

2020 ANNUAL MONITORING REPORT (YEAR 1)

DEVIL'S GATE OFF-SITE MITIGATION PROJECT

LOS ANGELES COUNTY, CALIFORNIA

USACE FILE No. SPL-2014-00591

CDFW TRACKING No. 1600-2015-0263-R5

RWQCB FILE No. 15-053



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LIST OF ACRONYMS

BEI	Bank Enabling Instrument
Cal-IPC	California Invasive Plant Council
CDFW	California Department of Fish and Wildlife
GPS	Global Positioning System
HMMP	Habitat Mitigation and Monitoring Plan
LACFCD	Los Angeles County Flood Control District
RWQCB	Regional Water Quality Control Board
USACE	United States Army Corps of Engineers
WOUS	Waters of the United States
WRA	WRA, Inc.

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1.0 PROJECT OVERVIEW

This is the first annual report for the Devil's Gate Off-Site Mitigation Project as required under the terms of the approved Devil's Gate Off-Site Mitigation Project Habitat Mitigation and Monitoring Plan (HMMP; WRA 2018). The USACE permit authorizing the HMMP requires the first annual report be submitted to the USACE, RWQCB, and CDFW (Permitting Agencies) one full year after planting by October 1. Subsequent reports will be submitted annually by October 1st thereafter for the five-year period commencing with planting.

Restoration activities at the Devil's Gate Off-Site Mitigation Project Site were completed as outlined in the as-built memo submitted to the Permitting Agencies and dated April 23, 2019 (WRA 2019). This report includes information on the site conditions, development activities, and performance monitoring for 2020.

1.1 Permit File Numbers

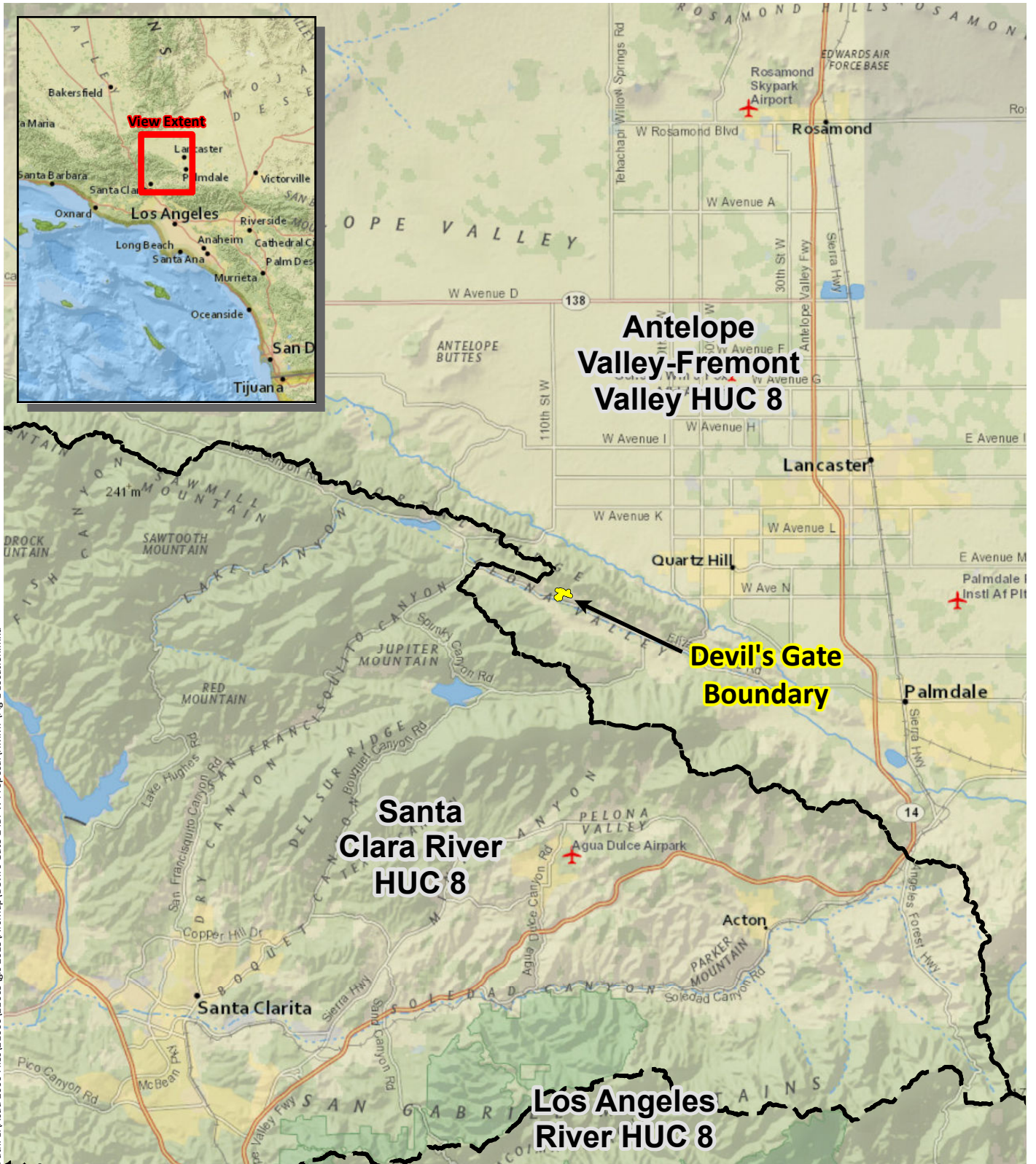
- U.S. Army Corps of Engineers Section 404 (File No. SPL-2014-00591)
- California Department of Fish and Wildlife Section 1602 Streambed Alteration Agreement (Notification No. 1600-2015-0263-R5)
- Los Angeles Regional Water Quality Control Board Section 401 Water Quality Certification (File No. 15-053)

This annual report is prepared pursuant to the above permits, as set forth by the HMMP prepared by WRA, Inc. (WRA), dated October 17, 2018.

1.2 Project Description

The Devil's Gate Off-Site Mitigation Project (Project) serves as an off-site mitigation project for the Los Angeles County Flood Control District (LACFCD) Devil's Gate Sediment Removal and Maintenance Project, which was proposed to remove vegetation and 1.7 million cubic yards (cy) of sediment from a 65.56-acre area within the reservoir above the Devil's Gate Dam (Impact Site). The Sediment Removal Project will directly impact 1.52 acres of United States Army Corps of Engineers (USACE) jurisdictional wetlands and 32.54 acres of USACE non-wetland Waters of the United States (WOUS). LACFCD proposed to compensate for these temporary and permanent impacts through a combination of on-site and off-site mitigation projects, as required by the USACE Section 404 Permit (SPL-2014-00591), the California Department of Fish and Wildlife (CDFW) Lake or Streambed Alteration Agreement (1600-2015-0263-R5), and the Regional Water Quality Control Board (RWQCB) Section 401 Certification (15-053). On-site mitigation objectives are described in the Devil's Gate Sediment Removal and Management Project Habitat Mitigation and Monitoring Plan (ECORP 2018).

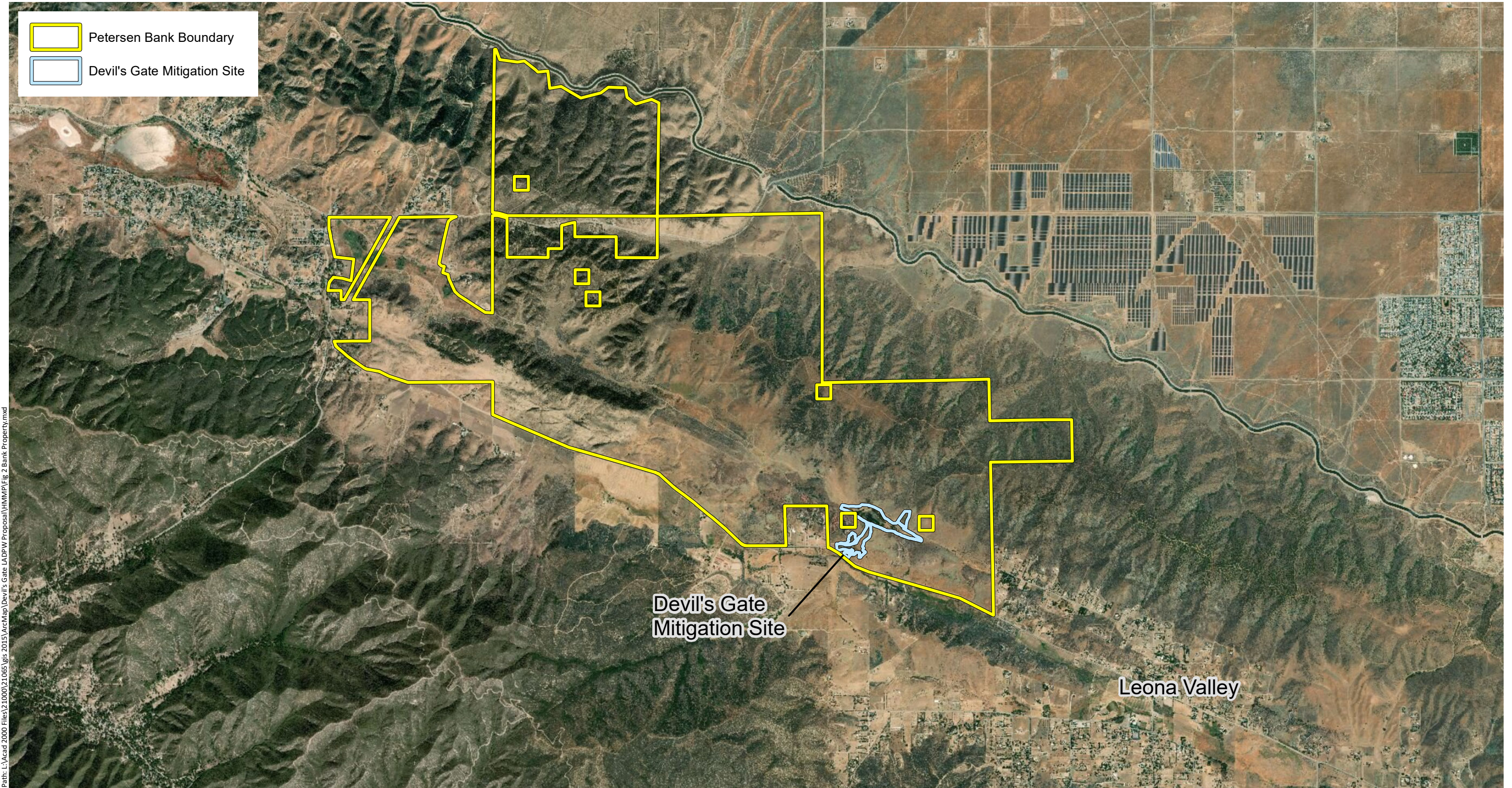
LACFCD satisfied the off-site mitigation requirement by engaging Land Veritas Corp (Bank Sponsor) to implement the Project in a 31.55-acre portion of the Petersen Ranch Mitigation Bank (Bank). The Bank is located in northern Los Angeles County near Leona Valley, California (Figure 1). The Project took place at and surrounding a large sag pond in Area D (Mitigation Site) of the Bank (Figure 2). Mitigation actions focused on enhancing existing seasonal wetlands that support mulefat (*Baccharis salicifolia*) and willow (*Salix* sp.) populations, creating new mulefat/willow dominated habitats, and preserving alluvial scrub areas around a large sag pond. The created, restored, and preserved communities are of a similar type and provide similar or greater functions to those affected at the Impact Site.



Sources: National Geographic, WRA | Prepared By: czumwalt, 8/2/2018

Figure 1. Location Map

Petersen Ranch Mitigation Bank
 Los Angeles County, California

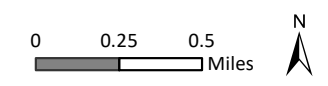


Path: L:\Acad 2000 Files\21000\21065\gis\2015\ArcMap\Devil's Gate LADPW Proposal\HMMP\Fig 2 Bank Property.mxd

Sources: 2016 DigitalGlobe Aerial, WRA | Prepared By: czumwalt, 8/2/2018

Figure 2. Bank Property Map

Petersen Ranch Mitigation Bank
Los Angeles County, California



1.3 Monitoring and Reporting Tasks

This report addresses the Year 1 monitoring and reporting requirements of the Mitigation Site outlined in the HMMP, including the management and maintenance tasks completed this year, a description of the overall condition of the Mitigation Site, and the status of development activities; performance monitoring activities and results; and management and maintenance activities proposed for the upcoming year, including proposed remedial actions.

1.4 Status Summary

Habitat restoration and enhancement activities were completed in April 2019, as described in the as-built report letter dated April 23, 2019. This includes planting of over 10,000 willow and mulefat live stakes and installation of cattle exclusion fencing. The mitigation site is now in Year 1 of the management and monitoring period, which will continue until the final (Year 5) performance standards have been met.

2.0 MITIGATION SITE EXISTING CONDITIONS

2.1 Location

The Mitigation Site is located approximately 32 miles north of the Impact Site within the agency approved Petersen Ranch Mitigation Bank. The 31.55-acre Mitigation Site is located within the eastern portion of the Bank (Figure 2). The Mitigation Site lies within Phase D of the Bank Property which is part of the larger, 4,103-acre Bank. Within Phase D, a large sag pond and associated wetland complex had been identified as having opportunities for improving the existing habitat. Opportunities include establishment and enhancement of wetlands, non-wetland WOUS and associated buffer habitats. The buffer habitats will be restored and enhanced to not only provide protection for the on-site aquatic resources but also to improve the overall function of the watershed. Additional details describing the mitigation bank can be found in the Bank Enabling Instrument (BEI) (Land Veritas Corp. 2016) and in the Biological Resource Inventory (Exhibit H, of the BEI).

2.2 Existing Habitat

A biological inventory was conducted by WRA at the Bank Property in January and February of 2013 (WRA 2013). In total, 11 biological communities were identified within the Mitigation Site: two wetlands and waters communities, four riparian communities, two sensitive terrestrial communities, and three non-sensitive terrestrial communities. The two communities targeted for restoration at the Mitigation Site are highlighted below.

Mulefat thickets (*Baccharis salicifolia* Shrubland alliance), 1600, PC, G5 S4. The Mulefat thickets alliance is widespread in canyon bottoms, floodplains, irrigation ditches, lake margins, and stream channels (Sawyer et. al, 2009). This alliance covered 6.21 acres of the Mitigation Area. Mulefat thickets integrate with Fremont cottonwood forest, arroyo willow thickets, stretchberry thickets, and Mexican rush marshes. Mulefat comprised greater than 50 percent relative cover in the shrub layer. Typically, mulefat was the only species in the shrub layer. In rare instances, other shrub species included arroyo willow (*Salix lasiolepis*), elderberry (*Sambucus nigra* ssp. *caerulea*), and stretchberry (*Forestiera pubescens*). Herbaceous groundcover was composed of Mexican rush (*Juncus mexicanus*), clustered field sedge (*Carex praegracilis*), stinging nettle (*Urtica dioica*), ripgut brome (*Bromus diandrus*), and ruderal weeds.

Red willow thickets (*Salix laevigata* Woodland Alliance), 1600, Porter-Cologne, G3 S3. Red willow thickets are widespread and occur in ditches, floodplains, lake edges, and low gradient depositions along streams (Sawyer et. al, 2009). This alliance covered 0.65 acres of the Mitigation Area, covering an area within Pond D itself. Red willow comprised greater than 50 percent relative cover in the tree canopy, or greater than 30 percent relative cover in the tree canopy if arroyo willow was in the subcanopy. The understory shrub layer often contained mulefat. Herbaceous groundcover was composed of Mexican rush, clustered field sedge, stinging nettle, water smartweed (*Persicaria amphibia*), ripgut brome, and ruderal weeds.

3.0 MITIGATION ACTIVITIES

The Project involved installing cattle exclusion fencing, removing and managing invasive plant species, planting mulefat and willow, and supplementing hydrology when necessary to sustain the restored habitat, as well as guaranteeing the long-term legal protection of the Mitigation Site with a conservation easement.

3.1 Preservation Areas

Two distinct preservation areas are located in the northeast and southwest of the Mitigation Site. They are dominated by California buckwheat (*Eriogonum fasciculatum*) in the northeast, and Parish's sagebrush (*Artemisia tridentata ssp. parishii*), thick leafed yerba santa (*Eriodictyon crassifolium*), and California buckwheat in the southwest. In total, 6.60 acres have been preserved. These areas are located on alluvial fans and ephemeral drainages that receive periodic sediment and surface flows and support high quality habitat for xeric riparian communities.

3.2 Planting Areas

Planting areas are within and immediately surrounding areas that previously supported sparse or scattered stands of mulefat, willow, and other riparian species. These areas were planted with mulefat and willow live stakes to achieve an average density of 500-stems per acre, similar to existing high density mulefat and willow stands within the Mitigation Site. Initial planting used a clustered approach that created large patches of dense cover, with open spaces between clusters. Over time, spaces between clusters are anticipated to fill in to achieve dense cover of mulefat and willow. In total, 27.67 acres have been planted.

4.0 MONITORING AND PERFORMANCE STANDARDS

This section details annual performance standards and monitoring methods. Monitoring will be conducted annually for five years to demonstrate success of the mitigation plantings. Monitoring will be conducted in spring or early summer, and will be timed to precede the blooming periods of target weed species, so that any necessary control measures can be implemented prior to the invasive species setting seed. Percent cover of mulefat and willow species within the Mitigation Site will be assessed using plots spaced along four permanent 50-meter transects. Survivorship of planted mulefat and willow stakes will be assessed by surveying irrigation lines and counting dead plants. Target invasive plant species will be mapped annually and treated on an as-needed basis. Success will be evaluated based on achieving the target standards presented below.

Restoration and enhancement activities were completed at the Mitigation Site in April 2019; this report therefore summarizes the first year of annual monitoring.

4.1 Planting Area Success Criteria

Success criteria for mulefat and willow installed in the planting areas is based on survival rates and absolute cover assessed by visual observation during the five-year monitoring period. Absolute cover of mulefat and willow is assessed in planting areas using the methods outlined in Section 4.2. Additionally, absolute cover of California Invasive Plant Council (Cal-IPC) rated High broad-leaved plant species will be assessed in conjunction with mulefat and willow cover. The criteria that are used to assess the success of the Mitigation Site are shown in Table 1.

Table 1. Performance Standards for Planting Areas

PERFORMANCE STANDARD	MONITORING YEAR					MONITORING FREQUENCY
	1	2	3	4	5	
By year 2, the planting areas must contain 10% or more absolute cover of mulefat or willow, or demonstrate 80% survivorship.		X				Annually
By year 3, the planting areas must contain 25% or more absolute cover of mulefat or willow, or demonstrate 80% survivorship			X			Annually
By year 4, planting areas must contain 40% or more absolute cover of mulefat or willow.				X		Annually
By year 5, planting areas must contain 68% or more absolute cover of mulefat or willow					X	Annually
Percent cover of Cal-IPC rated high broad leaved invasive plant species must cover no more than 10% absolute cover of the Mitigation Site.		X	X	X	X	Annually

4.2 Methods

The Mitigation Site planting areas were monitored for cover of willow and mulefat and survivorship of plantings. Absolute cover of willow and mulefat was monitored in planting areas using four permanent transects. Planted container stock were counted within the planting areas to assess survivorship. Qualitative health status was also assessed by counting plants that appeared stressed (e.g., displaying indicators such as yellowing, leaf drop, limb sacrifice, etc.).

Permanent 50-meter transects were established within planting areas (Figure 3). Transects were permanently marked in the field using T-posts. Global Positioning System (GPS) points were recorded in order to repeat transects in future years, and photos were taken at the start and end of each transect. Each 50-meter transect was surveyed by walking a 2.5-meter wide belt transect and recording species and

species cover class¹ every 5 meters, resulting in 10 sampling plots per transect. Species and species cover class were recorded within each plot in order to assess the performance standards outlines in Table 1. A photograph was taken of each plot.

Survivorship surveys were conducted to supplement mulefat and willow cover data and to identify areas that may be in need of maintenance. Survivorship surveys were conducted concurrently with the vegetation cover monitoring. Year 1 survivorship monitoring consisted of targeted surveys in areas with lower vegetation cover. Individual mulefat and willow stakes were tallied and identified as either alive or dead. Percent survivorship was calculated by dividing the number of observed living mulefat or willow stakes by the total number of stakes installed for each species, not including stakes that have been replaced.

4.3 Maintenance Activities

Maintenance activities during the five-year plant establishment period in the created and enhanced riparian areas will include:

1. Erosion control and repair on slopes, should an extreme storm event occur.
2. Inspections for colonization of non-native plants and actions to control them.
3. Inspections of wildlife friendly cattle exclusion fencing to ensure no grazing inside the Mitigation Site occurs and actions to repair the fence as needed.
4. Adjustment to water augmentation methods to ensure proper hydrologic conditions for plant establishment.

These conditions will be checked multiple times per year and if deficiencies are noted, they will be assessed, documented, and remedied as quickly as necessary to prevent further damage.

¹ Cover classes are as follows: 0=<1%, 1=1-5%, 2=5-25%, 3=25-50%, 4=50-75%, 5=75-95%, 6=95-100%

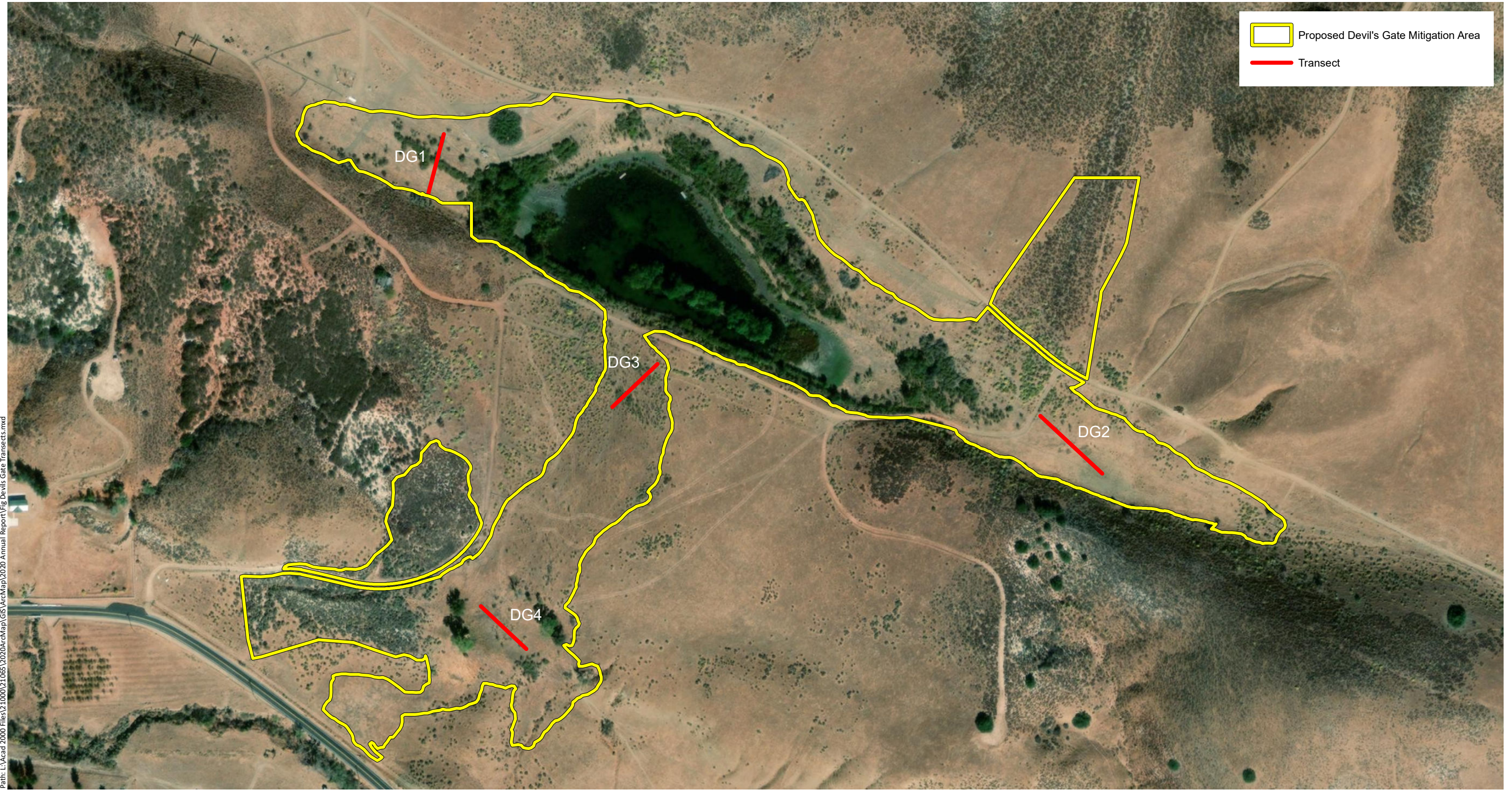


Figure 3. Mitigation Site Monitoring Locations

5.0 RESULTS

Year 1 Monitoring activities were completed at the Mitigation Site in May 2020. There are no success criteria to meet in Year 1 of the performance monitoring period (see Table 1). However, analysis of Year 1 monitoring data indicated that the Mitigation Site is performing well enough to already meet Year 2 performance criteria. Cover of mulefat and willow is variable at the four monitoring transects, averaging 17 percent absolute cover. No broad leaved invasive species rated High by Cal-IPC were detected at any of the monitoring transects. Survivorship surveys did not detect any dead mulefat or willow plantings. However, due to the targeted nature of the Year 1 survivorship surveys, it was estimated through visual observation that the site-wide percent survivorship was roughly 95% for both mulefat and willow. . Mulefat and willow cover results are presented in Table 2. Invasive broad-leaved plant cover is presented in Table 3.

Mulefat was more abundant than willow within the monitoring transects and was the dominant woody riparian species. Other native species with notable absolute cover within transects included beardless wild rye (*Elymus triticoides*; 8.7%), western vervain (*Verbena lasiostachys*; 4.3%), tarragon (*Artemisia dracunculus*; 3.8%), and seaside heliotrope (*Heliotropium curassavicum* var. *oculatum*; 3.0%). Non-native grass cover was moderate and included many of the species commonly encountered during performance monitoring efforts over the rest of the Bank, such as ripgut brome (8.7%), soft chess (*Bromus hordeaceus*, 1.3%) red brome (*B. rubens*; 2.5%), cheatgrass (*B. tectorum*; 3.6%), rattail sixweeks grass (*Festuca myuros*; 8.7%), and foxtail barley (*Hordeum murinum*; 5.0%) with trace cover of both slim oat (*Avena barbata*) and medusa head (*Elymus caput-medusae*). Non-native forb cover was low. Cal-IPC Moderate broad-leaf species included short-podded mustard (*Hirschfeldia incana*) at all four transects but only totaling 1.5 percent cover, and bull thistle (*Cirsium vulgare*) at transect DG4 with 2.6 percent cover.

A full species list for the four monitoring transects is supplied in Appendix A. Photopoints and transect photos are collected in Appendix B.

Table 2. Mulefat and Willow Cover Within Mitigation Site

TRANSECT	MULEFAT	ABSOLUTE COVER			YEAR 1 PERFORMANCE STANDARD	YEAR 1 PERFORMANCE STANDARD MET?
		WILLOW	COMBINED	YEAR 1 PERFORMANCE STANDARD		
DG1	23.0%	0.0%	23.0%	N/A	N/A	
DG2	2.6%	0.6%	3.2%	N/A	N/A	
DG3	38.1%	0.0%	38.1%	N/A	N/A	
DG4	3.6%	0.3%	3.9%	N/A	N/A	
Average	16.8%	0.2%	17.0%	N/A	N/A	

Table 3. Invasive Broad-Leaved Cover

TRANSECT	CAL-IPC HIGH COVER*	YEAR 1 PERFORMANCE STANDARD	YEAR 1 PERFORMANCE STANDARD MET?
DG1	0.0%	N/A	N/A
DG2	0.0%	N/A	N/A
DG3	0.0%	N/A	N/A
DG4	0.0%	N/A	N/A
Average	0.0%	N/A	N/A

*Species rated High per Cal-IPC (Annual grasses excluded)

6.0 SUMMARY AND MANAGEMENT RECOMMENDATIONS

6.1 Mulefat and Willow Cover

No Year 1 performance standard for mulefat and willow cover was set for the Mitigation Site. The Year 2 performance standard is: The planting areas must contain 10% or more absolute cover of mulefat or willow, or demonstrate 80% survivorship. The Mitigation Site is meeting the Year 2 performance standard for mulefat and willow cover a year ahead of schedule. Though the Mitigation Site is meeting the Year 2 performance standards, the Year 1 monitoring data indicates low cover of mulefat and willow in transects DG2 and DG4. The reason for the low cover is due to the timing of annual monitoring efforts and phenology of the mulefat and willows. The phenology of willow and mulefat during the May monitoring visit was early, with both species just starting to produce foliage after winter senescence. Older, and more robust individuals were generally further along in foliage growth, but the majority of the live stakes had little foliage with small young leaves during the May monitoring visit. This became evident during a subsequent site visit on September 10, 2020, when a significant increase in foliar abundance was observed throughout the Mitigation Site (Figures 4 and 5). Phenotypic variations in leaf phenology are common to perennial plants grown in similar environments and reflect underlying genetic diversity (Weih 2009), which may explain the difference in cover observed in the spring between the two sets of transects. Future annual monitoring efforts will take place later in the growing season in order to better align with the biology of the planted species and overall performance of the Mitigation Site.

Figure 4. Late season foliar abundance at DG2, looking north (September 2020).



Figure 5. Late season foliar abundance at DG2, looking south (September 2020).



6.2 Invasive Cover

No Year 1 performance standard for invasive cover was set for the Mitigation Site. The Year 2 performance standard is: Percent cover of Cal-IPC rated high broad-leaved invasive plant species must cover no more than 10 percent absolute cover of the Mitigation Site. As shown in Table 3, no Cal-IPC rated High broad-leaved plant species have been recorded in the monitoring transects and the Mitigation Site is already meeting this performance standard a year ahead of schedule.

6.3 Management

6.3.1 Biological Resources

Weeds surrounding each planted stake are cleared in the spring and managed throughout the growing season. It is recommended that treatment of invasive non-native species within the Mitigation Site continues in conjunction with invasive species treatments across the rest of the Bank Property. Although no broad-leaved species ranked High by Cal-IPC are present in the Site, three Cal-IPC High grasses are present: red brome, cheatgrass, and medusa head. Additionally, six Cal-IPC Moderate species are also present within the site: four non-native grasses and two broad leaf species (Appendix A). Red brome and cheatgrass are locally abundant in the region, and within the Bank property, these species will be managed to reduce competition for the live stakes. Medusa head populations are small and localized in the Bank property and will be targeted for eradication. Treatment of these species will improve the habitat quality of the restoration areas and ensure that target functions and values are met for the Site.

6.3.2 Infrastructure and Facilities

Installation of the cattle exclusion fencing and associated gates was completed concurrent with restoration activities in early 2019. The fence remains intact, cattle have been successfully excluded from the Site, and no repairs to the fence have been required. Additionally, no erosion control measures were necessary this year.

7.0 REFERENCES

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- WRA 2019 WRA, Inc. 2019. Devil's Gate Off-Site Project As-Built Report Letter. April 23, 2019.

APPENDIX A – TRANSECT SPECIES LIST

Scientific Name	Common Name	CAL-IPC Status	Wetland Status (AW 2016)	DG1	DG2	DG3	DG4	AVG
Bare	Bare			0.9%	1.1%	8.8%	13.5%	6.1%
Litter	Litter			21.8%	30.0%	35.3%	17.3%	26.1%
Acmispon americanus var. americanus	Spanish lotus	-	UPL		0.5%			0.1%
Amsinckia intermedia	Common fiddleneck	-	-	0.2%	0.1%			0.1%
Artemisia californica	Coastal sage brush	-	-		0.1%			0.0%
Artemisia dracuncululus	Tarragon	-	-		2.3%	8.3%	4.5%	3.8%
Asclepias fascicularis	Milkweed	-	FAC		0.3%	0.1%	0.2%	0.1%
Astragalus douglasii var. douglasii	Douglas's milkvetch	-	-			0.3%		0.1%
Avena barbata	Slim oat	Moderate	-				0.1%	0.0%
Baccharis salicifolia ssp. salicifolia	Mule fat	-	FAC	23.0%	2.6%	38.1%	3.6%	16.8%
Bromus diandrus	Ripgut brome	Moderate	-	16.5%	2.3%	2.5%	13.5%	8.7%
Bromus hordeaceus	Soft chess	Limited	FACU	0.3%	2.7%	1.3%	0.8%	1.3%
Bromus rubens	Red brome	High	UPL		0.4%	5.5%	4.2%	2.5%
Bromus tectorum	Downy chess	High	-	9.6%	4.3%	0.3%	0.2%	3.6%
Carex praegracilis	Field sedge	-	FACW	5.8%	1.8%	0.8%	1.0%	2.3%
Castilleja exserta	Owl's clover	-	-		0.1%			0.0%
Cirsium occidentale	Western thistle	-	-		0.3%			0.1%
Cirsium vulgare	Bullthistle	Moderate	FACU				2.6%	0.6%
Clarkia purpurea ssp. quadrivulnera	Purple clarkia	-	-			0.4%		0.1%
Corethrogyne filaginifolia	Common sandaster	-	-			0.1%		0.0%
Cucurbita foetidissima	Missouri gourd	-	-	0.1%	0.3%			0.1%
Datura wrightii	Jimsonweed	-	UPL	0.1%		0.1%		0.0%
Descurainia sophia	Herb sophia	Limited	-	0.3%		0.1%		0.1%
Distichlis spicata	Salt grass	-	FAC		3.0%	0.1%	0.3%	0.8%
Elymus caput-medusae	Medusa head	High	-				0.3%	0.1%
Elymus triticoides	Beardless wild rye	-	FAC	8.2%	25.5%		0.4%	8.5%
Epilobium brachycarpum	Willow herb	-	-		0.1%			0.0%
Ericameria nauseosa	Rubber rabbitbrush	-	-		0.5%	2.9%	2.4%	1.4%
Erigeron canadensis	Canada horseweed	-	FACU	0.1%		1.1%	0.1%	0.3%
Eriogonum davidsonii	Davidson buckwheat	-	-		0.5%	0.3%		0.2%
Eriophyllum confertiflorum	Yellow yarrow	-	-		0.3%			0.1%
Erodium cicutarium	Red stemmed filaree	Limited	-		6.6%	2.9%	0.3%	2.4%
Erythranthe guttata	Seep monkeyflower	-	OBL	0.3%	0.1%			0.1%
Festuca myuros	Rattail sixweeks grass	Moderate	FACU		5.8%	28.5%	0.6%	8.7%
Grindelia camporum	Gumweed	-	FACW	0.3%	3.6%	0.2%	3.4%	1.8%
Heliotropium curassavicum var. oculatum	Seaside heliotrope	-	FACU			0.5%	11.6%	3.0%
Hirschfeldia incana	Short-podded mustard	Moderate	-	2.0%	1.6%	1.3%	0.9%	1.5%
Hordeum murinum	Foxtail barley	Moderate	FACU	11.3%	7.5%	0.3%	0.9%	5.0%
Juncus mexicanus	Mexican rush	-	FACW	2.5%	3.5%	2.3%	0.6%	2.2%
Lactuca serriola	Prickly lettuce	-	FACU		0.7%	0.3%	1.9%	0.7%
Lepidium appelianum	Hairy whitetop	Limited	UPL	0.6%				0.1%
Lupinus bicolor	Miniature lupine	-	-			0.2%		0.1%
Malvella leprosa	Alkali mallow	-	FACU		0.1%	0.1%		0.0%
Marrubium vulgare	White horehound	Limited	FACU					0.0%
Melilotus albus	White sweetclover	-	-	0.1%	0.3%	0.3%	1.8%	0.6%
Melilotus indicus	Annual yellow sweetclover	-	FACU	1.2%	0.9%	0.3%	0.7%	0.8%
Pseudognaphalium californicum	Ladies' tobacco	-	-			0.2%		0.0%
Pseudognaphalium leucocephalum	White cudweed	-	-			0.1%		0.0%
Rumex crispus	Curly dock	Limited	FAC		0.3%		0.1%	0.1%
Salix laevigata	Red willow	-	FACW		0.6%			0.2%
Salix lasiolepis	Arroyo willow	-	FACW				0.3%	0.1%
Sidalcea malviflora	Wild hollyhock	-	FACW				1.2%	0.3%
Sisymbrium altissimum	Tumble mustard	-	FACU	0.1%	0.5%	0.2%		0.2%
Sonchus asper ssp. asper	Prickly sow thistle	-	FAC			0.1%	2.9%	0.7%
Stachys albens	Cobwebby hedge nettle	-	OBL	4.7%	0.1%			1.2%
Stipa pulchra	Purple needle grass	-	-				10.8%	2.7%
Tragopogon dubius	Goat's beard	-	-	0.1%	0.1%			0.0%
Urtica dioica	Stinging nettle	-	FAC	0.3%				0.1%
Verbena lasiostachys	Western vervain	-	FAC	5.8%	3.1%	8.1%	0.2%	4.3%
Total				115.5%	113.4%	151.2%	102.5%	120.6%

APPENDIX B – TRANSECT AND PLOT PHOTOS



Pre-restoration photo of western lobe of Mitigation Site looking to the northwest.



Western lobe of Mitigation Site looking to the northwest. Taken September 10, 2020.



Pre-restoration photo of the northern section of the Mitigation Site looking to the northeast.



Northern section of the Mitigation Site looking to the northeast. Taken September 10, 2020.



Pre-restoration photo of southern section of Mitigation Site looking to the southeast.



Southern section of the Mitigation Site looking to the southeast. Taken September 10, 2020.



Pre restoration photo of the Mitigation Site taken from the northeastern lobe looking to the northwest.



Mitigation Site taken from the northeastern lobe looking to the northwest. Taken September 11, 2020.



Transect DG1. Taken May 14, 2020.



Transect DG1. Taken May 14, 2020.



Transect DG2. Taken May 14, 2020.



Transect DG2. Taken May 14, 2020.



Transect DG3. Taken May 15, 2020.



Transect DG3. Taken May 15, 2020.



Transect DG4. Taken May 14, 2020.



Transect DG4. Taken May 14, 2020.

