihood for a special-status species to occur:

- None (no potential to occur): The project area is outside of the species' known distribution or elevation range and/or the species' required habitat is lacking from the project area.
- Unlikely (not expected to occur): The species' known distribution or elevation range overlaps with the project area, and the species' required habitat is of very low quality or quantity in the project area; suitable key habitat or habitat elements may be present, but may be of poor quality or isolated from the nearest extant occurrences.
- Moderate (may possibly occur): The species' known distribution or elevation range overlaps with the project area, and the species' required habitat occurs in the project area.
- High (present): The species has been documented in the project area and/or its required habitat occurs in the project area and is of high quality.

Of the 22 special-status wildlife species identified from the database queries (Appendix C, Table C-9), nine species were considered to have high or moderate potential to occur in the project area. One species, bald eagle, is known to forage in the project area (eBird, 2019); however, this species was eliminated from further analysis as the conceptual water transaction program will not affect large, open water bodies that provide suitable foraging habitat. The remaining eight special-status wildlife species with potential to occur in the project area are listed in Table 3.2-9; habitat associations and pertinent life history details are provided in Appendix C.

3.2 BIOLOGICAL RESOURCES

Table 3.2-8 Special-status Plant Species with the Potential to Occur in the Project Area and Their Associated Habitats

Scientific name	Common name	Status ^a : (Federal/ State/ CRPR)	Lifeform	Habitat Associations	AW Indicator Status ^b	Potential Habitats						
						Alfalfa-Row Crops	Emergent Marsh	Mixed Riparian Forest	Wet Sedge	Willow-Rose Scrub	Conifer Forest and Woodland	Dry Grass
Vascular Plants												
<i>Allium atrorubens</i> <i>var. atrorubens</i>	Great Basin onion	-/-/2B.3	perennial bulbiferous herb	Rocky or sandy soils in Great Basin scrub, and pinyon and juniper woodland	NL					✓	✓	✓
<i>Astragalus johannis-howellii</i>	Long Valley milk-vetch	-/CR/1B.2	perennial herb	Sandy loam soils in Great Basin scrub	NL						✓	✓
<i>Astragalus monoensis</i>	Mono milk-vetch	-/CR/1B.2	perennial herb	Pumice, gravelly, or sandy soils in Great Basin scrub and upper montane coniferous forest	NL					✓	✓	✓
<i>Atriplex pusilla</i>	smooth saltbush	-/-/2B.1	annual herb	Alkali soils in Great Basin scrub, and hot springs in meadows and seeps	FAC				✓		✓	✓
<i>Boechea bodiensis</i>	Bodie Hills rockcress	-/-/1B.3	perennial herb	Alpine boulder and rock field, great Basin scrub, pinyon and juniper woodland, and subalpine coniferous forest	NL					✓	✓	✓
<i>Boechea cobrensis</i>	Masonic rockcress	-/-/2B.3	perennial herb	Sandy soils in Great Basin scrub, and pinyon and juniper woodland	NL					✓	✓	✓
<i>Boechea tularensis</i>	Tulare rockcress	-/-/1B.3	perennial herb	Rocky slopes, and sometimes roadsides, in subalpine coniferous forest and upper montane coniferous forest	NL					✓		
<i>Botrychium ascendens</i>	upswept moonwort	-/-/2B.3	perennial rhizomatous herb	Mesic soils in lower montane coniferous forest, and meadows and seeps	FAC				✓	✓	✓	✓
<i>Botrychium crenulatum</i>	scalloped moonwort	-/-/2B.2	perennial rhizomatous herb	Bogs and fens, lower montane coniferous forest, meadows and seeps, freshwater marshes and swamps, and upper montane coniferous forest	FACW		✓	✓	✓	✓		✓
<i>Botrychium lunaria</i>	common moonwort	-/-/2B.3	perennial rhizomatous herb	Meadows and seeps, subalpine coniferous forest, and upper montane coniferous forest	FAC				✓	✓		✓
<i>Botrychium minganense</i>	Mingan moonwort	-/-/2B.2	perennial rhizomatous herb	Mesic soils in bogs and fens, lower montane coniferous forest, edges of meadows and seeps, and upper montane coniferous forest	NL				✓	✓		✓
<i>Botrychium paradoxum</i>	paradox moonwort	-/-/2B.1	perennial rhizomatous herb	Limestone and marble in alpine boulder and rock field, and moist soils in upper montane coniferous forest	NL					✓		
<i>Calochortus excavatus</i>	Inyo County star-tulip	-/-/1B.1	perennial bulbiferous herb	Alkaline and mesic soils in chenopod scrub, and meadows and seeps	FACU				✓		✓	✓
<i>Carex occidentalis</i>	western sedge	-/-/2B.3	perennial rhizomatous herb	Lower montane coniferous forest, and meadows and seeps	NL				✓	✓		✓
<i>Carex petasata</i>	Liddon's sedge	-/-/2B.3	perennial herb	Broadleafed upland forest, lower montane coniferous forest, meadows and seeps, and pinyon and juniper woodland	FAC				✓	✓		✓

3.2 BIOLOGICAL RESOURCES

Scientific name	Common name	Status ^a : (Federal/ State/ CRPR)	Lifeform	Habitat Associations	AW Indicator Status ^b	Potential Habitats								
						Alfalfa–Row Crops	Emergent Marsh	Mixed Riparian Forest	Wet Sedge	Willow–Rose Scrub	Conifer Forest and Woodland	Dry Grass	Moist Meadow	Sagebrush–Rabbitbrush Scrub
<i>Carex vallicola</i>	western valley sedge	–/–/2B.3	perennial rhizomatous herb	Mesic soils in Great Basin scrub, and meadows and seeps	FAC				✓			✓	✓	✓
<i>Chaetadelpa wheeleri</i>	Wheeler's dune-broom	–/–/2B.2	perennial rhizomatous herb	Sandy soils in desert dunes, Great Basin scrub, and Mojavean desert scrub	NL							✓		✓
<i>Claytonia umbellata</i>	Great Basin claytonia	–/–/2B.3	perennial herb	Talus soils in subalpine coniferous forest	NL						✓			
<i>Crepis runcinata</i>	fiddleleaf hawkbeard	–/–/2B.2	perennial herb	Mesic and alkaline soils in Mojavean desert scrub, and pinyon and juniper woodland	FACU						✓	✓		✓
<i>Cryptantha glomeriflora</i>	clustered-flower cryptantha	–/–/4.3	annual herb	Great Basin scrub, meadows and seeps, subalpine coniferous forest, and upper montane coniferous forest	NL				✓		✓	✓	✓	✓
<i>Cryptantha scoparia</i>	gray cryptantha	–/–/4.3	annual herb	Chenopod scrub, Great Basin scrub, and pinyon and juniper woodland	NL						✓	✓		✓
<i>Cusickiella quadricostata</i>	Bodie Hills cusickiella	–/–/1B.2	perennial herb	Clay or rocky soils in Great Basin scrub, and pinyon and juniper woodland	NL						✓	✓		✓
<i>Eremothera boothii subsp. alyssoides</i>	Pine Creek evening-primrose	–/–/4.3	annual herb	Sandy and gravelly soils in Great Basin scrub	NL							✓		✓
<i>Eriogonum nutans var. nutans</i>	Dugway wild buckwheat	–/–/2B.3	annual herb	Sandy or gravelly soils in chenopod scrub, and Great Basin scrub	NL							✓		✓
<i>Erythranthe utahensis</i>	Utah monkeyflower	–/–/2B.1	perennial rhizomatous herb	Meadows and seeps, and pinyon and juniper woodland	NL				✓		✓		✓	
<i>Glyceria grandis</i>	American manna grass	–/–/2B.3	perennial rhizomatous herb	Streambanks and lake margins in bogs and fens, meadows and seeps, and marshes and swamps	OBL		✓	✓	✓	✓			✓	
<i>Hymenopappus filifolius var. nanus</i>	little cutleaf	–/–/2B.3	perennial herb	Carbonate soils in pinyon and juniper woodland, and subalpine coniferous forest	NL						✓			
<i>Kobresia myosuroides</i>	seep kobresia	–/–/2B.2	perennial rhizomatous herb	Mesic soils in alpine boulder and rock field, carbonate soils in meadows and seeps, and subalpine coniferous forest	FACU				✓		✓		✓	
<i>Lomatium foeniculaceum subsp. macdougalii</i>	MacDougal's lomatium	–/–/2B.2	perennial herb	Chenopod scrub, Great Basin scrub, lower montane coniferous forest, and pinyon and juniper woodland	NL						✓	✓		✓
<i>Lupinus duranii</i>	Mono Lake lupine	–/–/1B.2	perennial herb	Volcanic pumice and gravelly soils in Great Basin scrub, subalpine coniferous forest, and upper montane coniferous forest	NL						✓	✓		✓
<i>Lupinus pusillus var. intermontanus</i>	intermontane lupine	–/–/2B.3	annual herb	Sandy soils in Great Basin scrub	NL							✓		✓

3.2 BIOLOGICAL RESOURCES

Scientific name	Common name	Status ^a : (Federal/ State/ CRPR)	Lifeform	Habitat Associations	AW Indicator Status ^b	Potential Habitats								
						Alfalfa–Row Crops	Emergent Marsh	Mixed Riparian Forest	Wet Sedge	Willow–Rose Scrub	Conifer Forest and Woodland	Dry Grass	Moist Meadow	Sagebrush–Rabbitbrush Scrub
<i>Mentzelia monoensis</i>	Mono Craters blazing star	–/–/4.3	annual herb	Pumice and gravelly soils, disturbed areas in Great Basin scrub, and upper montane coniferous forest	NL						✓	✓		✓
<i>Mentzelia torreyi</i>	Torrey's blazing star	–/–/2B.2	perennial herb	Sandy or rocky, alkaline, usually volcanic soils in Great Basin scrub, Mojavean desert scrub, and pinyon and juniper woodland	NL						✓	✓		✓
<i>Mertensia oblongifolia</i> var. <i>oblongifolia</i>	sagebrush bluebells	–/–/2B.2	perennial herb	Usually mesic soils in Great Basin scrub, lower montane coniferous forest, meadows and seeps, and subalpine coniferous forest	NL			✓			✓	✓	✓	✓
<i>Phacelia monoensis</i>	Mono County phacelia	–/–/1B.1	annual herb	Clay soils, often roadsides in Great Basin scrub and pinyon and juniper forests	NL						✓	✓		✓
<i>Polycytenium fremontii</i>	Williams' combleaf	–/–/1B.2	perennial herb	Sandy, volcanic soils and lake margins in Great Basin scrub, marshes and swamps, pinyon and juniper woodlands, playas, and vernal pools	FAC		✓	✓	✓		✓	✓	✓	✓
<i>Polygala subspinoso</i>	spiny milkwort	–/–/2B.2	perennial herb	Gravelly and rocky soils in Great Basin scrub, and pinyon and juniper woodland	NL						✓	✓		✓
<i>Polystichum kruckebergii</i>	Kruckeberg's sword fern	–/–/4.3	perennial rhizomatous herb	Rocky soils in subalpine coniferous forest, and upper montane coniferous forest	NL						✓			
<i>Potamogeton zosteriformis</i>	eel-grass pondweed	–/–/2B.2	annual herb (aquatic)	Assorted freshwater marshes and swamps	OBL		✓		✓					
<i>Ranunculus hydrocharoides</i>	frog's-bit buttercup	–/–/2B.1	perennial herb (aquatic)	Freshwater marshes and swamps	OBL		✓		✓					
<i>Sidalcea multifida</i>	cut-leaf checkerbloom	–/–/2B.3	perennial herb	Great Basin scrub, lower montane coniferous forest, meadows and seeps, and pinyon and juniper woodland	NL				✓		✓	✓	✓	✓
<i>Sphaeromeria potentilloides</i> var. <i>nitrophila</i>	alkali tansy-sage	–/–/2B.2	perennial herb	Usually alkaline soils in meadows, seeps and playas	FAC				✓				✓	
<i>Sphenopholis obtusata</i>	prairie wedge grass	–/–/2B.2	perennial herb	Mesic soils in cismontane woodland, and meadows and seeps	FAC				✓				✓	
<i>Suaeda occidentalis</i>	western seablite	–/–/2B.3	annual herb	Alkaline and mesic soils in Great Basin scrub	FACW							✓		✓
<i>Tetradymia tetrameres</i>	dune horsebrush	–/–/2B.2	perennial shrub	Sandy soils in Great Basin Scrub	NL							✓		✓
<i>Thelypodium integrifolium</i> subsp. <i>complanatum</i>	foxtail thelypodium	–/–/2B.2	annual / perennial herb	Alkaline or subalkaline, mesic soils in Great Basin scrub, and meadows and seeps	NL				✓			✓	✓	✓

3.2 BIOLOGICAL RESOURCES

Scientific name	Common name	Status ^a : (Federal/ State/ CRPR)	Lifeform	Habitat Associations	AW Indicator Status ^b	Potential Habitats								
						Alfalfa–Row Crops	Emergent Marsh	Mixed Riparian Forest	Wet Sedge	Willow–Rose Scrub	Conifer Forest and Woodland	Dry Grass	Moist Meadow	Sagebrush–Rabbitbrush Scrub
<i>Thelypodium milleflorum</i>	many-flowered thelypodium	–/–/2B.2	perennial herb	Sandy soils in chenopod scrub, and Great Basin scrub	NL							✓		✓
<i>Trifolium kingii subsp. dedeckerae</i>	DeDecker's clover	–/–/1B.3	perennial herb	Granitic and rocky soils in lower montane coniferous forest, and pinyon and juniper woodland	NL						✓			
<i>Viola purpurea subsp. aurea</i>	golden violet	–/–/2B.2	perennial herb	Sandy soils in Great Basin scrub, and pinyon and juniper woodland	NL						✓	✓		✓
Non-vascular plants														
<i>Helodium blandowii</i>	Blandow's bog moss	–/–/2B.3	moss	Damp soils in meadows and seeps, and subalpine coniferous forest	NL				✓		✓		✓	
<i>Meesia longiseta</i>	long seta hump moss	–/–/2B.3	moss	Carbonate, on soils in bogs and fens, meadows and seeps, and upper montane coniferous forest	NL		✓		✓		✓		✓	

Notes:

^a Status:

Federal

– No federal status

State

CR California State listed as rare

– No state status

CRPR

1B Plants rare, threatened, or endangered in California and elsewhere

2B Plants rare, threatened, or endangered in California, but more common elsewhere

4 Plants of limited distribution, a watch list

0.1 Seriously threatened in California (high degree/immediacy of threat)

0.2 Fairly threatened in California (moderate degree/immediacy of threat)

0.3 Not very threatened in California (low degree/immediacy of threats or no current threats known)

^b NL "Not Listed." Some of these species were not considered by Lichvar et. al 2016 and others were considered and intentionally not listed thus considered to be Upland (UPL)

Table Source: (CNPS, 2019)

3.2 BIOLOGICAL RESOURCES

Table 3.2-9 Special-status Wildlife with Moderate to High Potential to Occur in the Project Area

Common Name	Scientific Name	Status (Federal/State)	Likelihood to Occur	Potential Habitats							
				Alfalfa-Row Crops	Emergent Marsh	Mixed Riparian Forest	Wet Sedge	Willow-Rose Scrub	Conifer Forest and Woodland	Dry Grass	Moist Meadow
Birds											
Swainson's hawk	<i>Buteo swainsoni</i>	-/ST	High	✓	✓	✓*	✓			✓	✓
Greater sage grouse	<i>Centrocercus urophasianus</i>	-/SSC	High		✓		✓			✓	✓
Yellow warbler	<i>Setophaga petechia</i>	-/SSC	High		✓	✓*	✓		✓		✓
Mammals											
Townsend's western big-eared bat	<i>Corynorhinus townsendii</i>	-/SSC	Moderate (mostly foraging)		✓	✓	✓	✓	✓		✓
Spotted bat	<i>Euderma maculatum</i>	-/SSC	Moderate (mostly foraging)		✓	✓	✓		✓		✓
Pallid bat	<i>Antrozous pallidus</i>	-/SSC	Moderate (mostly foraging)		✓	✓	✓			✓	✓
Pygmy rabbit	<i>Brachylagus idahoensis</i>	-/SSC	Moderate						✓		✓*

3.2 BIOLOGICAL RESOURCES

Common Name	Scientific Name	Status (Federal/State)	Likelihood to Occur	Potential Habitats									
				Alfalfa-Row Crops	Emergent Marsh	Mixed Riparian Forest	Wet Sedge	Willow-Rose Scrub	Conifer Forest and Woodland	Dry Grass	Moist Meadow	Sagebrush-Rabbitbrush Scrub	
American badger	<i>Taxidea taxus</i>	-/SSC	Moderate								✓		✓

Notes:

ST = state threatened; SSC = state Species of Special Concern

* = required habitat

Source: (CDFW, 2018b)

3.2 BIOLOGICAL RESOURCES

Swainson's Hawk

Swainson's hawk are known to occur and breed in the Antelope and Bridgeport valleys (eBird, 2019). Tall trees in mixed riparian forest, particularly cottonwood, provide highly suitable Swainson's hawk nesting habitat. Alfalfa provides the most highly suitable foraging habitat used by Swainson's hawks, though low-growing and expansive habitats such as dry grass and moist meadows also provide opportunities for Swainson's hawk foraging.

Greater Sage-Grouse

The California side of the Walker River Basin is at the western edge of the greater sage-grouse's distribution and includes the range of the Bi-State distinct population segment (DPS) for two Population Management Units (PMUs): the Pine Nut PMU and the Desert Creek/Fales PMU. The Pine Nut PMU overlaps the portion of the project area around Topaz Lake; however, there are no documented greater sage-grouse from radio-telemetry studies in this area (Committee, 2012). The Desert Creek/Fales PMU overlaps the remaining portion of the Walker Basin south of Topaz Lake; radio-telemetry data show fairly robust greater sage-grouse populations in this PMU (Bi-State Technical Advisory Committee 2012).

There are several documented sightings of greater sage-grouse in the Bridgeport Valley area, and there is one eBird sighting of nine greater sage-grouse (six males and three females) east of I-395 near the intersection with State Route 182 in 2014 (eBird, 2019). There are many documented telemetry locations in the area between Antelope Valley and Bridgeport Valley (Bi-State Technical Advisory Committee, 2012), numerous sightings by birders in the area between Bridgeport Reservoir and Mono Lake (eBird, 2019), and a known population in the Fales area, north of Bridgeport Valley along Highway 395 (Hall, Gardner, & Blankenship, 2008). While sage-grouse are known to historically occupy sagebrush scrub habitat in the Slinkard Valley Wildlife Area (Little Antelope Valley), no sage-grouse have been observed there since 1987 (Taylor, 2011). It is unknown whether or not the extent of sagebrush habitat, or some other aspect of their natural history, is limiting their population.

Greater sage-grouse is more likely to occur in areas composed of dry grass or sagebrush-rabbitbrush scrub vegetation types, particularly in areas that provide a broad mosaic of habitats. These areas are primarily in around the edges of the project area, on the slopes surrounding the valley floor.

Yellow Warbler

There are numerous documented observations of yellow warbler throughout the West Walker River Basin, particularly along the east fork of the Walker River downstream of Bridgeport Reservoir (eBird, 2019). Yellow warbler may nest in deciduous mixed riparian forest along streams or wet meadows in the West Walker River Basin. They may also be present in areas comprised of emergent marsh, wet sedge, or moist meadow vegetation types where they are adjacent to mixed riparian forest.

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Townsend's Western Big-Eared Bat, Spotted Bat, and Pallid Bat

Little is known about the distribution of special-status bat species in the project area, including Townsend's western big-eared bat, spotted bat, and pallid bat. The project area likely offers abundant foraging opportunities for Townsends big-eared bat and spotted bat, particularly in areas near water sources such as mixed riparian forest and wet emergent marsh. Foraging habitats for pallid bats are varied and include nearly all natural land covers including grasslands, oak savannah woodlands, open pine forests, and agricultural areas (Rambaldini, 2006). The project area likely offers abundant foraging opportunities for pallid bats across all habitat types, assuming there is suitable roosting habitat within one to three miles of foraging habitat. Roosting opportunities for Townsend's big-eared bat, spotted bat, and pallid bat may be limited in the project area.

Pygmy Rabbit

Pygmy rabbit may occur in the project area, though only in areas dominated by expanses of sagebrush–rabbitbrush scrub, as this species is extremely dependent on this habitat type. No recorded observations were found in the project area.

American Badger

American badgers may occur in dry upland habitats of the project area, including areas composed of dry grass, sagebrush–rabbitbrush scrub, and conifer forest and woodland vegetation types. There is a CNDDDB sighting near Highway 395, approximately 12 miles northwest of Bridgeport, and another approximately 1.5 miles southwest of Walker, in the Slinkard Valley Wildlife Area.

Special-Status Fish

The Walker River basin in California currently supports both native and non-native (i.e., introduced) fish species. Native fish resources in the Walker River basin include the Lahontan cutthroat trout (*Oncorhynchus clarkii henshawi*), mountain whitefish (*Prosopium williamsoni*), mountain sucker (*Catostomus platyrhynchus*), Tahoe sucker (*Catostomus tahoensis*), Piute sculpin (*Cottus beldingii*), Lahontan tui chub (*Siphateles bicolor*), Lahontan redband (*Richardsonius egregious*), and speckled dace (*Rhinichthys osculus*) (MCCDD, 2007).

Introduced fish species primarily consist of non-native trout including brown, rainbow, and brook trout and kokanee salmon, which are planted in various lakes, reservoirs, and stream reaches to provide improved recreational fishing opportunities. CEQA requires an assessment of impacts on special-status and native fish species. Brown, rainbow, and brook trout are neither special-status nor native fish species. Therefore, potential impacts of the proposed project on these species will not be discussed in this EIR. However, brown, rainbow, and brook trout are important for the recreational fishing opportunities they provide, and potential project-related impacts on these species will be analyzed in the recreation section (Section 3.4). Information on fish species distribution and habitat condition within specific stream reaches in the Walker River basin is limited. The potential for special-status fish species to occur in the project area is presented in Appendix C, Table C-10. Special-status fish that could occur within

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the project area are listed in Table 3.2-10. Information about each species distribution within the project area is discussed below.

Table 3.2-10 Special-Status Fish Species with the Potential to Occur in the Project Area

<i>Scientific Name</i> Common Name	Status (Federal/ State)	Distribution in California	Habitat Association	Likelihood to Occur in the Project Area
<i>Oncorhynchus clarkii henshawi</i> Lahontan cutthroat trout	FT/-	Historically, were likely the dominant species in the Walker River basin, with distribution extending from small headwater streams in the Sierra Nevada to the California–Nevada border and downstream to Walker Lake.	Large desert lakes with high alkalinity (e.g., Pyramid, Walker), relatively warm Nevada desert streams that may exceed 80.6 degrees Fahrenheit for short periods of time, and alpine lakes and streams with relatively cool water temperatures year-round.	Unlikely: Historical range includes the project area, but species is currently restricted to Mill Creek upstream of Lost Cannon Creek and project area.
<i>Prosopium williamsoni</i> Mountain whitefish	-/SSC	Limited to a few Lahontan basins draining the eastern Sierra Nevada including the Walker River.	Streams with large pools (>1 m depth) and clear cold water, with summer water temperatures of 51.8–69.8 degrees Fahrenheit; elevations of approximately 4,600–7,500 ft.	High: Present in watercourses within and adjacent to the project area.
<i>Siphateles bicolor</i> Lahontan Lake tui chub	-/SSC	Abundant and widely distributed in habitats of the eastern Sierra Nevada.	Most abundant in lakes and reservoirs where summer water temperature is greater than 68 degrees Fahrenheit.	High: Present in Topaz Lake and Bridgeport reservoir.
<i>Catostomus platyrhynchus</i> Mountain sucker	-/SSC	Distribution within California is limited to Lahontan basin streams draining the eastern Sierra Nevada, including the Walker Basin.	Pools of found in relatively shallow streams (< 2ft) of moderate size.	High: Likely present in watercourses within and adjacent to the project area.

Sources: (CDFW, 2018b)

Lahontan Cutthroat Trout

Historically, Lahontan cutthroat trout (LCT) were likely the dominant species in the Walker River Basin, with distribution extending from small headwater streams in the Sierra Nevada to the California–Nevada border and downstream to Walker Lake (USFWS, 2009; Kattelman, 2012). Other native fish species likely occurred throughout most of the LCTs distribution. Currently, the range of LCT in the Walker River has been reduced by over 90 percent. In the West Walker River, LCT are currently restricted to a number of isolated populations in small tributaries draining the east slope of the Sierra Nevada, including Slinkard, Mill, Silver, and Wolf Creeks (USFWS, 2009). In the East Walker River, LCT are currently restricted to two small

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tributary basins draining the eastern Sierra Nevada, Murphy, and By-Day Creeks (USFWS, 2009).

Mountain Whitefish

Mountain whitefish are distributed throughout western North America, although their distribution within California is limited to a few Lahontan basins draining the eastern Sierra Nevada, including the Walker River.

Lahontan Tui Chub

Lahontan tui chub are likely most abundant in lakes and reservoirs (e.g., Topaz Lake and Bridgeport reservoir) in the Walker River Basin, California, with densities likely decreasing in an upstream direction as gradient, water velocity, and elevation increases, and stream size decreases.

Mountain Sucker

Mountain sucker's native distribution within California is limited to Lahontan basin streams draining the eastern Sierra Nevada, including the Walker River.

Migration Corridors

Mule Deer

Mule deer are not federally or state-listed and have no special protections under federal or state law. As a big game species, mule deer are considered valuable as a recreational (e.g., wildlife viewing, and hunting) and economic resource for the state. Furthermore, they are included in this section to provide information on existing migratory corridors in the area. The West Walker, East Walker, and Mono Lake herds of mule deer occupy the project area or adjacent lands on a perennial or seasonal basis (Kattelmann, 2012; MCCDD, 2007).

The West Walker herd occupies about 2200 square miles of winter range and 500 square miles of summer or intermediate range within the California portion of the West Walker River Basin (Thomas, 1984). The West Walker mule deer herd uses winter range in Little Antelope Valley, the east side of Antelope Valley at base of the Wellington Hills, Slinkard Valley, Gray Hills, and Wild Oat Mountain (Taylor 1992 and Ferranto 2006 in Kattelmann 2012). Deer wintering in the Wellington Hills migrate south through Indian Valley, Jackass Flat, and the west slope of the Sweetwater Mountains to the Sonora Junction holding area in the spring. From there, they move to summer ranges in the central Sierra.

The East Walker herd's winter range is mainly downstream and east of the California–Nevada border. About two-thirds of the East Walker herd summers in the Swauger Creek and Buckeye Creek watersheds from Devils Gate to Twin Lakes or beyond into the West Walker River watershed. A narrow migration corridor along the East Walker River and slopes north of the river and Bridgeport Reservoir connects the winter and summer ranges (Taylor 1992 in MCCDD 2007).

Mule deer found in the Bodie Hills are mostly part of the Mono Lake herd. After wintering near Hawthorne, the deer migrate through the Bodie Hills in April to their summer range along the

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eastern slope of the Sierra Nevada and again in the autumn on the return to their winter range. The Mono Lake herd and the East Walker herd share some parts of their summer range (Taylor 1992 *in* MCCDD 2007).

Greater Sage-Grouse

Greater sage-grouse can move several miles through sagebrush scrub and meadow habitats to complete habitual nesting, chick-rearing, and overwintering movements. Large expanses of relatively connected sagebrush scrub are required to sustain greater sage-grouse populations. Small, isolated populations of sage-grouse are especially vulnerable to threats like wildfires and West Nile virus, and genetic diversity declines if birds don't have the ability to occasionally interbreed with other groups (Crist, Knick, & Hanser, 2017).

Migratory Birds

Numerous migratory birds are known to occupy the Walker River area on a seasonal basis. The Walker River in Mono County is located within the southern Pacific flyway, a corridor for migratory birds.

Fish Migration

Lahontan tui chub are present in Topaz Lake and Bridgeport Reservoir in the Walker River Basin, California, with densities likely decreasing in an upstream direction as gradient, water velocity, and elevation increases and stream size decreases. Typically, Lahontan tui chub have a seasonal vertical migration, with fishes located deeper in the water column during winter and moving back into the upper water column during summer months in order to have a successful spawning (NRM, 2020).

Mountain whitefish are also present in the project area and usually migrate into tributaries from lakes to spawn, although some spawning may take place in gravel in shallow water. Spawning takes place in October through early December, as a result of upstream or downstream movements often associated with a fairly rapid drop in water temperature (Caltrout.org, 2017). The mountain sucker, another present species in the project area, has had two reports of short distance spawning migrations by reservoir populations, but no observations of movements by stream populations (Belica & Nibbelink, 2006).

3.2.3 Regulatory Setting

Federal

Clean Water Act

The U.S. Army Corps of Engineers (USACE) is responsible under Section 404 of the Clean Water Act to regulate the discharge of fill material into waters of the U.S. Waters of the U.S. and their lateral limits are defined in 33 Code of Federal Regulations (CFR) Part 328.3(a) and include streams that are tributaries to navigable waters and their adjacent wetlands. The lateral limits of jurisdiction for a non-tidal stream are measured at the line of the Ordinary High Water Mark (OHWM; 33 CFR Part 328.3[e]) or the limit of adjacent wetlands (33 CFR Part 328.3[b]). Any permanent extension of the limits of an existing water of the U.S., whether natural or man-

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made, results in a similar extension of USACE jurisdiction (33 CFR Part 328.5). Waters of the U.S. fall into two broad categories: wetlands and other waters. Other waters include unvegetated waterbodies and watercourses such as rivers, streams, lakes, springs, ponds, coastal waters, and estuaries. Seasonally inundated or intermittent waterbodies or watercourses that do not exhibit wetland characteristics are often classified as other waters of the U.S. Wetlands include marshes, wet meadows, seeps, floodplains, basins, and other areas experiencing extended seasonal or permanent soil saturation that support wetland vegetation. Seasonally or intermittently inundated features, such as seasonal ponds, ephemeral streams, and tidal marshes, are categorized as wetlands if they have hydric soils and support wetland plant communities.

Wetlands and other waters that cannot trace a continuous hydrologic connection to a navigable water of the U.S. are not tributary to waters of the U.S. These are termed “isolated” wetlands and waters. Isolated wetlands and waters are jurisdictional when their destruction or degradation can affect interstate or foreign commerce (33 CFR Part 328.3[a]). USACE may or may not take jurisdiction over isolated wetlands, depending on the specific circumstances.

Federal Endangered Species Act

The U.S. Fish and Wildlife Service (USFWS) has jurisdiction over federally listed threatened and endangered plant and animal species. The federal Endangered Species Act (ESA) protects listed species from harm or “take,” broadly defined as to “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct.” Any such activity can be defined as a “take” even if it is unintentional or accidental. An endangered species is one that is considered in danger of becoming extinct throughout all or a significant portion of its range. A threatened species is one that is likely to become endangered in the foreseeable future.

In addition to endangered and threatened species, which are legally protected under the ESA, the USFWS maintains lists of proposed and candidate species. Proposed species are those for which a proposed rule to list them as endangered or threatened has been published in the Federal Register. A candidate species is one for which the USFWS currently has enough information to support a proposal to list it as a threatened or endangered species. Proposed species could be listed at any time, and many federal agencies protect them as if they already are listed. Candidate species are not afforded legal protection under the ESA.

Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (MBTA) prohibits the taking, hunting, killing, selling, purchasing, etc. of migratory birds, parts of migratory birds, or their eggs and nests. As used in the MBTA, the term “take” is defined as “to pursue, hunt, shoot, capture, collect, kill, or attempt to pursue, hunt, shoot, capture, collect, or kill, unless the context otherwise requires.” Most bird species native to North America are covered by this act (16 USC 703-712).

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State and Regional

Porter-Cologne Water Quality Control Act

Under the Porter-Cologne Water Quality Control Act (California Water Code Sections 13000–14920), RWQCB is authorized to regulate the discharge of waste that could affect the quality of the state’s waters. Therefore, even if a project does not require a federal permit, it may still require review and approval by the RWQCB (e.g., for impacts to isolated wetlands and other waters). When reviewing applications, the RWQCB focuses on ensuring that projects do not adversely affect the “beneficial uses” associated with waters of the state. In most cases, the RWQCB seeks to protect these beneficial uses by requiring the integration of water quality control measures into projects that will require discharge into waters of the State.

California Endangered Species Act

The California Endangered Species Act (CESA) provides protection for candidate plants and animal species as well as those listed as threatened or endangered by CDFW. The Act prohibits the take of any such species unless authorized; however, California case law has not interpreted habitat destruction, alone, as included in the state’s definition of take. Take is defined in Section 86 of the Fish and Game Code as “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill” (Cal. Fish and Game Code §86). CDFW administers the act and authorizes take through Section 2081 agreements, Section 2080.1 consistency determinations (for species that are also listed under the federal ESA) or NCCPs. A candidate species is one that the Fish and Game Commission has formally noticed as being under review by CDFW for addition to the state list. Candidate species are protected by the provisions of the California ESA. Any listed or candidate species that could be adversely affected by any aspect of the proposed project would be required to comply with this act and obtain an incidental take permit.

California Fish and Game Code

The CDFW is also responsible for enforcing the California Fish and Game Code, which contains several provisions potentially relevant to construction projects. For example, Section 1602 of the Fish and Game Code (CCR; Title 14, Div. 1) governs the issuance of Lake and Streambed Alteration Agreements by the CDFW. Lake and Streambed Alteration Agreements are required whenever project activities substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated as such by the CDFW. Section 1602 of the Fish and Game Code applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes in the state.

The Fish and Game Code also lists animal species designated as Fully Protected, which may not be taken or possessed at any time. The Fully Protected designation does not allow “incidental take” and is thus more restrictive than the CESA. Fully Protected species are listed in Sections 3511 (birds), 4700 (mammals), 5050 (reptiles and amphibians), and 5515 (fish) of the Fish and Game Code, while protected amphibians and reptiles are listed in Chapter 5, Sections 41 and 42 (CCR; Title 14, Div. 1).

Section 3503 of the Fish and Game Code (CCR; Title 14, Div. 1) prohibits the take, possession, or needless destruction of the nest or eggs of most bird species. Subsection 3503.5 (CCR; Title 14,

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Div. 1) specifically prohibits the take, possession, or destruction of any birds in the orders Falconiformes (hawks and eagles) or Strigiformes (owls) and their nests. These provisions, along with the federal MBTA, serve to protect nesting native birds. Certain non-native species, including European starling and house sparrow, are not protected under the California Fish and Game Code.

California Species of Special Concern

The CDFW maintains an administrative list of Species of Special Concern (SSC), defined as a “species, subspecies, or distinct population of an animal native to California that currently satisfies one or more of the following (not necessarily mutually exclusive) criteria: is extirpated from the State, or, in the case of birds, in its primary seasonal or breeding role; is listed as federally, but not State, threatened or endangered; meets the State definition of threatened or endangered but has not formally been listed; is experiencing, or formerly experienced, serious (noncyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for State threatened or endangered status; and has naturally small populations exhibiting high susceptibility to risk from any factor(s), that if realized, could lead to declines that would qualify it for State threatened or endangered status.”

The CDFW’s Nongame Wildlife Program is responsible for producing and updating SSC publications for mammals, birds, reptiles, and amphibians. The Fisheries Branch is responsible for updates to the Fish SSC document and list. Section 15380 of the CEQA Guidelines indicates that SSC should be included in an analysis of project impacts if they can be shown to meet the criteria of sensitivity outlined therein. In contrast to species listed under the federal or California ESAs, however, SSC have no formal legal protective status.

Native Plant Protection Act

The Native Plant Protection Act (NPPA; California Fish and Game Code Section 1900 et seq.) designates 64 species, subspecies, and varieties of native California plants as rare. NPPA prohibits take of rare native plants but includes some exceptions for agricultural and nursery operations, for emergencies, and after properly notifying CDFW for vegetation removal from canals, roads, and other sites, changes in land use, and in certain other situations.

California Rare Plant Ranks

Special-status plants in California are assigned to one of five “California Rare Plant Ranks” by a group of over 300 botanists in government, academia, non-governmental organizations, and the private sector. This effort is jointly managed by the CDFW and CNPS. The five California Rare Plant Ranks currently recognized by the CNDDDB include the following:

- Rare Plant Rank 1A – presumed extinct in California
- Rare Plant Rank 1B – rare, threatened, or endangered in California and elsewhere
- Rare Plant Rank 2 – rare, threatened, or endangered in California but more common elsewhere
- Rare Plant Rank 3 – a review list of plants about which more information is needed
- Rare Plant Rank 4 – a watch list of plants of limited distribution

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Substantial impacts to plants ranked 1A, 1B and 2 are typically considered significant based on Section 15380 of the CEQA Guidelines depending on the policy of the lead agency. Plants ranked 3 and 4 may be evaluated by the lead agency on a case-by-case basis to determine significance thresholds under CEQA.

Executive Orders

Executive Order W-59-93 (California Wetlands Conservation Policy) establishes substantive environmental goals to ensure no overall net loss of wetlands; to achieve a long-term net gain in the quantity, quality, and permanence of wetlands in California; and to provide due consideration for private property and stewardship.

Local

Mono County General Plan

The Mono County General Plan contains an Open Space and Conservation Element that serves as the county's Open Space Plan and contains policies to designate lands for open space uses. Policies within the Open Space and Conservation Element address a number of resource areas that include, but are not limited to, biological resources, water resources, and water quality. Each policy identifies an action or actions to implement the policies. For more information, please see the Mono County General Plan Open Space and Conservation Element.

Policies established for biological resources include, but are not limited to:

Open Space and Conservation Element

- GOAL 2.** Maintain an abundance and variety of vegetation, aquatic and wildlife types in Mono County for recreational use, natural diversity, scenic value, and economic benefits.
- Objective 2.A.** Maintain and restore botanical, aquatic and wildlife habitats in Mono County.
- Policy 2.A.2.** Protect and restore threatened and endangered plant and animal species and their habitats.
- Policy 2.A.3.** Protect and restore sensitive plants, wildlife, and their habitat and those species of exceptional scientific, ecological, or scenic value.
- Policy 2.A.9.** Maintain water quality for fishery habitat by enforcing the policies contained in the Water Quality and Agriculture/Grazing/Timber sections of the Conservation/Open Space Element.
- Policy 2.A.10.** Support efforts to regulate in-stream flows and lake levels to maintain fishery and other wildlife values, including riparian habitat.
- Policy 2.A.11.** In order to provide richer angling diversity, and to increase the wild trout population and stimulate tourism, support efforts to manage fisheries in accordance with their biological capabilities.

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Policy 2.A.12. Promote the non-consumptive use of existing fisheries, where appropriate.

Policy 4.A.7. Continue to support “no net loss” of wetlands at a regional scale.

3.2.4 Significance Standards and Methodology

Significance Criteria

For purposes of this EIR and consistent with Appendix G of the CEQA Guidelines, the conceptual water transaction program is considered to have a significant impact on biological resources if it would:

- a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;
- b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service;
- c. Have substantial adverse effect on state or federally protected wetlands (including but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance;
- f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

The conceptual water transaction program would not conflict with an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan because no such plans have been adopted for the project area. Therefore, significance criteria f is not discussed further.

Approach to Analysis

The analysis presented in this section was performed using qualitative and comparative methods that involved identifying potential impacts from potential water transactions on the biological resources in the project area. Temporary leasing of water rights for a year would mimic drought conditions in agricultural areas because the water would be reapplied to the site the subsequent year. Temporary leasing of water for a single year would therefore not have a significant effect on biological resources. The impact analysis below focuses on permanent or long-term (2 years or more) acquisition of decreed or storage rights only. The maximum potential water transfer under permanent water transaction scenarios is presented in Section

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2.7.4 of the Project Description. It is assumed that a water transaction of decreed water rights would only transfer 53 percent of the water from any parcel that is involved in the transaction due to the decision made by the SWRCB and the Nevada State Engineer that the NFWF’s exercise of those rights is limited to the consumptive use portion of the rights (approximately 53 percent)⁵. It is assumed that water transactions for storage rights would transfer the full water right, as discussed in Section 2.7.4.

3.2.5 Impact Discussion

Impact Biology-1: Would a water transaction program have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? (Significance criterion a)	Significance Determination of Proposed Project (GP Policies)	Significance Determination of Conceptual Water Transaction Program
	No Impact	Potentially Significant

Impacts on Special-Status Species Due to Habitat Modifications

Special-Status Plants

Table 3.2-8 provides a list of special-status plants with the potential to occur in the project area. Plant species associated with wetland habitats are most likely to be impacted by reduction in irrigation flow to wetlands or increases in flow along the river corridors. There may be significant impacts to special-status plant species where there is a reduction in wetland and riparian acreage within areas that lose water availability due to the water transaction and beneficial effects where there is an increase in the extent of riparian habitat along Walker River. Potential impacts are discussed by water transaction scenario below.

Permanent or Long-Term Acquisition of Decreed Water Rights

With permanent or long-term transfer of water rights there may be impacts to some of the plant community types vulnerable to reduction in water as described in Section: Vegetation Sensitivity to Water Availability, p. 3.2-14 (i.e., Emergent Marsh, Wet Sedge, Willow Rose–Scrub, and Moist Meadow); each of the vulnerable vegetation communities may convert to a drier vegetation type. No special-status plant species were observed in the project area; however, it was not feasible to conduct focused special-status plant species surveys within all areas that could be subject to a future water transaction. Special-status plants with suitable habitat in the project area are considered present for the propose of this analysis. Water transactions could result in a reduction in suitable habitat and decline in populations of special-

⁵ The consumptive use portion of a water right reflects the amount of water that is actually used and consumed by agriculture. When an upstream user appropriates water for irrigation, some portion of the water—the non-consumptive use portion—is not consumed by the crop and returns as runoff to the river, and for another rightsholder’s use, downstream.

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status species associated with wetland habitats (i.e., emergent marsh, wet sedge and moist meadow; Table 3.2-8) where the wetland habitats convert to drier habitat conditions that do not support the special-status plant species. Additionally, reduced irrigation could result in increases in the extent of more drought tolerant invasive plant species. Invasive plant species would out compete special-status plant species and could contribute to significant impacts on special-status plants. While the WBC conducts active revegetation and management for invasive plants for a period of two years following acquisition of water rights, the change in vegetation communities could be longer-term and the introduction of invasive weeds could change habitat community composition over time. The permanent transfer of decreed water rights could result in reduction of special-status species populations associated with wetland vegetation communities where those populations occur in areas that would be affected by the transfer of decreed water rights. The impact on suitable habitat for special-status plants and special-status plant species populations is potentially significant.

The proposed General Plan policy Action 3.E.4.a requires preparation of an adaptive management plan to avoid loss of wetland habitats and loss of habitat for sensitive species. Proposed General Plan policy Action 3.E.4.c requires focused surveys for special-status plants on land affected by transfer of water rights and mitigation and monitoring to ensure replacement of any affected special-status plant species or populations. The proposed General Plan policies would avoid or mitigate significant impacts on special-status plants during implementation of potential water transactions in California.

Transfer of decreed water rights to instream use would result in increased flow on the Walker River during the summer and fall months when 53 percent of the water currently used for irrigation would be transferred to Walker Lake and not diverted for irrigation use. The increased instream flow could result in increased riparian and wetland vegetation growth or vigor along the East and West Walker Rivers. The increased flow could have beneficial effects on special-status species associated with riparian and wetland vegetation communities along the Walker River where the extent or health of riparian vegetation increases.

Permanent or Long-term Acquisition of Storage Water Rights

The permanent acquisition of water rights would transfer 100 percent of the storage right to Walker Lake, and 100 percent of the water would not be placed in irrigation ditches or canals. Storage water that is permanently acquired would be held in the upstream reservoirs (e.g., Twin Lakes) during the growing season. Storage water releases occur after the end of the irrigation period, when stream flows are typically lowest (i.e., in the fall). Under existing circumstances, storage water is only released in some years as necessary to irrigate the land; however, if storage water were acquired by WBC, the water would likely be transferred in all years to benefit Walker Lake. The transfer of 100 percent of the storage water right from lands that are currently irrigated to Walker Lake would be expected to result in similar impacts to special-status plants occurring in areas that would be affected by drying conditions as described for the acquisition of decreed water rights above. The reduction in suitable habitat for special-status plants, and potential increase in invasive plants could result in significant impacts on special-status plants as described above. Proposed General Plan policy Action 3.E.4.a and

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Action 3.E.4.c would avoid or mitigate potentially significant impacts of future water transactions on special-status plants as described for acquisition of decreed water rights above.

The acquisition of storage water rights would increase flow in the Walker River in the fall. The increased late season, flow in the Walker River may result in an increase in the extent or vigor of riparian and wetland vegetation along the Walker River; therefore, the transfer of storage water rights may result in a beneficial effect on special-status plant species associated wetlands and riparian vegetation along the West Walker River.

Special-Status Wildlife

Water transactions could affect special-status wildlife species by changing the extent, distribution, and/or quality of vegetation and associated availability of suitable habitat for special-status wildlife throughout the project area. Table 3.2-9 provides a summary of habitat associated with special-status wildlife species known or expected to occur in the project area. The special-status wildlife habitat associations were compared with potential effects on vegetation in order to assess potential wildlife impacts from implementation of a water transaction program.

Permanent Acquisition of Decreed Water Rights and Storage Rights

Swainson's Hawk and Yellow Warbler. Permanent transfer of all or part of the water rights may increase the potential for long-term increases in the overall extent of riparian vegetation, which may in turn provide for a long-term increase in availability and/or quality of nesting habitat for Swainson's hawk and nesting and foraging habitat for yellow warbler. The riparian corridor currently occupies a very limited area in Antelope Valley and somewhat more extensive area in Bridgeport Valley. Increased instream flows could increase the lateral extent and duration of spring flooding or increase water availability in the fall. The increase in Walker River flow could increase the amount of potential yellow warbler nesting habitat (e.g., willows, alders, cottonwoods, and other riparian shrubs and trees) and Swainson's hawk nesting habitat (e.g., tall, mature, stable trees such as cottonwoods).

Permanent transfer of all or part of the water rights may result in long-term increases in upland vegetation communities, including drier habitats such as Sagebrush-Rabbitbrush Scrub and Dry Grass, providing for a long-term increase in habitat availability and/or quality for greater sage-grouse, pygmy rabbit, and American badger, and some types of Swainson's hawk foraging habitat (e.g., grassland). Any potential reduction in alfalfa production associated with this alternative may impact the availability of Swainson's hawk's preferred foraging habitat, however. If alfalfa is taken out of production as a result of the project, there could be a loss of up to approximately 1,400 acres of alfalfa. These areas are expected to be managed by WBC as dry grassland communities to minimize weeds based on the comments from WBC and similar areas that have undergone water transactions in Nevada. Studies indicate the importance of alfalfa for Swainson's hawk (Estep, 1989; Swolgaard, Reeves, & Bell, 2008; Smallwood, 1995; Estep & Dinsdale, 2012). While grasslands (generally lightly grazed) also may provide a source of prey, it may be at lower prey abundance/densities and accessibility (see Section: Special-Status Wildlife, p. 3.2-23). Lower prey abundance/density could have an effect on Swainson's hawk

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foraging behavior in the project area; however, the water transaction would affect a maximum of 8 percent of the agricultural land in the project area. Drying of 8 percent of the agricultural areas and resultant reduction in prey density in those areas would not have a substantial effect on Swainson's hawk individuals or populations because the majority of the areas that provide Swainson's hawk foraging habitat would be unaffected and the areas would continue to provide foraging opportunities, just at an anticipated lower density.

Greater Sage-Grouse. Greater sage-grouse require vast and relatively continuous expanses of sagebrush for food and cover. They are also known to be associated with irrigated areas adjacent to sagebrush habitats. Proximity to water – or vegetation associated with water – may be important to sage-grouse in some areas and not in others (Schroeder, Young, & Braun, 1999); accordingly, water availability and sage-grouse habitat are not inextricably connected. Water transaction scenarios that result in the replacement of wet sedge or moist grass habitats with sagebrush could increase the extent, availability, and quality of sagebrush habitat required for greater sage-grouse; late autumn, winter, and early spring are the seasons when sage-grouse are most dependent on sagebrush for both food and cover. Greater sage-grouse are also known to use irrigated areas adjacent to sagebrush habitats, since meadows can provide an abundance of succulent forbs for foraging during summer. These areas are especially important during drier summers. In addition to food, herbaceous vegetation also provides cover during the nesting and early brood-rearing seasons. A water transaction scenario that suspends all water delivery to irrigated areas or wet meadows may alter the distribution of moist habitats adjacent to sagebrush habitats. There would likely be an increase in the extent and availability sagebrush habitat for sage-grouse, with a possible simultaneous impact on adjacent wet areas used for rearing/cover and summer foraging. It is difficult to ascertain whether the increase in amount and extent of sagebrush would offset the loss of moist, irrigated habitats within the valley floors. Sagebrush habitat are available in the surrounding uplands adjacent to the valley edges. Since sagebrush-rabbitbrush habitat is currently mapped on approximately 6 percent of the study areas in both Bridgeport and Antelope Valleys, and herbaceous vegetation types take up a large amount of the remaining area in the valley bottom, an increase in sagebrush-rabbitbrush habitat would likely increase the amount of area where a combination of both habitat types are available, which could potentially have a beneficial effect on the greater sage-grouse.

Special-Status Bats. A correlated reduction in the overall extent of wet or moist habitats (e.g., Moist Meadow, Wet Sedge) may reduce the total amount of foraging habitat for special-status bat species. Species such as the spotted bat are vulnerable to the loss or reduction in value of wet meadows and other foraging areas, at least at a local scale (Luce & Keinath, 2007). This effect on bat foraging habitat is expected to be less than significant based on the overall amount of foraging habitat available for special-status bats compared with the limited amount of roosting habitat in the project area. Bat foraging habitat is expected to be widespread and varied throughout the project area, as most special-status bat species may use most available native habitat types in the project area for foraging. The transfer of water from 8 percent of the irrigated lands in the valleys (up to 3,290 acres) would not significantly affect special-status bat individuals or populations because significant foraging areas and opportunities would remain.

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Special-status fish. Water transactions under the WBRP would result in more water remaining in or being delivered to the East and West forks of the Walker River during the summer and fall low-flow season. Water transactions would generally have beneficial effects on special-status fish species and aquatic biota because more water would be available to support special-status fish habitat. However, water transactions could result in seasonal or annual changes to instream flows and subsequent effects on fish and aquatic biota.

There are four special-status fish species with the potential to occur in the project area: LCT, mountain sucker, Lahontan Lake tui chub, and mountain whitefish. Lahontan cutthroat trout are present in Mill Creek, upstream of Lost Cannon Creek, which is upstream of Little Antelope Valley. As such, LCT are upstream of the project area and, therefore, the water transactions would have no adverse impact on this species.

The Lahontan Lake tui chub, mountain sucker, and mountain whitefish are present within the project area and have the potential to be affected by future water transactions under the WBRP.

Permanent or Long-term Acquisition of Decreed Water Rights

Permanent or long-term transfer of decreed water rights is expected to result in seasonal and perennial increases in instream flows in watercourses upstream of Topaz and Bridgeport reservoirs and East and West Walker Rivers.

LCT are not present within the project area, and the water transaction would have no impact on this species. However, increases in river flows could create conditions more suitable for LCT, which could allow them to become reestablished in the East and West forks of the Walker River. The increased river flow would be a potentially beneficial impact.

Increased flows in the East and West Walker River as a result of transfer of water rights would increase the amount of spawning and rearing habitat for mountain suckers and whitefish. The increased river flow would also potentially reduce water temperatures and generally provide improved habitat conditions for mountain suckers and whitefish during the low flow season. Increased delivery of water to Topaz and Bridgeport reservoirs during low flow years would improve habitat for tui chub in the reservoirs. Water transactions would have no adverse impact on special-status fish and could have beneficial impacts on Lahontan Lake tui chub, mountain sucker, and mountain whitefish due to increased instream flows and improved habitat conditions over the long-term.

Permanent Acquisition of Storage Water Rights

Storage water rights that are acquired for the WBRP would be held in the upstream reservoirs (e.g., Twin Lakes) during the growing season and only released in the fall. The release of surplus storage water from Topaz and Bridgeport Reservoirs is expected to occur in the fall, following the end of the irrigation season. The additional flow in the East and West Walker Rivers is expected to have a generally beneficial impact on special-status fish species as described above. However, if the flow release from storage is too high, the instream flow could impact mountain whitefish since their spawning period (October to early December) would coincide with any storage release. Whitefish do not dig redds, but scatter eggs over gravel and

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rocks, where they sink into interstices. The eggs are not adhesive, which means excessive increases in water velocity could dislodge the eggs from those interstitial spaces and subject them to predation, which would decrease chances for successful incubation. The impact on mountain whitefish from increased releases of storage water during the mountain whitefish spawning period is potentially significant.

The proposed General Plan Policy Action 3.E.4.e would ensure that releases of water would be gradually ramped up to a level where the West and East forks of the Walker River experience increased flow levels for at least two weeks. In addition, storage release flows in the West and East forks of the Walker River would not increase above the October mean monthly flow for wet years to avoid significant impacts on the spawning period of the mountain whitefish. A gradual increase in release of storage water that extends over a longer period (two weeks to one month) would be beneficial for instream biota and reduce the potential for whitefish eggs to be dislodged. The release of storage water in the appropriate amounts would result in the proposed project having a long-term beneficial impact on special-status fish species. Proposed General Plan Policy Action 3.E.4.e would avoid significant impacts of water transactions on mountain whitefish.

Proposed Project Impacts

The adoption of General Plan policies and amendments that reduce and mitigate the effects of a water transaction program would not adversely affect special-status species. The proposed project (General Plan policies) would have a beneficial impact by protecting habitats for special-status species, requiring compensatory mitigation for effects to special-status plant populations and avoiding significant impacts on mountain whitefish spawning. The proposed project would have no adverse impacts.

Impact Biology-2: Would a water transaction program have a substantial adverse effect on any riparian habitat, or other sensitive natural communities identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service? (Significance criterion b)	Significance Determination of Proposed Project (GP Policies)	Significance Determination of Conceptual Water Transaction Program
	No Impact	Potentially Significant

Impacts on Riparian Habitats and Other Sensitive Natural Communities

Riparian Vegetation and Sensitive Natural Communities

Persistent reductions in irrigation and associated reduced groundwater recharge could affect water availability to the rooting zone and result in vegetation composition shifts that favor more drought-resistant species. Areas supporting vulnerable vegetation communities with sandy soils that have lower water storage capacity are expected to be more impacted than those on finer textured loam and clay rich soils (Figure 3.2-1 and Figure 3.2-2). Invasive weed species that are more drought tolerant could increase in extent during single- to multiple-year reduction in irrigation flows as invasive species may be adapted to drier conditions than the existing plant communities. Potential impacts to riparian vegetation and other sensitive natural

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communities associated with permanent acquisition of decreed or storage water rights are discussed below.

Impacts on Upland Vegetation Communities

All upland vegetation communities, including upland-associated sensitive natural communities, are outside of the areas that would experience hydrological changes associated with a permanent transfer of water rights; therefore, there would be no impact on any upland sensitive natural communities.

Impacts on Irrigation-Dependent Sensitive Natural Communities

Permanent or long-term water transactions and diversion of irrigation flow to instream flow could result in impacts on wetland vegetation communities because those vegetation communities are sensitive to changes in water availability. Wetland vegetation communities could convert to drier types of vegetation on parcels where water is transferred as part of a long-term water transfer. The effects on wetland vegetation communities within parcels where irrigation water is part of a permanent water transfer are summarized as follows:

- Emergent marsh could convert to willow–rose scrub, wet sedge and/or moist meadow, depending on adjacent conditions.
- Wet sedge could convert to moist meadow and/or dry grass.
- Moist meadow could convert to dry grass.
- Willow–rose scrub could convert to moist meadow.

Each of the wetland vegetation types in the project area includes areas with sensitive natural communities, and willow–rose scrub is a sensitive natural community. The impact from the conversion of sensitive natural communities to drier non-sensitive vegetation communities as a result of water transactions is potentially significant.

Proposed General Plan Policy Action 3.E.4.d involves the preparation of updated vegetation maps that identify the presence, extent, and quality of sensitive vegetation communities within the property where the transfer would occur. Mapping would identify sensitive natural communities on the water right holder’s property. If sensitive communities are identified, the applicant shall consult with CDFW and implement a Sensitive Vegetation Community/Riparian Adaptive Management Plan that would minimize loss of sensitive communities and, where necessary, restore or replace sensitive communities with a site of equivalent value. Where the loss of sensitive vegetation communities is unavoidable, the applicant would identify off-site locations for creation of new sensitive natural communities and/or pay for acquisition and long-term management and protection through a conservation easement of the sensitive natural community that would be lost. Implementation of proposed General Plan Policy Action 3.E.4.d would avoid or mitigate impacts of water transactions on sensitive natural communities.

Increases in the extent of more drought tolerant invasive plant species could contribute to impacts on any sensitive natural communities that occur in areas where irrigation flows are transferred. The WBC has commented that invasive weed management for a period of two years is included in the water transaction; however, a two-year period may not be sufficient to

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avoid increases in invasive weed dominance and impacts on sensitive natural communities. The impacts from invasive weeds on sensitive natural communities is potentially significant.

Proposed General Plan Policy Action 3.E.4.a requires an adaptive management plan that would address management of invasive weeds. Implementation of proposed General Plan policy Action 3.E.4.a would avoid or mitigate impacts of invasive weeds on sensitive natural communities.

Impacts on Riparian Habitat

A permanent transfer of water rights could result in beneficial effects on riparian habitat along the East or West Walker Rivers due to increased instream flow. The increased instream flow could increase the extent of riparian habitats, including riparian forest and willow-rose scrub, where it is adjacent to the Walker River and therefore would have a beneficial impact. There would be no adverse impact on riparian habitat as a result of the conceptual water transaction program.

Proposed Project Impacts

The adoption of General Plan policies and amendments that avoid or mitigate the effects of a water transaction program would not adversely affect sensitive natural communities. The proposed project (General Plan policies) would have a beneficial impact by protecting sensitive natural communities and managing invasive weeds. The proposed project would have no adverse impacts.

Impact Biology-3: Would a water transaction program have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? (Significance criterion c).	Significance Determination of Proposed Project (GP Policies)	Significance Determination of Conceptual Water Transaction Program
	No Impact	No Impact

Permanent or Long-Term Acquisition of Decreed Water Rights or Storage Water Rights

The wetland habitats that would be impacted are non-jurisdictional based both on federal and state regulatory guidelines. Specifically, USACE does not consider artificially irrigated areas that would revert to uplands if the irrigation ceased to be jurisdictional (USACE, 2012); similarly, the state excludes wetlands that are maintained for agricultural crop irrigation or stock watering from the definition of waters of the state (State Water Resources Control Board, 2019). The permanent water transaction would have no impact on jurisdictional wetlands because the wetlands that could be impacted are not state or federally jurisdictional. No impact would occur.

Proposed Project Impacts

The proposed project (General Plan policies) would have no impact on state or federally protected wetlands. The proposed project would apply to water transactions under the WBRP. As mentioned above, any wetlands that could be affected by a water transaction are supported

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by irrigation and are not state or federally protected. The proposed project would therefore have no effect on state or federally jurisdictional wetlands.

Impact Biology-4: Would a water transaction program substantially interfere with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites? (Significance criterion d)	Significance Determination of Proposed Project (GP Policies)	Significance Determination of Conceptual Water Transaction Program
	No Impact	Less than Significant Impact

Native or Migratory Wildlife

Mule deer and greater sage grouse use the project area for overwintering and may be susceptible to changes in water availability, vegetation quality, and vegetation distribution as discussed in Impact Biology-1, above. As discussed, in Impact Biology-1 above, the water transaction program would not adversely affect any breeding habitat (nursery sites) for wildlife; areas used for agricultural production are subject to routine disturbance and do not provide wildlife nursery sites.

The West Walker herd of mule deer is present in the project area in winter. Mule deer are extremely reliant on water. Water transaction scenarios in the Walker River Basin would not change water availability for migrating mule deer because changes in water availability resulting from water transactions would occur from spring through fall.

Water transactions could affect the distribution of forage vegetation if there are long-term landcover type changes. A few important mule deer forage plants occur in the project area, including (but are not limited to) bitterbrush, rabbitbrush, Woods’ rose, sagebrush, willow, bluegrass, squirrel tail, and fescue (Cox, et al., 2009). This diet includes a mix of plants adapted to both wet and dry conditions. The mule deer’s diet is diverse; therefore, changes in vegetation type on the lands that are subject to water transactions are not expected to reduce the variety of existing vegetation types used for forage. Accordingly, there should be no impact on mule deer migration patterns in winter.

Greater sage-grouse can move several miles through sagebrush scrub and meadow habitats to complete habitual nesting, chick-rearing, and overwintering movements. An increase in the area and distribution of sagebrush scrub in the project area as a result of conversion of irrigated lands to drier vegetation types, including sagebrush, may improve habitat connectivity and migration for greater sage grouse.

Water transactions would have little or no effect on the movement of native resident or migratory wildlife species, established native resident or migratory wildlife corridors, or the use of native wildlife nursery sites. Impacts of permanent or long-term transfer of decreed of water storage rights on species migration would be less than significant.

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Native or Migratory Fish

Permanent or Long-Term Acquisition of Decreed Water Rights

Permanent or long-term transfer of decreed water rights would result in seasonal and perennial increases to instream flows in the East and West Walker Rivers. Increased flows in the Walker River would result in greater water depth and improved passage for native and migratory fish within the Walker River. In addition, increased flow in the Walker River would improve production of benthic macroinvertebrates, which could increase food resources for mountain whitefish and generally expand nursery habitat for other fish species. The impacts of water transactions on native fish nursery sites from increased food resources is potentially beneficial. The amount of water that would be retained in or delivered to the West and East forks of the Walker River would be well within the range of natural variability currently and historically experienced by fish. For example, the very wet 2016/2017 and 2018/2019 water years resulted in heavy spring snow pack, which elevated instream flows well beyond those required to fulfill water right allocations. The suspended sediment load experienced by fish during these flows is likely well in excess of what the transaction program is likely to produce. In addition, the transaction program would retain or deliver a small portion of the water that would normally be in the channel if there were no diversions. As a result, the sediment that could be suspended with implementation of the proposed water transactions would be smaller than the unimpaired flow and within the natural range of variability. The irrigation season in Antelope and Bridgeport valleys occurs from March 1 to October 31 and March 1 to September 15, respectively. For the most part, the Mountain whitefish spawning period of October to early December does not coincide with the peak months of irrigation season when discharge flows from agricultural areas are highest. The limited increase in in-stream flow in October as a result of transfer of storage rights to Walker Lake would not result in sedimentation that would affect the fishery because the increased flow would be at a time of year when flow within Walker River would be below peak levels and the flow levels would be within the normal range for the River. Therefore, the potential for the proposed project to mobilize sediment that could affect fish nursery habitat is less than significant.

Permanent or Long-Term Acquisition of Storage Water Rights

The release of storage water would increase flows in the Walker River, which would result in greater water depth and improved passage for native and migratory fish downstream of the reservoirs and within the Walker River downstream of the release sites. In addition, increased flow in the Walker River would improve production of benthic macroinvertebrates, which could increase food resources for mountain whitefish and generally expand nursery habitat for other fish species. Therefore, the acquisition and increased release of storage water could have beneficial impacts on the movement of native or migratory fish species. As discussed under Impact Biology-1 above, late season release of water from storage could impact eggs of mountain whitefish, which could result in a significant impact on native nursery sites. The proposed General Plan policy Action 3.E.4.e would mitigate the effect on native nursery sites for mountain whitefish by ensuring that release flows would be at a level that they would not affect mountain whitefish spawning activity.

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As discussed above, increased instream flow from a water transaction would be well within the natural range of current and historical variability experienced by fish species within the Walker Basin. Therefore, the potential for the proposed project to mobilize sediment that could affect native fish would be less than significant.

Proposed Project Impacts

The proposed project (General Plan policies) would not adversely affect native resident or migratory fish or wildlife species, migratory wildlife corridors, or use of native wildlife nursery sites. The proposed project would have a potentially beneficial impact on native nursery sites by mitigating impacts of a water transaction program. The proposed project would have no adverse effect.

	Significance Determination of Proposed Project (GP Policies)	Significance Determination of Conceptual Water Transaction Program
Impact Biology-5: Would a water transaction program would conflict with local policies or ordinances protecting biological resources. (Significance criterion e)	No Impact	Potentially Significant Impact

Permanent Acquisition of Decreed and Storage Water Rights

Water transactions could result in potential conflicts with existing policies in the County General Plan, including the following:

- GOAL 2.** Maintain an abundance and variety of vegetation, aquatic and wildlife types in Mono County for recreational use, natural diversity, scenic value, and economic benefits.
- Objective 2.A.** Maintain and restore botanical, aquatic and wildlife habitats in Mono County.
- Policy 2.A.2.** Protect and restore threatened and endangered plant and animal species and their habitats.
- Policy 2.A.3.** Protect and restore sensitive plants, wildlife and their habitat, and those species of exceptional scientific, ecological, or scenic value.
- Policy 2.A.10.** Support efforts to regulate instream flows and lake levels to maintain fishery and other wildlife values, including riparian habitat.
- Policy 2.A.11.** In order to provide richer angling diversity, and to increase the wild trout population and stimulate tourism, support efforts to manage fisheries in accordance with their biological capabilities.
- Policy 4.A.7.** Continue to support “no net loss” of wetlands at a regional scale.

Potential conflicts with these policies could result from loss of special-status plant populations and sensitive communities as a result of vegetation drying and introduction of invasive weeds,

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impacts on mountain whitefish from increased flows during the spawning season, and loss of wetlands from vegetation community drying.

The proposed General Plan policy Actions 3.E.4.a, 3.E.4.c, 3.E.4.d, and 3.E.4.e have been developed to provide additional detail and clarity on the requirements of future water transactions to avoid conflicts with County policies. The SWRCB would have to consider these policies in their CEQA process prior to approval of any future water transaction. Implementation of the proposed project would mitigate future water transactions from conflicts with County General Plan policies.

Proposed Project Impacts

The proposed project contains, a number of proposed policy changes (Section 2.8) designed to avoid or mitigate impacts of a water transaction program. These policies were designed to be compatible with other County policies and ordinances and would reduce potential conflicts of a water transaction on biological resources. The proposed project would have no adverse effect from conflicts with local policies or ordinances.

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