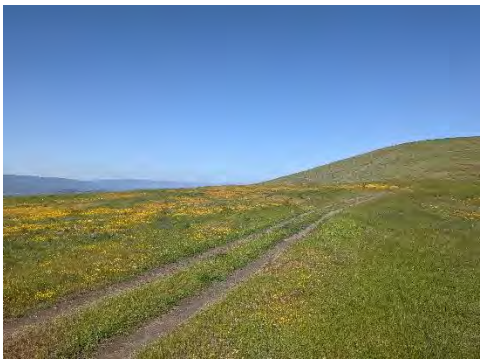

Coyote Ridge Ponds Restoration Project, Ponds CR1 and CR4- Year 4 Monitoring Report

Prepared for:

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February 16, 2024

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List of Preparers

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Section A. General Project Information

The Coyote Ridge Ponds Restoration Project (Project) is a priority for the implementation of the Conservation Strategy of the Santa Clara Valley Habitat Plan (Habitat Plan) (ICF 2012). The Santa Clara Habitat Agency constructed the project in partnership with the Santa Clara Valley Open Space Authority and is currently in the third year of the 5-year post-construction monitoring and management period. The project was constructed to restore and establish pond habitat at two locations (CR1 and CR4) in the Coyote Ridge Open Space Preserve, located in the eastern foothills of the Diablo Range in the Coyote Creek watershed (Section E, Figures 1 and 2). Project objectives and compensatory mitigation credits are described in the *Coyote Ridge Ponds Restoration Project (CR1 and CR4) Restoration and Monitoring Plan* (MMP) (Swaim Biological Inc. 2018). The project's objectives are as follows:

Pond Reestablishment Sites

Restore suitable breeding habitat for the California red-legged frog (*Rana draytonii; CRLF*) and California tiger salamander (*Ambystoma californiense; CTS*) and for common amphibians such as the Sierran tree frog (*Pseudacris sierra*) and California toad (*Anaxyrus boreas halophilus*), and basking habitat for Western Pond Turtle (*Actinemys marmorata*; WPT), by performing the following actions:

Deepen a portion of the pond to restore a hydroperiod suitable for the successful breeding and metamorphosis of CTS and CRLF
Repair berm failure to restore ponding capacity, hydroperiod, and water retention
Plant wetland vegetation
Exclude cattle from a portion of the pond

Restore multiple wetland functions including sediment filtration, nutrient filtration, and erosion protection by performing the following actions. This Reestablishment will also provide aquatic refugia, foraging, and dispersal habitat for CRLF:

Exclude cattle from a portion of the pond
Plant native wetland vegetation

Restore aquatic habitat and establish functional basking habitat for WPT by performing the following actions:

Lengthen the pond's hydroperiod
Deepen the pond's open water portion
Install anchored basking logs in the pond's deepened open water

Improve climate change resiliency of pond habitat by performing the following actions:

Increase the water storage capacity and hydroperiod of the ponds
Establish a spring water source for cattle that graze the CROSP

Project construction commenced on August 6, 2019, and was completed on October 29, 2019. Sherwood Design Engineers provided a trip report, dated November 8, 2019, documenting the final walkthrough to assess that construction has been completed in accordance with the plans and specifications and that Best

Management Practices (BMP's) are in place and stabilization has been achieved. An as-built survey was conducted on December 17, 2019, and as-built designs were provided shortly thereafter. A Letter of Completion will be prepared after analysis of the pond's current function has been completed.

This report presents the results of the Year 4 monitoring in relation to the ecological performance standards outlined in the project's MMP. Monitoring results will also inform management activities to direct maintenance and potential remedial measures to ensure that the project's objectives are fulfilled. In accordance with the requirements of the MMP, this report was prepared in the format of the U.S. Army Corps of Engineers (USACE) South Pacific Division Mitigation Monitoring Report Form (USACE 2014).

A.1 Project Name

Coyote Ridge Ponds Restoration Project, Ponds CR1 and CR4.

A.2 DA File Number(s)

The project permit numbers are as follows:

USACE File No. 2019-00086S

Regional Water Quality Control Board, California Integrated Water Quality System (CIWQS) Place No. 855532 (bkw) and CIWQS Regulatory Measure No. 428417

California Department of Fish and Wildlife (CDFW) Lake and Streambed Alteration Agreement No. 1600-2019-0019-R3

CDFW Natural Community Conservation Plan Permit No. 2835-2012-002-03

U.S. Fish and Wildlife Service (USFWS) Federal Fish and Wildlife Permit No. TE94345A-0

A.3 Project Type

Permittee responsible mitigation

A.4 Permittee, Bank, or In-Lieu Fee Sponsor Name and Work Phone Number

Edmund Sullivan, Santa Clara Valley Habitat Agency
(408) 779-7261

A.5 Permittee, Bank, or In-Lieu Fee Sponsor Mailing Address

Edmund Sullivan, Santa Clara Valley Habitat Agency
535 Alkire Avenue, Suite 100
Morgan Hill, CA 95037

A.6 Permittee, Bank, or In-Lieu Fee Sponsor E-Mail Address

edmund.sullivan@scv-habitatagency.org

A.7 Agent Name and Work Phone Number

Kelli Camara, Camara Environmental Consulting
(831) 840-5184

A.8 Agent Mailing Address

Kelli Camara, Camara Environmental Consulting
PO Box 427
Capitola, CA 95010

A.9 Agent E-Mail Address

haploxeroll@yahoo.com

Section B. Notice of Commencement/Completion of Compensatory Mitigation Project

B.1 Commencement

Y: ☒ N: ☐

Project construction commenced on August 6, 2019.

B.2 Completion

Y: ☒ N: ☐

Project construction was completed on October 29, 2019. Sherwood Design Engineers provided a trip report, dated November 8, 2019, documenting the final walkthrough to assess that construction has been completed in accordance with the plans and specifications and that BMP's are in place and stabilization has been achieved (Sherwood Design Engineers 2019). An as-built survey was conducted on December 17, 2019, and as-built designs were provided shortly thereafter (Appendix D). Wetland plantings were installed during the week of January 14, 2022 (Go Native, letter to Kelli Camara, dated January 16, 2022). A Letter of Completion will be prepared after Sherwood Design Engineers has completed analysis of the pond's hydroperiod and determined if any adaptive management should be completed to improve pond function.

B.3 Financial Assurance Remains in Place

Y: ☒ N: ☐

B.4 Requesting Release of a Financial Assurance?

Y: ☐ N: ☒

B.5 Name of Contractor (If Any)

Go Native Inc. constructed the project and are performing ongoing infrastructure monitoring.

B.6 Phone Number of Contractor (If Any)

Dave Sands, Go Native Inc.
(650) 996-8996

Section C. Mitigation Monitoring Status

C.1 Final Monitoring Completed and Verification Requested?

Y: ☐ N: ☒

C.2 Date of Monitoring Reported

This monitoring report summarizes monitoring conducted during the calendar year 2023, Year 4 of the short-term (i.e., 5-year) post-construction ecological monitoring period set forth in the MMP.

C.3 Monitoring Report Number

Monitoring report number 4.

C.4 Management and Maintenance Activities Completed

Management and maintenance activities completed during Year 4 (2023) include the following:

Provided control treatment of artichoke thistle (*Cynara cardunculus*) and purple star thistle (*Centaurea calcitrapa)* within the project areas, in areas immediately adjacent to the project areas and on the hill between CR1 and CR4. (May 20, 2023).

Inspected infrastructure at CR1 and CR4. Go Native Inc. report completed. (May 26, 2023).

Hand pulled Italian thistle (*Carduus pycnocephalus*), some black mustard (*Brassica nigra*), canary grass (*Phalaris sp.*) (to be identified at the species level in 2024), and milk thistle (*Silybum marianum*) and young yellow star thistle (*Centaurea solstitialis*) within the CR4 project area. Weedwacked small patches of canary grass in the grassland outside, but adjacent to the CR4 project area. (May 26 & 31, 2023)

Provided oversight and assisted the crew to hand pull yellow star thistle and barbed goat grass (*Aegilops triuncalis*) within the CR1 project area. Weedwacked barbed goat grass on the hill between CR1 and CR4. Began hand pulling yellow star thistle and additional Italian thistle in the CR4 project area. All hand pulled materials were bagged and disposed of off-site to avoid latent seeding within the site. (June 6, 2023).

Provided oversight and assisted the crew to weedwack yellow star thistle and barbed goat grass in CR1. Weedwacked buffer zones and areas adjacent to the CR1 project area. Weedwacked black mustard and Canary grass adjacent to the CR4 project area. (June 12, 2023).

Finished pulling yellow star thistle, barbed goat grass, Italian thistle, milk thistle in and around both project areas. (June 21, 2023).

Provided oversight and assisted the crew to hand pull yellow star thistle and some Italian thistle in the CR1 and CR4 project areas. Pulled black mustard at CR4. Weedwacked Italian thistle on the steep eastern slope of CR4 on. July 5, 2023. Provided oversight and assisted the crew to weedwack yellow star thistle resprouts to the east of CR4 along the road. Rechecked and hand pulled yellow star thistle on CR1 and CR4 and on the

hill between the two project areas. All hand pulled materials were bagged and disposed of properly. (July 27, 2023).

Completed a fall assessment of invasive weeds with Kathy Lyons prior to the first significant rainfall. (October 4, 2023).

C.5 Adaptive Management Activities Completed

The following additional adaptive management measures were employed in 2023.

The width and length of the buffer zones outside of the initial CR1 and CR4 project areas were expanded, and additional treatment of yellow star thistle and barbed goat grass was completed to further slow the reintroduction of these species into the project area.

Control of purple and yellow star thistle was expanded to include the road that leads up to the gate east of CR4 as this is the most significant vector for reintroduction of these 2 species in the CR4 project area.

Efforts were increased to control the Italian thistle on the easternmost portion of CR4 and adjacent slope by hand removal and weedwacking.

In an attempt to slow the spread of canary grass into the southern portion of the pond area, control of canary grass was extended to the south and southwest of CR4 to the main access road.

Within the CR4 project area, canary grass was hand removed within the pond fencing. The limited new polygon in the southeast section was hand removed or weedwacked. The area outside the southern perimeter fence of the project area was weedwacked.

The following activity was also completed in 2023. Yellow star thistle was weedwacked approximately 70 meters beyond the northwestern boundary of the CR1 project to where the infestation terminates to reduce the level of reintroduction of yellow star thistle onto the northwest sector of the project area.

Based on a belief that pond hydroperiods for CR1 and CR4 were not performing as designed, the project team monitored the water level for CR1 and CR4 and documented rainfall totals to evaluate pond function, identify the likely loss of water, and discuss adaptive management strategies that could be employed to achieve the objectives of this project and determine a solution to be employed in 2024. The data collected suggested that CR4 was performing as designed, but that CR1 was losing water faster than designed. An adaptive strategy for resolving CR1 water loss is in planning to be implemented in 2024.

C.6 Performance Standards

The project's MMP describes performance standards during the 5 years of post-construction ecological monitoring. Table 1 contains the Year 4 performance standards and an evaluation of whether Year 4 monitoring results met them. Section C.7 contains further discussion of the Year 4 results relative to the performance standards.

Table 1. Year 4 Performance Standards and Results for CR1

Performance Standard	Year 4 Goal	Goal Met in Year 4?	Year 4 Results
Target Hydrologic Regime	Depth of inundation at least 6" through August 31 in average rainfall year[1].	No	2022-2023 was an above-average rainfall year. The pond was observed as filled and flowing into the overflow pipes on 1/22. Despite on-going rain events, the water level continued to decrease, and the pond was dry by 5/30.
California Red-legged Frog/ California Tiger Salamander/ Western Pond Turtle	Successful breeding of CRLF and CTS and WPT presence in at least one average rainfall monitoring year.	No	The inundation period was insufficient to support successful amphibian breeding. Water depth was 5.7'on 4/19. No eggs or larvae were detected during the day survey, but sampling access was limited due to water depth. Water was ponded for the night survey on 4/26 (4.75') but was dry during the second night survey on 5/22. No CRLF/CTS egg masses or larvae and no WPT were observed during the surveys.
Aquatic Predator Presence/ Absence	No predator occurrences.	Yes	A predator survey was completed on 4/19 and 5/22. No predators were observed, and the pond was dry by 5/30, so no further surveys were conducted.
Wetland Vegetation Percent Cover	60% wetland vegetation cover in planting zones.	No	Within the planting zones, a visual estimate of cover found wetland vegetation cover to be 30%.
	<50% any veg in open water habitat.	Yes	Visual assessment in May found 5% vegetation cover in open water habitat area on May 20th.
	At least 3 wetland species present	Yes	Four wetland species were present.
Invasive Plant Cover	Less than 5%	No	The Year 4 observations found total cover by all invasive plant species to be 6.67% which exceeds the Year 4 performance standard.
Wetland Delineation	NA	NA	A wetland delineation will be performed in Year 5.
Water for Cattle	Sufficient water to support the same grazing intensity of the CROSP lands as the existing conditions.	Yes	Water was temporarily available at both CR1 and CR4. As such, we have met the criteria by providing water longer into the year than before the berms were reconstructed.

[1] Date revised from September 30 to August 31

Table 2. Year 4 Performance Standards and Results for CR4

Performance Standard	Year 4 Goal	Goal Met in Year 4?	Year 4 Results
Target Hydrologic Regime	Depth of inundation at least 6" through August 31 in average rainfall year[2].	Yes	2022-2023 was an above-average rainfall year. The pond was observed as full but not overflowing on 1/22. The pond retained water throughout the summer and was ~4.8' deep as of August 31.
California Red-legged Frog/ California Tiger Salamander/ Western Pond Turtle	Successful breeding of CRLF and CTS and WPT presence in at least one average rainfall monitoring year.	No	CTS eggs were observed on February 16; however, no egg masses or larvae were detected during the day survey on 4/19, but depth was 5.9', so sampling access was limited. Water was still at 5.9' for the 2nd day survey and no larvae was detected. Water level was at 5.9' for the night survey on 4/26 and at 5.8' during the second night survey on 5/22. No CRLF, CTS, or WPT were observed during the night surveys.
Aquatic Predator Presence/ Absence	No predator occurrences.	Yes	A predator survey was completed on 4/19 and 5/22. No predators were observed, so no recommendation to dry pond manually was made. However, because the pond did not dry completely, additional surveys should be completed in 2024.
Wetland Vegetation Percent Cover	60% wetland vegetation cover in planting zones	No	The average percent cover of wetland vegetation within the planting zones was 37.6%.
	<50% any veg in open water habitat.	Yes	Wetland vegetation in open water habitat was visually estimated at 15% on October 4th.
	At least 3 wetland species present	Yes	Ten wetland species were present.
Invasive Plant Cover	Less than 5%	No	The Year 4 observations found total cover by all invasive plant species to be 5.2% which just slightly exceeds the Year 4 performance standard.
Wetland Delineation	NA	NA	A wetland delineation will be performed in Year 5.
Water for Cattle	Sufficient water to support the same grazing intensity of the CROSP lands as the existing conditions.	Yes	Water was available. As such, we have met the criteria.

[2] Date revised from September 30 to August 31

C.7 Short Statement on Whether the Performance Standards Are Being Met (Monitoring Methods, Results and Discussion, and Management Recommendations)

Year 4 monitoring methods, results, discussion, and recommended management activities are provided below for each performance standard.

C.7.1 Methods

Year 4 monitoring methods are discussed below for each performance standard and are in accordance with the project's MMP (Swaim Biological 2018).

C.7.1.1 Target Hydrologic Regime

Hydrologic monitoring at the ponds was provided by Camara Environmental Consulting. Appendix B contains water depth records and rainfall totals to document the Year 4 hydrologic regime.

C.7.1.2 California Red-legged Frog/California Tiger Salamander/Western Pond Turtle

Camara Environmental Consulting conducted wildlife surveys for special-status species at CR1 and CR4 to evaluate the performance standards for the California red-legged frog, California tiger salamander, western pond turtle, and aquatic predators.

The hydroperiod was not long enough to support successful amphibian breeding at CR1, as the pond completely dried out by the end of May 2023. The hydroperiod was long enough to support breeding at CR4.

Matt Fogerty, an approved qualified biologist with the SCVHA, detected CTS egg masses at CR4 on February 16. Kelli Camara conducted a California red-legged frog egg mass and larvae survey and dipnetted for California tiger salamander larvae at CR1 and CR4 on April 19, 2023. No egg masses or larvae were observed at either pond; however, both ponds were to deep (>5') to seine. Kelli Camara and Matt Fogerty conducted a California red-legged frog egg mass and larvae survey and dipnetted for California tiger salamander larvae at CR1 and CR4 on May 22, 2023. CR4 still had >5' of water and CR1 was very shallow (~1ft deep). Clam shrimp and tree frog larvae were observed at both ponds.

Kelli Camara conducted the 1st night survey on April 26. 2023. No CRLF were observed. However, 2 juvenile western toad (*Anaxyrus boreas*) were observed at CR1 and 2 western toad (1 live adult and 1 juvenile mortality) were observed at CR4. Over 100 tree frog larvae were observed.

Kelli Camara conducted a 2nd survey on June 30. No CRLF were observed. 3 adult western toad were observed at CR4. CR 1 was dry, and no animals were observed.

Aquatic predator presence/absence and WPT presence surveys were conducted with each visit, and no predators were observed. CR1 was dry by 5/30/23. CR4 did not dry prior to the 1st winter rains of 2023/2024.

Table 3. Level of Effort for Wildlife Surveys

Date	Survey Type	Observer	Pond CR1	Pond CR4
4/19/2023	California red-legged frog and California tiger salamander egg mass and larvae and WPT survey	Kelli Camara	Daytime egg mass survey and dip-netted	Daytime egg mass survey and dip-netted
4/19/2023	Predator survey	Kelli Camara	Visual observation and dip-netted	Visual observation and dip-netted
4/26/2023	California red-legged frog juvenile and adult night survey	Kelli Camara	Visual observation and dip-netted	Visual observation and dip-netted
5/22/2023	California red-legged frog and California tiger salamander egg mass and larvae and WPT survey	Kelli Camara, Matt Fogerty	Daytime egg mass survey and dip-netted	Daytime egg mass survey and dip-netted
6/20/2023	California red-legged frog juvenile and adult night survey	Kelli Camara	Visual observation	Visual observation and dip-netted

C.7.1.3 Aquatic Predator Abundance

No predators were encountered during day or night surveys, during site visits for quarterly photos, or during observational monitoring of water level.

C.7.1.4 Wetland Vegetation Percent Cover

Biotic Resources Group plant ecologist Kathleen Lyons conducted wetland vegetation monitoring at CR1 and CR4 on May 20, July 6, and October 4, 2023. Percent cover of planted and naturally recruited vegetation was determined by species using the quadrat sampling method (Bonham 1989) along transects established within the un-grazed portions of CR1 and CR4 (see Figures A-1 and A-4 in Appendix A). At CR1, one-meter^2 quadrats were not in the correct location to record wetland cover; therefore, a visual estimate of wetland vegetation cover was made at CR1. At CR4, fourteen (14) one-meter^2 quadrat locations were established in the planting zone to capture the wetland vegetation within the planting zone. At all quadrats, cover was estimated to the nearest whole percent. Bare ground and open water were also recorded. All species in quadrats were identified using the Jepson Manual (Baldwin et al. 2012). Wetland species were defined as having a wetland indicator status of facultative (FAC), facultative wetland (FACW), or obligate (OBL) based on the National Wetland Plant List for the Arid West Region (Lichvar, et al. 2020), regardless of whether they were native or nonnative. Plant species were also distinguished as to plant guild, as follows: exotic annual forb (EAF), exotic annual grass (EAG), exotic perennial forb (EPF), exotic perennial grass (EPG), native annual forb (NAF), native annual grass (NAG), native perennial forb (NPF), or native perennial grass (NPG). The average percent wetland vegetation cover and number of wetland species observed at each site were evaluated.

The extent of vegetation within the open water habitat at each pond was visually assessed in May 2024. T.

C.7.1.5 Invasive Plant Cover

Invasive, non-native plant species were documented on site during preparation of the 2018 MMP (Swaim Biological, Inc. 2018). Invasive species targeted for control were based on a California Invasive Plant Council (Cal-IPC) Inventory rating of moderate or high. At that time, a small number of artichoke thistle (*Cynara cardunculus*) individuals were present in the uplands around pond site CR1. Non-native annual species typically found in California annual grassland habitat were also documented in the project area grasslands, including black mustard (*Brassica nigra*), artichoke thistle (*Cynara cardunculus*), purple star thistle (*Centaurea calcitrapa*), yellow star thistle (*Centaurea solstitialis*), and barbed goat grass (*Aegilops triuncialis)*. A small area of Himalayan blackberry (*Rubus armeniacus*) was documented on the banks of Pond CR4 (Swaim Biological, Inc. 2018).

2023 Year 4 Condition. Biotic Resources Group plant ecologist Kathleen Lyons, with George McMenamin, conducted focused visual surveys for invasive plant species at both restoration sites. On May 20, 2023, Ms. Lyons documented invasive plant cover along the five transects previously established in 2019. Using the line intercept sampling method, plant species composition and cover was recorded at 1-meter intervals along 2 30-meter long transects at CR1 and along 2 30-meter and 1 13-meterlong transects at CR4. In addition, one-meter^2 quadrats were placed at 1-meter intervals to visually document cover of invasive, non-native plant occurrences, using the following metrics: very low (1-5% cover), low (6-25% cover), moderate (26-50% cover), and high (51 -100% cover). The very low category was added in 2023 to document less than 5% cover is this is a target for several species. Data from the point intercept sampling was compiled into an Excel spreadsheet to determine plant cover by species, plant guild and invasive status for each transect. Data from the quadrat sampling was used to document total cover by invasive plant species.

On May 20th, Ms. Lyons and Mr. McMenamin visually assessed the distribution and density of invasive plant species cover at CR1 and C4, mapping species occurrences in polygons. The cover categories of very low, low, moderate, and high were assigned to each polygon. During these visits, cover for the following target species, with required performance criteria, were determined: black mustard (*Brassica* sp.), artichoke thistle (*Cynara cardunculus)*, yellow star thistle (*Centaurea solstitialis)*, purple star thistle (*Centaurea calcitrapa*), barbed goat grass (*Aegilops triuncalis)*, and Himalayan blackberry (*Rubus armeniacus*). In addition, cover for these additional species were determined: Italian thistle (*Carduus pycnocephalus*), bull thistle (*Cirsium vulgare*) and canary grass (*Phalaris* sp.). The results of the visual assessments were used to prepare maps depicting the extent and severity of invasive plant species at CR1 and CR4.

C.7.1.6 Wetland Delineation

In accordance with the MMP, a wetland delineation will be conducted at the end of the 5-year monitoring period; therefore, one was not conducted in Year 4. Biotic Resources Group performed a qualitative assessment of wetland conditions in Year 4 during monitoring and maintenance visits.

C.7.1.7 Water for Cattle

Given the above-average rainfall year and based on visual observations of installed staff plates to document water depth, water was available for cattle at CR4 for almost the entirety of 2023 (~January 22 – December 31). Water was available for cattle at CR1 from ~ January 22 – ~May 30, as the pond is infiltrating faster than designed. Discussions and planning to improve pond CR1 function are underway.

C.7.1.8 Photo-documentation

Photo-documentation of the pond sites was conducted by Camara Environmental Consulting from permanent locations established by Gerry Haas on August 7, 2020. Photographs were taken documenting the wetland and invasive plant cover by Biotic Resources Group plant ecologist Kathleen Lyons during monitoring on May 20, July 6, and October 4, 2023, from the beginning of each wetland transect and invasive plant transect. At CR4, each quadrat was photographed. Additional photographs were taken throughout Year 3 4 to record observations and events that may affect the success of mitigation. Photographs are provided in Section D and the locations of the photo-documentation points are shown on Figures 3 and 4 in Section E.

C.7.2 Results and Discussion

Year 4 monitoring results are provided below for each performance standard. These results are also summarized in Table 1.

C.7.2.1 Target Hydrologic Regime

Pond Site CR1. Despite receiving 8.25 inches of rain in the fall of 2022 CR1 was dry as of 12/15/2022 (based on rain gauge data provided by an adjacent landowner. After approximately 14 inches of rain were received during storm events between 12/15/2022 and 1/22/2023, CR1 was observed as filled and flowing into the left overflow pipe during a visit by SCVHA land manager, Matt Fogerty, on 1/22/2023. Mr. Fogarty noted that the pond continued to receive incoming water from the drainage above the bay tree. Despite ongoing rain events in February (2.95-in), March (5.4-in), and May (1-in), the water level continued to decrease, and the pond was dry by 5/30/2023.

Pond Site CR4. CR4 was at 0.4 feet as of 12/15/22. However, it was observed as filled but no longer overflowing during a visit by SCVHA Mr. Fogarty on 1/22/2023. He noted that the pond clearly overflowed at some point during the storms based on the debris around the drain pipes. Additionally, the pond was still receiving a small amount of inflow from the depression that is rocked just above the western bank. With ongoing rain events in February, March, and May the water level was maintained above 5 feet until late July. The pond was at 3.1 feet as of 11/2/2023.

Comparison to Performance Standards. The hydrologic regime performance standard calls for a depth of inundation of at least 6 inches through August 31 of each monitoring year that exhibits average or above average precipitation. This standard is intended to achieve the target hydrologic regime that supports high quality breeding habitat for the California red-legged frog and California tiger salamander. WY 2022-2023 was an above average water year. Therefore, the hydrologic regime performance standard was applicable in Year 4.

C.7.2.2 California Red-legged Frog/California Tiger Salamander/Western Pond Turtle

California Tiger Salamander. Mr. Fogarty did not detect CTS eggs in either pond during a site visit on 1/22/2023, despite them being observed at several ponds lower in the watershed on CROSP East. Staff noted that water in both ponds was fairly turbid, which impacted visibility. SCVHA staff detected CTS egg masses at CR4 on February 16, 2023. However, no larvae were found during dipnetting on April 19 and May 22, 2023. Clam shrimp and tree frog larvae were observed at both ponds when water was in the ponds.

For the initial sampling in April at CR1 and CR4 and the secondary sampling in May at CR4, the water depth was over 5-ft, which was too deep to seine and limited the percentage of the pond that could be sampled. CTS larvae could have been present in the deeper portion of the ponds, which were inaccessible during sampling. On May 22, 2023, the pond level had dropped to 1.1 ft at CR1. Seining was not possible due to the lower water level and emergent vegetation. However, visibility was high, and the entirety of the pond was well sampled. No CTS were observed.

A 2008 special-status amphibian aquatic survey by Biosearch Associates (2008) documented California tiger salamander larvae in Pond CR1 (Pond 2 in their report) and reported previous findings of larvae in 2005 and 2006. The same 2008 study documented California tiger salamander larvae in Pond CR04 (identified as "Pond 15" in their report) (Biosearch 2008).

California Red-legged Frog. Despite an above average rainfall year, no California red-legged frogs or egg masses were observed during the Year 4 monitoring at CR1 or CR4. Kelli Camara conducted the 1st night survey on April 26, 2023. No CRLF were observed. However, 2 juvenile western toad (*Anaxyrus boreas*) were observed at CR1 and 2 western toad (1 live adult and 1 juvenile mortality) were observed at CR4. Over 100 tree frog larvae were observed.

Kelli Camara conducted a 2nd survey on June 30. No CRLF were observed. 3 adult western toad were observed at CR4. CR 1 was dry, and no animals were observed. Biosearch Associates (2008) reported an adult California red-legged frog at Pond CR1 in 2006 and a breeding pair at Pond CR4 in 2007.

Western Pond Turtle. CR1 provided suitable western pond turtle habitat until May. CR4 provided suitable western pond turtle habitat for most of the year. However, the species was not observed at either pond.

Additional Wildlife Observations.

On April 26. 2023, two (2) juvenile western toad (*Anaxyrus boreas*) were observed at CR1 and 2 western toad (1 live adult and 1 juvenile mortality) were observed at CR4. Over 100 tree frog larvae were observed.

On June 30, 3 adult western toad were observed at CR4. CR 1 was dry, and no animals were observed.

Comparison to Performance Standards. The MMP performance standards call for CRLF and CTS breeding and WPT presence to be documented at CR1 and CR4 at least once during the five-year monitoring period, assuming average rainfall year/s. The performance standard was applicable in Year 4. However, while this was an above average rainfall year, the previous 3 years of monitoring were during below average water years. Therefore, it's not surprising that species did not successfully find the ponds and breed. If WY 2023-2024 is an average or above-average rainfall year, it will increase the likelihood of animals dispersing further and successfully breeding in the ponds.

C.7.2.3 Aquatic Predator Abundance

Aquatic predator presence/absence and WPT presence was conducted with each visit and no predators were observed. CR1 was dry by 5/30. CR4 did not dry prior to the 1st winter rains of 2023/2024.

Comparison to Performance Standards. The MMP performance standard for aquatic predators requires draining the pond(s) to control predators if annual monitoring determines that bullfrog or crayfish have located to one or both ponds. If evidence of these predators is detected, the pond(s) will be drained in mid-September of the year of detection and allowed to dry completely until winter rains refill the pond. Predators were not observed during Year 4; therefore, this criterion has been met.

C.7.2.4 Wetland Vegetation and Pond Vegetation Percent Cover

The MMP requires that the average percent cover of wetland vegetation within the planting zones exhibit an increasing temporal trend across monitoring years at the seasonal wetland planting portions of the pond sites; evaluated separately. Percent cover will be determined by species. At least three wetland species will be observed at each site during each monitoring year. For Year 4, wetland cover performance standard within the seasonal wetland planting zones is 60% and is to be comprised of a minimum of three wetland plant species. Meanwhile, the open water (i.e., pond) habitat is required to have less than 50% vegetation corresponding to the open water condition necessary for preferred CTS breeding habitat.

In Year 4, average wetland vegetation cover within the planting zones ranged from 30% at CR1 to 37.6% at CR4 (Table 4). Vegetation cover within the open water habitat ranged from 5% at CR1 (May 20th) and 15% at CR4 (October 4th).

At CR1, wetland cover within the planting zone was documented on July 6. 2023. Wetland cover within the planting zone was dominated by perennial ryegrass (FAC), with lesser amounts of knotweed (FAC), cocklebur (FAC), goosefoot, and sow thistle (FAC) (Table 5). Cover by wetland vegetation was 30%.

Documenting wetland plant cover at CR4 was delayed until October 4 due to the high water level in the pond that precluded access to the planting zone. At CR4, individual quadrat samples within the planting zone ranged from a low of 0% wetland cover to a high of 105% (absolute cover). Average wetland cover was recorded at 37.6%, comprised of ten species (Table 5). Open water within the planting zone was 7%. A visual estimate of plant cover within the open water portion of the pond was 15%, comprised of patches of bulrush, water smartweed, and white-water crowfoot. Wetland cover data is presented in Appendix A, Table A-1. Appendix A, Figure A-14 presents wetland cover by wetland indicator status at CR1 and CR4 for 2023.

Table 4. Wetland Vegetation Percent Cover and Number of Wetland Species, Year 4 (2023)

Year	Site	Wetland Vegetation Cover (average) Year 4	Year 4 Wetland Vegetation Cover Performance Standard	Number of Wetland Species Year 4	Year 4 Wetland Species Number Performance Standard	Year 4 Performance Standards Met?
Year 4	CR1	30% in planting zone (July) 5% vegetation cover in open water habitat (May)	60% in planting zones Less than 50% cover in open water pond habitat	4	3	No, wetland plant cover in planting zone is below 60%; however, vegetation within open water habitat was below 50% (May).
	CR4	37.6% in planting zone; 15% in open water habitat		10		No, wetland plant cover in planting zone is below 60%. Vegetative cover is expected to naturally increase as more plants become established in this zone. However, vegetative cover within open water habitat is less than 50%. High rainfall year resulted in deep water that limited vegetative growth.

1 – Cover by OBL, FACW and FAC-designated species, as per Arid West 2020 Regional Wetland plant List, Lichvar, etal, 2020

Species richness at the two sites were recorded by the quadrats and visual observations. Four wetland plant species were observed at CR1, and ten wetland species were observed at CR4 (Table 5); knotweed (*Polygonum aviculare)* (FAC) provided the most cover, followed by spikerush (*Eleocharis macrostachys)* (OBL), rabbitsfoot grass (*Polypogon monspeliensis)* (FACW), swamp pricklegrass (*Crypsis schoenoides)*, (FACW), and creeping wild rye (*Elymus triticoides)* (FACW). Other species were bulrush (*Schoenoplectus sp.)* (OBL), sow thistle (*Sonchus asper)* (FAC), ryegrass *(Lolium perennis)* (FAC) and curly dock (*Rumex crispus)* (FAC). Other wetland plant species observed at the ponds, yet outside of the quadrats include white water crowfoot (*Ranunculus aquatilis)* (OBL), and western vervain (*Verbena lasiostachys)* (FAC) and spreading rush (*Juncus patens)* (FAC). Charts displaying the monitoring results for each site, showing cover by plant guild and each species wetland indicator status, are provided in Appendix A, Table A-1 and Figures A-7 and A-12.

Table 5. Wetland Plant Species Observed at CR1 and CR4, Year 4 (2023)

Species Scientific Name	Species Common Name	Plant Guild	Wetland Indicator Status	Percent Cover CR1	Percent Cover CR4
Festuca (Lolium) perennis	Ryegrass	EAG	FAC	1.4	1.8
Xanthium strumarium	Cocklebur	NAF	FAC	2.6	0.6
Polygonum aviculare	Knotweed	EAF	FAC	0.1	0
Sonchus asper	Sow thistle	EAF	FAC	0.1	0
Cyrpsis shoenoides	Swamp pricklegrass	EAG	FACW	0	3.9
Schoenoplectus sp.	Bulrush	NPF	OBL	0	0.8
Rumex crispus	Curly dock	EPF	FAC	0	1.6
Eleocharis macrostachys	Spikerush	NPF	OBL	0	15.4
Polypogon monspeliensis	Rabbitsfoot grass	EAG	FACW	0	8.1
Leymus triticoides	Creeping wild rye	NPG	FAC	0	3.5
Persicaria amphibia	Water smartweed	NPF	OBL	0	1.6
Epilobium ciliatum	Willow herb	NAF	FACW	0	0.3
Ranunculus aquatilis	White water crowfoot	NAF	OBL	-	-
Verbena lasiostachys	Western vervain	NAF	FAC	_	_
Juncus patens	Spreading Rush	NPF	FAC	-	-

1 – Cover by OBL, FACW and FAC-designated species, as per Arid West 2020 Regional Wetland plant List, Lichvar, et al., 2020

As per the MMP, vegetation cover at CR1 and CR4 should not exceed 50% in the open water pond habitat during any monitoring year to ensure establishment of breeding habitat for CTS and CRLF. In Year 4, CR1 supported open water in May and vegetation cover was visually estimated at 5%. Vegetative cover within the open water habitat at this time of the year was less than 50%, which meets project objectives.

At CR4, open water was present during the May, July, and October site visits of 2023. At the October site visit, vegetation cover was visually estimated at 15%. vegetative cover within the open water habitat was less than 50% during all site visits which meets project objectives; the high rainfall year resulted in deep water that precluded too much vegetative growth.

C.7.2.5 Invasive Plant Cover

As per the MMP, the average percent cover of specific non-native, invasive plant species at the pond sites is required to be less than 5% in each monitoring year. Using the visual metrics, the performance standard would equate to the very low-density metric (1-5% cover). All species with a Cal-IPC rating of moderate or high are to be considered non-native, invasive plant species.

For this report, SCVHA clarified borders for the CR1 and CR4 subject to the performance standards and requested that all targeted invasive plant species be tracked with a single encompassing performance standard of less than 5% cover within the defined boundary. Previously, the percent cover of other targeted invasive species had previously been tracked individually. Yellow star thistle and barbed goat grass had been tracked separately for a yearly reduction in percent cover and extent, rather than less than 5% cover.

As some of the original transects are outside of the updated boundary, polygon data, in addition to transect data, was used to determine performance metrics in 2023. The methodology, developed by George McMenamin, is described below.

<u>Method for determining total percent cover for all targeted species within the defined project borders for CR1 and CR4.</u>

Step 1 – Measure the defined project area in sq. ft.

Step 2 - Measure the area of each individual polygon containing targeted invasive species in sq. ft.

Step 3 - Measure the area of each polygon as a percentage of the area of the entire site (area of each polygon divided by the area of the entire site

Step 4 – Multiply the answer from step 3 for each polygon (as a percentage) times the mean of the invasive plant cover category in each individual polygon. (very low = 2.5%, low = 12.5%, moderate = 37.5%)

Step 5 – Add all the answers from Step 4 to achieve a sum. The sum represents the percent cover of all targeted invasive plant species in the defined project area. (CR1 or CR4)

At CR1, transect data documented invasive plant cover at 3.3% (1.6% along T-1 and 1.7% along T-2.). Data documented yellow star thistle, barbed goat grass, and artichoke thistle. Compared to previous years, the transects found in decline in cover by of French broom and barbed goat grass.

The Year 4 polygon data found cover by all invasive plant species to be 6.67%. This is above the Year 4 performance standard of 5%. Visual mapping of invasive plant polygons at CR1 showed polygons of very low cover for black mustard. Most artichoke thistle polygons are shown as low. Italian thistle showed polygons marked as low. Barbed goat grass polygons are shown as low with 1 exception in the pond area, but most polygons did have a lower density than previous years. The percent cover for the yellow star thistle polygons outside the pond fencing continued to be categorized as low with the exception of polygon 9 (very low). It is noted that the yellow star thistle inside the pond fencing was greatly reduced (80%+) with less than 12 plants total in 2023. There were no polygons of moderate or high density for any species.

At CR4, transect data documented invasive at 3.9% (3.9% along T-1 and 0% at T-2 and T-3, an increase from 1.9% in Year 3; however, a decrease from 6.6% in 2021 and 15.5% in 2020. The data documented black mustard and Italian thistle.

The Year 4 polygon data found cover by all invasive plant species to be 5.2%. This is slightly above the Year 4 performance standard of 5%. Visual mapping of invasive plant polygons at CR4 showed 5 polygons for black mustard, an increase from the 3 that were recorded in 2022. The original 3 polygons have been reduced from moderate (1) and low (2) density to low (1) and very low (2) density in 2023 and the 2 new polygons to the south of the pond are recorded with low density. One new polygon of artichoke thistle was detected at very low density and the existing polygon is low density. The Italian thistle has 1 polygon of moderate density to the northeast. This is an increase from low density. Despite efforts to provide a buffer zone, the size of the patch, the large existing seedbank, and wet winter are likely responsible for the increase. All other polygons of Italian thistle remained recorded as low density with a reduction within the cover category or saw a reduction in density from moderate and high to low and very low.

In 2023, there was one yellow star thistle polygon in the CR4 project area at the low percent cover category, as the second previous polygon showed no yellow star thistle.

For both CR1 and CR4, the distribution of some species changed slightly in 2023, due to the wet winter. However, the density of plants has mostly been reduced.The one exception is canary grass. At both CR1 and CR4, canary grass has increased in areal extent and density compared to 2022. In 2021, there was no detected canary grass at CR1 and only 1 small patch at the very northern tip of CR4. The increase in areal extent at CR1 is significant as it appears to be spreading from the drainage to the southwest of the perimeter project fencing. The increase in areal extent at CR4 is much smaller, but the entire area outside the southern perimeter fence is infested with canary grass. It is suspected that canary grass was here previously to a lesser extent but remained undetected due to the drought conditions the first 3 years of the project. Despite management efforts, control of this species is likely to have limited long-term success due to the rapidly spreading canary grass in much of the surrounding grassland outside the perimeter fence.

The Year 4 visual mapping of invasive plant polygons within the project boundaries at each pond site is presented in Appendix A (Figures A-2 and A-3) and summarized in Table 6. Charts displaying the monitoring

results for each site, including cover by plant guild and invasive plant status, are provided in Appendix A, Figures A-5, A-6, A-8, A-9. A-10, A-11, and A-13.

Table 6. Invasive Plant Polygons Within Project Boundaries, Visual Assessment, Year 4 (2023)

Site	Species Scientific Name	Species Common Name	Cal IPC Rating	Very Low Density (1-5%)	Low Density (6-25%)	Moderate Density (26-50%)	High Density (51-100%)
CR-1	*Carduus pycnocephalus*	Italian thistle	High	Yes	Yes	No	No
	Brassica nigra	Black mustard	Moderate	Yes	No	No	No
	Centaurea solstitialis	Yellow star thistle	High	Yes	Yes	No	No
	Cynara cardunculus	Artichoke thistle	Moderate	Yes	Yes	No	No
	Aegilops triuncialis	Barbed goat grass	High	Yes	Yes	No	No
CR-4	*Carduus pycnocephalus*	Italian/slender flowered thistle	High	Yes	Yes	Yes	No
	Centaurea solstitialis	Yellow star thistle	High	No	Yes	No	No
	Cynara cardunculus	Artichoke thistle	Moderate	Yes	Yes	No	No
	Brassica nigra	Black mustard	Moderate	Yes	Yes	No	No
	Centaurea calcitrapa	Purple star thistle	High	No	Yes	No	No
	Cirsium vulgare	Bull thistle	High	Yes	No	No	No
	Phalaris aquatica.	Canary grass	Moderate	No	Yes	No	No

Table 7. Performance Standards for Invasive, Non-native Plant Species, Years 1-5

Monitoring Year	Pond	Performance Standard					
		Year 1 (2020)	Year 2 (2021)	Year 3 (2022)	Year 4 (2023)	Year 5 (2024)	Meets Year 4 Performance Standard?
		5% cover	5% cover	5% cover	5% cover	5% cover	
2023	CR1				6.67% cover		No, cover by all invasives is 6.67%
	CR4				5.2% cover		No, cover by all invasives is 5.2%

The Year 4 observations found total cover by Italian thistle, black mustard, purple star thistle, artichoke thistle and canary grass to be greater than 5%, which exceeds the Year 4 performance standard. The first 3 years of project monitoring were drought years. As such, the level and rate of seed germination for specific species in the habitat was not fully understood. It was thought that germination rates of some species seed would be reduced during the drought. As 2022-2023 was a wet winter, the expectation was for potentially increased levels of seed germination leading to increased levels of density or areal coverage relative to the previous years.

Present control methods seem adequate to further reduce populations of black mustard, artichoke thistle, yellow star thistle and barbed goat grass. However, canary grass, which first appeared at CR4 in 2021 as a single small patch at the base of the overflow pipe and was found at CR1 in 2023, is likely to continue to be a problem in the project areas as it is increasing in coverage throughout all of the grassland surrounding the 2 ponds. In 2023, all canary grass within the fenced pond areas was dug up and removed. Canary grass in the rest of the project area was weedwacked or removed. The expanding patches of canary grass to the south of CR4 were weedwacked to the main access road.

C.7.2.6 Wetland Delineation

A wetland delineation will be conducted at the end of the 5-year monitoring period; therefore, no wetland delineation was conducted in Year 4. Wetland conditions were observed to be establishing at CR4, but as noted previously CR1 is not meeting the intended hydroperiod to develop wetland characteristics and is limited in supported wetland vegetation.Wetland plant species include those species installed as plantings as well as naturally recruited plant species.

C.7.2.7 Water for Cattle

We have met the criteria for cattle water by providing water longer into the year than before the berms were reconstructed and CR 4 retained water almost all year.

C.7.2.8 Photo-documentation

Photographs from established photo-documentation points and additional locations taken throughout Year 3 monitoring are provided in Section D. Photo-documentation points are shown on Figures 3 and 4 in Section E.

C.7.3 Recommended Management Activities

Management recommendations are provided below for relevant performance standards.

C.7.3.1 Target Hydrologic Regime

Pond CR4 is functioning as designed. CR1 is drawing down faster than anticipated for a normal to high water year. Based on pond hydroperiod evidence and deductive reasoning the project team has determined that the CR1 must have a higher infiltration rate in the bottom of the pond that designed. To address the inadequate hydrologic regime for CR1, the team has agreed upon the following approach to address it:

- Sherwood will develop adaptive management strategies to resolve what appears to be a leaking pond bottom.
- Camara Environmental Consulting will contract with Go Native Inc. to install adaptive management activities outlined in the design.
- Corrective measures will be implemented in the pond bottom in accordance with permit avoidance conditions when the pond is dry during the late summer/early fall of 2024.

C.7.3.2 Aquatic Predator Abundance

Because CR1 was dry by May 30, 2023, no management activities, such as pond draining, were needed. Because no predators were detected at CR4 during sampling, pond draining is not recommended.

C.7.3.3 Wetland Vegetation Percent Cover

CR1 did not meet the Year 4 wetland plant cover performance standard of at least 60% cover in the planting zones as wetland cover in the planting zone was 30%. Wetland plant cover was provided by ryegrass, an exotic annual grass (EAG). At least three wetland plant species are required; and in 2023 this criterion was met as four species were present, yet none of the species were from installed plants. Within the open water habitat, wetland cover was recorded at 5% in May which meets the Year 4 performance standard of <50%. If the pond is re-graded in 2024, management actions could be implemented to replace wetland plants within the planting zone. Wetland plant cover within the planting zone should be increased in 2024 through replanting and by increasing the hydroperiod of the pond, such that wetland plant species can self-recruit into the planting zone. Suitable plant species for installation could be species observed at CR4, such as creeping wild rye and spikerush, as well as spreading rush and bog rush. If the pond is not re-graded to increase the hydroperiod, more dry-tolerant wetland species (ranked FAC) could be planted in the planting zone, such as spreading rush, to achieve suitable wetland plant cover.

At CR4 wetland plant cover did not meet the Year 4 wetland plant cover performance standard of at least 60% cover in the planting zones as wetland plant cover was recorded at 53.2%. Ten wetland plant species were documented. The native species were from the wetlands plantings that were installed on site in January 2022, as well as naturally recruited species. Vegetative cover is expected to naturally increase in Year 5 (2024) and meet the Year 5 performance standard, as long as the hydroperiod remains similar to 2023. The existing perennial plant species are expected to increase in girth and cover in Year 5. No additional management is needed for the planting zone. However, if there are drought conditions and the pond does not fully inundate or inundation does not reach the planting zone, there could be a decrease in plant cover. Vegetative cover within the open water habitat was 15%, which meets the Year 4 performance standard of less than 50%. If there is a similar hydroperiod in 2024, which results in a suitable deep-water condition that precludes too much vegetative growth, no management is needed. However, if drought conditions occur, vegetation may colonize the open water habitat. If plant cover exceeds 50% management actions would be needed to remove vegetation from this area.

At CR4 open water persisted through October (to date), which limited vegetation growth within the pond, yet vegetation was present around the ungrazed pond edge, including the planting zones. Vegetation within the open water was limited to patches of bulrush, water smartweed, and whitewater crowfoot (*Ranunculus*

aquaticus). At both CR1 and CR4, where cattle had access to the areas, there was bare ground. It is recommended that the visual assessment of vegetation within the open water habitat be conducted in early spring prior to natural drawdown as this is the most critical use period for amphibians. In 2023, vegetation within the open water habitat was evaluated in May at CR1 and October at CR4.

C.7.3.5 Invasive Plant Cover

The May 2023 site visit, wherein transect data was collected and a visual estimate of invasive plant cover was conducted, was suitable for documenting invasive species cover prior to Year 4 invasive removal activities. Given their location, the average cover values of invasive species from the transects were lower than the polygon analysis; therefore, it is recommended that additional transects be established at both CR1 and CR4 to better capture the pre-treatment invasive plant cover values. In the last year of monitoring, after invasive control treatments have been implemented, it is recommended that the transects be repeated such that the effectiveness of the treatments in reducing invasive plant cover can be detected.

Invasive plant species control should continue in 2024. Most previously targeted species had a decrease in density and areal extent in 2023, as compared to 2019, 2020, 2021 and 2022. In part, this can be directly attributed to the control actions implemented in 2020. Control actions in 2020 were implemented prior to flower/seed formation, which decreased the weed seed in the soil seedbank. However, the decrease in density and areal extent may be tempered by the fact that the 2019/2020, 2020/21 and 2021/2022 growing seasons had drought conditions and the 2023 growing season followed a wetter than average winter. Therefore, it is likely that some seed that previously may not have germinated in the drought conditions was activated by the wet winter in 2023.

To achieve the <5% Performance Standard, the following actions are recommended:

Purple star thistle: Control methods for purple star thistle should continue along the ridge top between CR1 and CR4 and along the road to the gate east of CR4 to prevent a potential infestation at both ponds. Present control methods should be sufficient to meet the performance standards in 2024 due to the small size and very limited seed bank. No purple start thistle occurs at CR1.

Italian thistle: The main infestation of Italian thistle at CR1 is located in the very northwest corner of the project area, with most of this infestation outside the project area. It may be partially controlled by carefully timed weedwacking followed by a 2nd treatment of herbicide. However, full eradication of this infestation both in and outside the project area is unlikely due to the length of seed viability, seed mobility, the cost in resources, and the degree to which the infestation is located outside the project area. Reducing the density and coverage of Italian thistle at CR4 to the performance standard is more problematic. There is a very large infestation of Italian thistle located outside the project area to the north and northeast. This likely leads to a significant yearly reintroduction from windborne seed, cattle and wildlife. In 2023, control efforts were expanded to include hand removal of Italian thistle within approximately 10 meters of the project banks and an additional buffer zone was weedwacked on the west facing bank within 10 to 20 meters of the project area. However, full control has not been attempted and may not be practical due to the size of the patch, the steepness of the slope, the windborne seed and the proximity of the Italian thistle to desirable native species.

Artichoke thistle: Present control methods, including the landowner/ SCVHA field mowing should continue to reduce the seedbank of artichoke thistle.

Black mustard: Present control methods, including the landowner/ SCVHA field mowing should continue to reduce the seedbank of black mustard.

Canary grass: Canary grass is spreading rapidly throughout the surrounding grasslands at a landscape level. Without a property-wide management plan with substantial resources within the next few years, canary grass should be expected to become a dominant grass species in much of the area. Although *Phalaris aquatica* is suspected to be the *Phalaris* in the project boundaries, the species will be re-confirmed in 2024.

Yellow star thistle: At CR1, yellow star thistle is found in the surrounding grasslands to the east, west and south, it will retain some ability to reinfest the area and increase in density. It is recommended that the weedwacking of the buffer zones to the northwest outside the project area continue at CR1 as a relatively low-cost options to control reinfestation and continue the reductions in both areal extent and density. At CR4, carefully timed weedwacking twice along the road and gate to the southeast of CR4 appears to be succeeding at reducing both density, areal extent and preventing a reinfestation. The surrounding grasslands at CR4 have limited yellow star thistle with the exception of the access road and gate to the southeast.

Barbed goat grass: Although barbed goat grass has vectors for reinfestation in the grasslands to the east, west and south of the CR1 project area,. the methods of control appear to be working as of 2023. It is recommended the present control methods and buffer zones be continued.At CR4, very few barbed goat grass plants have been detected since 2020.

C.7.3.6 Water for Cattle

Water was available year-round for cattle from CR4, so no management action is recommended. However, for CR1, corrective measures to increase pond hydroperiod is recommended to increase water supply for cattle, as well as other conditions as described above.

C.8 Conclusions and Adaptive Management Activities Proposed

Year 4 represented the 1st year since project implementation where rainfall totals were not below average. This year confirmed both that CR4 functions as designed and identified that that CR1 appears to not be capable of meeting performance hydrology criteria without employing adaptive management measures to retain water and support amphibian breeding and meet cattle needs. As previously noted, the project team has spent the last 2 years re-evaluating the hydrologic budget and increasing the frequency of monitoring to document pond dry down. Based on data analysis and field visits, CR1 will be subject to adaptive management measures to resolve the rapid pond infiltration.

Alternatively, the above average rainfall year confirmed that CR4 would adequately function in above-average rainfall years and could meet the performance standard of 0.5 ft of standing water through August 31. On-going monitoring surveys will be conducted to determine if the California red-legged frog and/or California tiger salamander is present and successfully breeding during at least one of the monitoring years.

At CR1, the Year 4 monitoring shows wetland cover in the planting zone at 30%, an increase in wetland plant cover within the planting zone from natural colonization and the 2022 wetland plantings. However, wetland cover in the planting zone is below the Year 4 performance standard of 60%. It is recommended that the arrangement of quadrats at CR1 be changed in 2024 to better capture wetland cover in the planting zone.

Due to the shallow depth of inundation, the planting zone is not saturated long enough to facilitate wetland plant cover. Vegetation within open water habitat of pond was below 50% in May 2023, this meets the Year 4 performance standard. If re-grading of the pond is done to increase the hydroperiod this would aid both the wetland plant cover development within the planting zone and maintain/increase the open water habitat. If this is done, new plantings should be installed in the planting zone. If the new hydroperiod is to be similar to CR4, then a similar suite of plant species should be considered for installation, such as spikerush, creeping wild rye, spreading rush, and bog rush. Plants should be obtained from a native plant nursery; opportunities for on-site salvage is limited due to poor plant survival of the original plantings; however, there could be an opportunity for a small number of surviving previously-installed plants to be salvaged and re-planted on-site. Alternately, if the pond is not re-graded, the planting zone could be re-planted with more dry tolerant wetland plant species (FAC rated species vs. species rated OBL or FACW). The re-graded pond and/or altered planting zone areas should be monitored for a minimum of three years as per the HMP protocols.

At CR4, the planting zone averaged 37.6% wetland plant cover, which is below the Year 4 performance standard of 60%; however, due to the presence of water in this pond, wetland vegetation is increasing, particularly with native perennial species. No additional management is needed for the CR4 planting zone as plant cover, particularly by native perennial wetland species, is expected to increase in Year 5. However, if there are drought conditions and the pond does not fully inundate or inundation does not reach the planting zone, there could be a decrease in plant cover. Vegetative cover within the open water habitat was less than 50% in 2023, which met the Year 4 performance standard. If there is a similar hydroperiod in 2024, which results in a suitable deep-water condition that precludes too much vegetative growth, no management is needed. However, if drought conditions occur, vegetation may colonize the open water habitat. If plant cover exceeds 50% management actions would be needed to remove vegetation from this area.

At both sites, the performance standard for at least 3 wetland species was met. Four wetland species were recorded at CR1 and ten wetland species were recorded at CR4. No additional actions are needed for this objective.

Invasive plant cover density and areal extent for most species decreased from 2020 due to active control efforts and possibly the three years of drought conditions. Several factors are influencing plant density and coverage. This can lead to short-term fluctuations in density or coverage data. The previous drought is likely to have suppressed both the germination of seed and vigor of some native and non-native plant species. Other plant species may have increased their germination and growth due to loss of competition and differing environmental requirements. In addition, some of the targeted non-native invasive plant species exist in the habitats directly adjacent to the project areas. This leads to the direct import of undesirable seed into the project areas, thereby reducing the depletion rate of the seed banks.

At CR1, the Year 4 observations total cover by invasive plant species to be 6.67%, which exceeds the Year 4 performance standard of 5%. At CR4, the Year 4 observations total cover by invasive plant species to be 5.27%, which is slightly above the Year 4 performance standard of 5%.

Continuing the current methods of control at CR1 and CR4 should result in meeting the performance standards in Year 5. However, the following additional measures are recommended to assist in achieving this goal. To address the rapid spread of canary grass at CR1 and CR4, canary grass could be mowed or weedwacked in the areas immediately adjacent to the project borders by landowner/ SCVHA with careful timing to reduce seed formation. Timing would be critical. Mowing would likely prove the sole option if the

area of infestation is significant and coordination between the ecologist or botanist and mower would be critical. Without a larger scale management plan for canary grass, it is likely to place increasing pressure in the project area over time.

In addition to on-going activities, it is recommended that the patch of black mustard directly south of CR4 be fully mowed, weedwacked or hand pulled in 2024 by landowner/SCVHA prior to mowing the road inside the main perimeter fence at CR4 to prevent a reinfestation of CR4.

To further control yellow star thistle, a 2nd weedwacking of the patch to the northwest of CR1 to control resprouts could prove useful for reducing this vector of new seed. If this option is not available a careful spot spray using an approved herbicide following the previously established protocols (spot treatment with a backpack sprayer) could achieve similar results. However, this could negatively affect the numerous native plants species in the area and reduce diversity.

In previous years, artichoke thistle was treated mid-spring and in late spring/early summer. The few missed plants were treated when discovered. In 2023, most artichoke thistle patches in the surrounding areas were treated by the agency and the remaining plants were controlled by crew hired by SCVHA. It was observed that there were additional plants appearing within and directly outside the CR1 project area throughout the summer, likely due to the increased soil moisture. It is recommended that a mid to late summer check for artichoke thistle be performed by the landowner/ SCVHA with control of any plants discovered, in the project areas and directly adjacent to them.

As the CR1 pond is expected to be redone in 2024, measures should be taken to limit the potential spread of invasive seed throughout the area. As much as is possible, the invasive plant species control work should be completed prior to the beginning of construction, equipment movement or disturbance into the project area. The construction schedule should be provided to the invasive management team as soon as possible, so invasive work can be coordinated. Depending on the start of construction, some invasive species may not yet be treatable (yellow star thistle and barbed goat grass). In this case, alternatives such as specific herbicide applications or ground scraping and treatment may be required within the construction work zone and access paths. These methods could require a level of revegetation with appropriate native grass seed and/or forbs, although the level of disturbance during construction is likely to require the same activity. In addition, efforts should be made to limit the movement of equipment throughout the area to the maximum extent possible.

After construction, monitoring should be required within the disturbed area for a minimum of three years to assure that new or existing invasive plant species have not reinfested or increased density within the construction, access and other disturbed areas.

Section A. Photodocumentation

Photo 1. Establishment of Photo Monitoring Point CR1_PPT1 (August 12, 2019)

Photo 2. Year 1 Conditions at Photo Monitoring Point CR1_PPT1 (January 28, 2020)

Photo 3. Year 2 Conditions at Photo Monitoring Point CR1_PPT1 (April 8, 2021)

Photo 4. Year 3 Conditions at Photo Monitoring Point CR1_PPT1 (March 3, 2022)

Photo 5. Year 4 Conditions at Photo Monitoring Point CR1_PPT1 (January 30, 2023)

Photo 6. Establishment of Photo Monitoring Point CR1_PPT2_1 (August 12, 2019)

Photo 7. Year 1 Conditions at Photo Monitoring Point CR1_PPT2_1 (January 28, 2020)

Photo 8. Year 2 Conditions at Photo Monitoring Point CR1_PPT2_1 (April 8, 2021)

Photo 9. Year 3 Conditions at Photo Monitoring Point CR1_PPT2_1 (March 3, 2022)

Photo 10. Year 4 Conditions at Photo Monitoring Point CR1_PPT2_1 (January 30, 2023)

Photo 11. Establishment of Photo Monitoring Point CR1_PPT2_2 (August 12, 2019)

Photo 12. Year 1 Conditions at Photo Monitoring Point CR1_PPT2_2 (January 28, 2020)

Photo 13. Year 2 Conditions at Photo Monitoring Point CR1_PPT2_2 (April 8, 2021)

Photo 14. Year 3 Conditions at Photo Monitoring Point CR1_PPT2_2 (March 3, 2022)

Photo 15. Year 4 Conditions at Photo Monitoring Point CR1_PPT2_2 (January 30, 2023)

Photo 16. Establishment of Photo Monitoring Point CR1_PPT2_3 (August 12, 2019)

Photo 17. Year 1 Conditions at Photo Monitoring Point CR1_PPT2_3 (January 28, 2020)

Photo 18. Year 2 Conditions at Photo Monitoring Point CR1_PPT2_3 (April 8, 2021)

Photo 19. Year 3 Conditions at Photo Monitoring Point CR1_PPT2_3 (September 27, 2022)

Photo 20. Year 4 Conditions at Photo Monitoring Point CR1_PPT2_3 (January 30, 2023)

Photo 21. Establishment of Photo Monitoring Point CR1_PPT3_1 (August 12, 2019)

Photo 22. Year 1 Conditions at Photo Monitoring Point CR1_PPT3_1 (January 28, 2020)

Photo 23. Year 2 Conditions at Photo Monitoring Point CR1_PPT3_1 (April 8, 2021)

Photo 24. Year 3 Conditions at Photo Monitoring Point CR1_PPT3_1 (March 3, 2022)

Photo 25. Year 4 Conditions at Photo Monitoring Point CR1_PPT3_1 (January 30, 2023)

Photo 26. Establishment of Photo Monitoring Point CR1_PPT3_2 (August 12, 2019)

Photo 27. Year 1 Conditions at Photo Monitoring Point CR1_PPT3_2 (January 28, 2020)

Photo 28. Year 2 Conditions at Photo Monitoring Point CR1_PPT3_2 (April 8, 2021)

Photo 29. Year 3 Conditions at Photo Monitoring Point CR1_PPT3_2 (March 3, 2022)

Photo 30. Year 4 Conditions at Photo Monitoring Point CR1_PPT3_2 (January 30, 2023)

Photo 31. Establishment of Photo Monitoring Point CR1_PPT3_3 (August 12, 2019)

Photo 32. Year 1 Conditions at Photo Monitoring Point CR1_PPT3_3 (January 28, 2020)

Photo 33. Year 2 Conditions at Photo Monitoring Point CR1_PPT3_3 (April 8, 2021)

Photo 34. Year 3 Conditions at Photo Monitoring Point CR1_PPT3_3 (September 27, 2022)

Photo 35. Year 4 Conditions at Photo Monitoring Point CR1_PPT3_3 (January 30, 2023)

Photo 36. Establishment of Photo Monitoring Point CR1_PPT3_3 (August 12, 2019)

Photo 37. Year 1 Conditions at Photo Monitoring Point CR4_PPT1 (January 28, 2020)

Photo 38. Year 2 Conditions at Photo Monitoring Point CR4_PPT1 (April 8, 2021)

Photo 39. Year 3 Conditions at Photo Monitoring Point CR4_PPT1 (March 3, 2022)

Photo 40. Year 4 Conditions at Photo Monitoring Point CR4_PPT1 (January 30, 2023)

Photo 41. Establishment of Photo Monitoring Point CR4_PPT2 (August 12, 2019)

Photo 42. Year 1 Conditions at Photo Monitoring Point CR4_PPT2 (January 28, 2020)

Photo 43. Year 2 Conditions at Photo Monitoring Point CR4_PPT2 (April 8, 2021)

Photo 44. Year 3 Conditions at Photo Monitoring Point CR4_PPT2 (March 3, 2022)

Photo 45. Year 4 Conditions at Photo Monitoring Point CR4_PPT2 (January 30, 2023)

Photo 37. Completely Dry Pond Bed at CR1 (December 29, 2020)

Photo 38. Completely Dry Pond Bed at CR1 (February 1, 2021)

Photo 39. 4.6 feet of water at CR1 (January 14, 2022)

Photo 40. Completely Dry Pond Bed at CR1 (March 3, 2022)

Photo 41. CR1 at water level completely dry by May 30 (June 16, 2022).

Photo 42. CR1 filled and flowing into overflow pipes with >12-inches of rainfall in November – January (January 30, 2023).

Photo 43. 5.7 ft of water (April 19, 2023), but pond water levels steadily decreased to 0 ft by the end of May.

Photo 44. Completely Dry Pond Bed (August 8, 2023)

Photo 30. Completely Dry Pond Bed at CR4 (December 29, 2020)

Photo 31. One (1) foot of water at CR4 (February 1, 2021)

Photo 32. No water at CR4 due to open drain valve (photo provided by SCVHA, February 10, 2021)

Photo 33. Removeable caps, added to the quick drain pipes to prevent leakage (photo provided by SCVHA, November 30, 2021)

Photo 42. 3-ft of water at CR4 (January 14, 2022)

Photo 43. 2.1-ft of water at CR4 (March 3, 2022)

Photo 44. Completely Dry Pond Bed at CR1 (June 16, 2022)

Photo 44. Pond filled with >12-inches of rainfall in November – January (January 30, 2023)

Photo 44. Pond remains filled with 4.9 ft of water (April 19, 2023)

Photo 45. Pond did not dry during the summer months and retained 3.1 ft of water (November 2, 2023)

Section C. Wetland Vegetation

CR1, Wetland Transect within Cattle Exclosure, July 2023

1m^2 Quadrat, CR1, July 2023

Vegetation within CR1, July 2023

CR1, Wetland, Showing Grazed and Un-grazed Areas, July 2023

CR4, Open Water with Some Wetland Vegetation, July 2023

CR4, Open Water within Some Wetland Vegetation, October 2023

CR-4 1m^2 Quadrat in Wetland Planting Zone, October 2023

CR-4 1m^2 Quadrat on South Shore in Wetland Planting Zone, October 2023

CR-4 1m^2 Quadrat along East Shore in Wetland Planting Zone, October 2023

Section D. Invasive Plant Cover Photo-Documentation

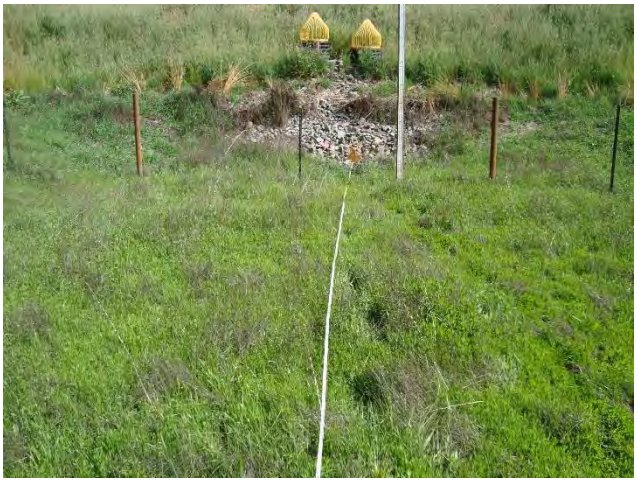
CR1 Transect T-1, May 2023

CR1 Transect T-2, May 2023

CR4 Transect T-1, May 2023

CR4 Transect T-2, May 2023

CR4 Transect T-3, May 2023



CR1, Wetland Transect within Cattle Exclosure, April 2022

1m^2 Quadrat, CR1, April 2022

CR1, Wetland, 2022, Showing Grazed and Un-grazed Areas, April 2022

CR4, Transect Sampling; Open Water with No Wetland Vegetation, April 2022

CR4, 1m^2 Quadrat Quadrat within Wetland Planting Zone, April 2022

CR-4 1m^2 Quadrat in Wetland Planting Zone, April 2022

CR1 Transect T-1, May 2023

CR1 Transect T-2, May 2023

CR4 Transect T-1, May 2023

CR4 Transect T-2, May 2023

CR4 Transect T-3, May 2023

Section E. Maps

Figures 1–4 are included below.

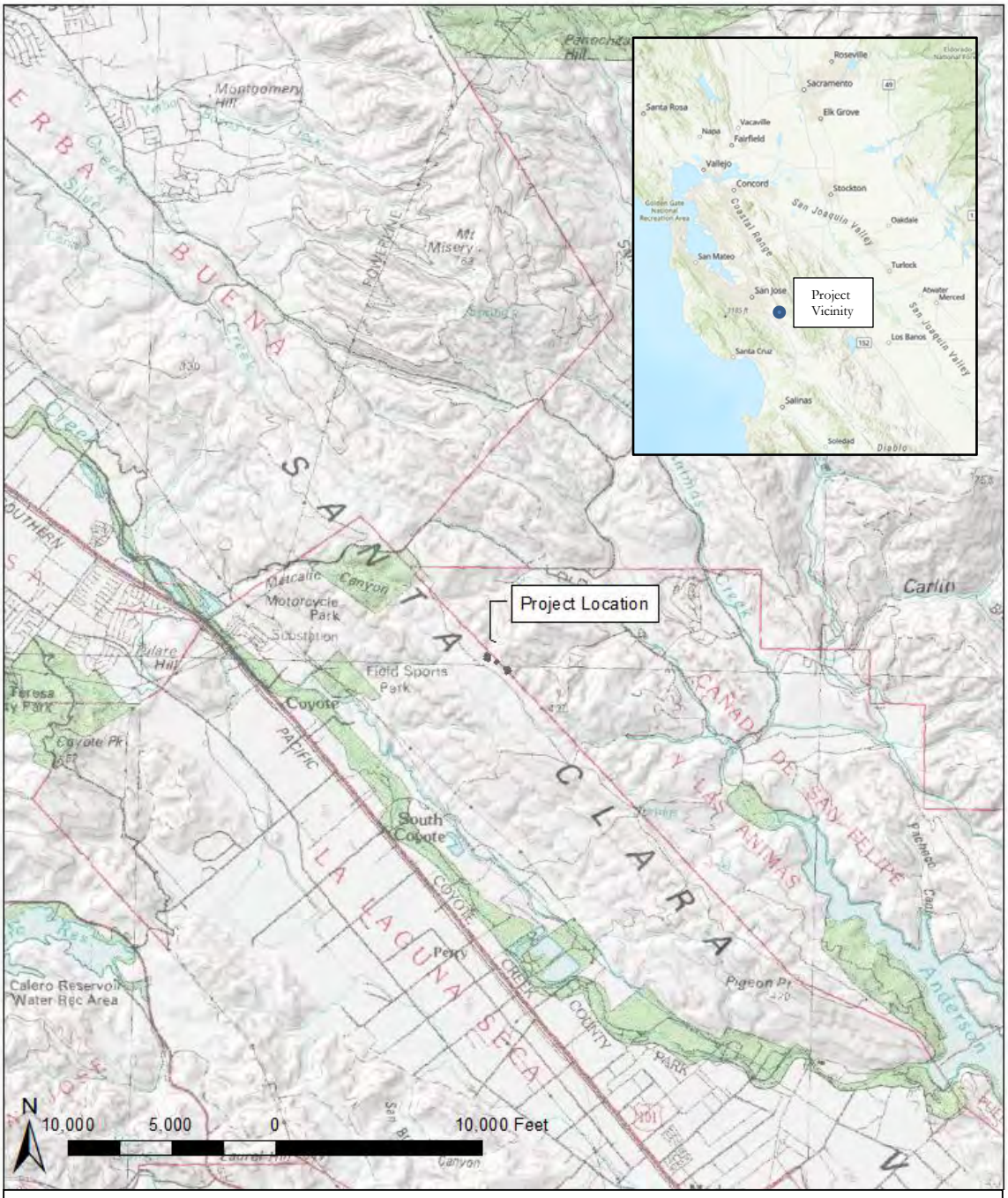


Figure 1. Coyote Ridge CR1 and CR4 Sites Vicinity Map
Coyote Ridge Ponds Restoration Project, Ponds CR1 and CR4
Year 4 Monitoring Report
February 2024

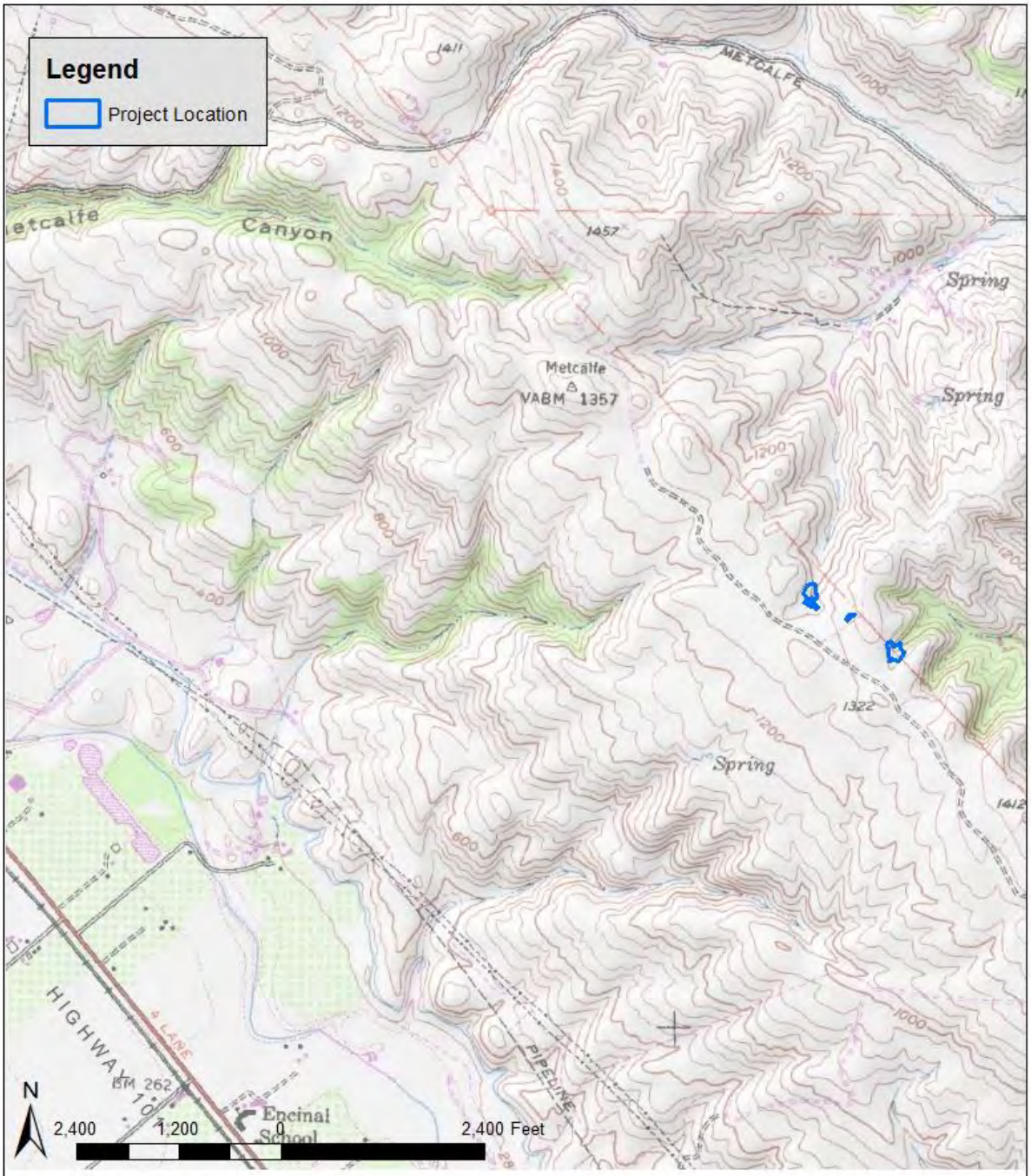


Figure 2. Coyote Ridge CR1 and CR4 Sites USGS Topographical Map

Coyote Ridge Ponds Restoration Project, Ponds CR1 and CR4
Year 4 Monitoring Report
February 2024

Figure 3. Coyote Ridge CR1 Photo Monitoring Locations
Coyote Ridge Ponds Restoration Project, Ponds CR1 and CR4
Year 4 Monitoring Report
February 2024

Figure 4. Coyote Ridge CR4 Photo Monitoring Locations
Coyote Ridge Ponds Restoration Project, Ponds CR1 and CR4
Year 4 Monitoring Report
February 2024

Section F. References

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[USFWS] U.S. Fish and Wildlife Service. 2005. Revised Guidance on Site Assessments and Field Surveys for the California Red-Legged Frog. August.

[USFWS and CDFW] U.S. Fish and Wildlife Service and California Department of Fish and Game. 2003. Interim Guidance on Conducting Site Assessments and Field Surveys for Determining Presence or a Negative Finding of the California Tiger Salamander.

Appendix A. Wetland Vegetation and Invasive Plant Cover Monitoring Results

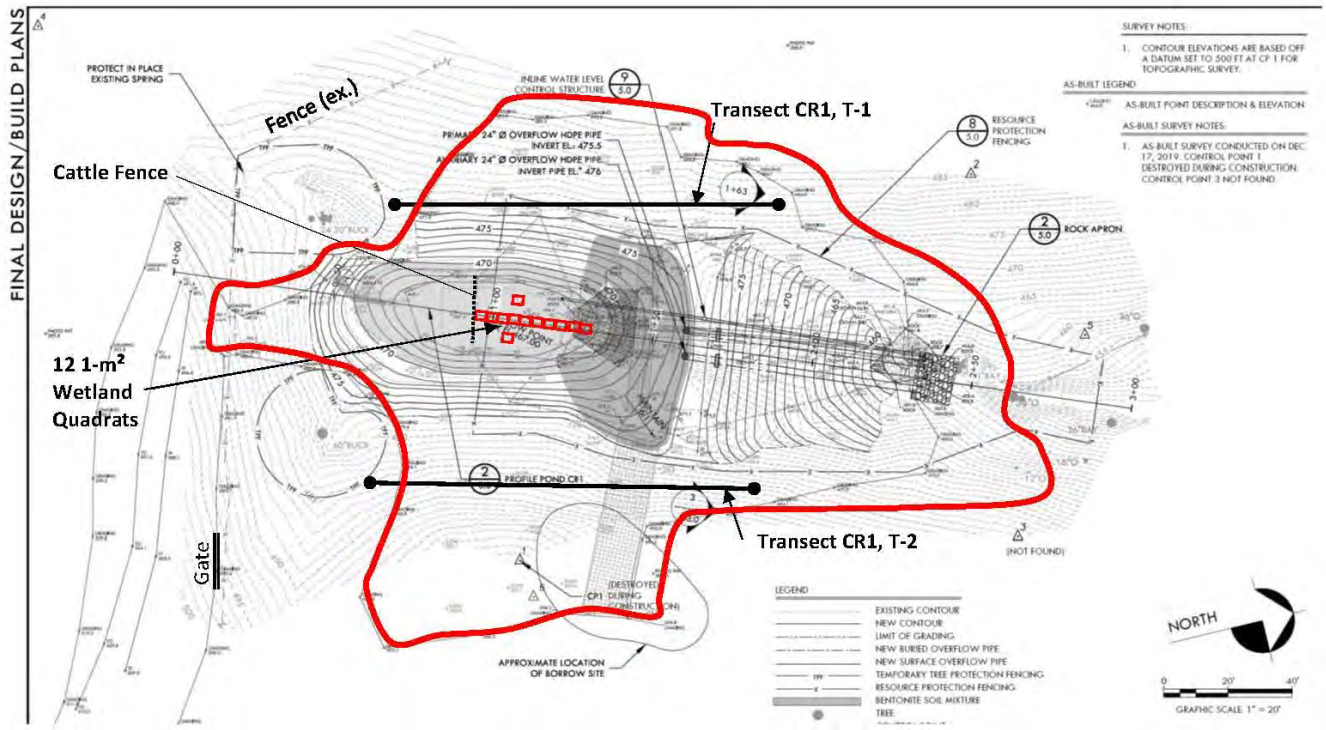


Figure A-1. Pond CR1 – Wetland and Invasive Plant Monitoring Transects, 2023

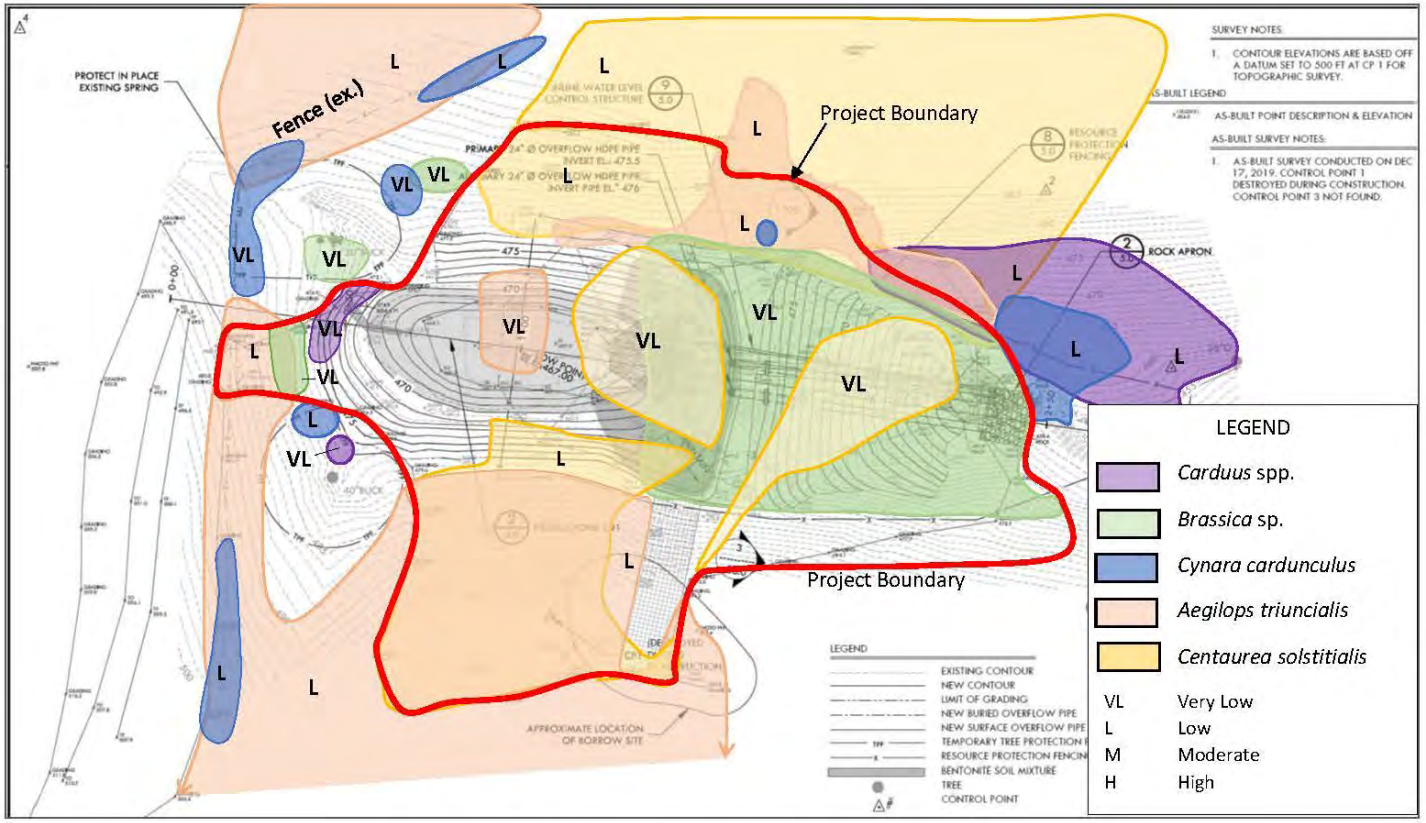


Figure A-2. Pond CR1 – Distribution of Invasive Plant Species, 2023

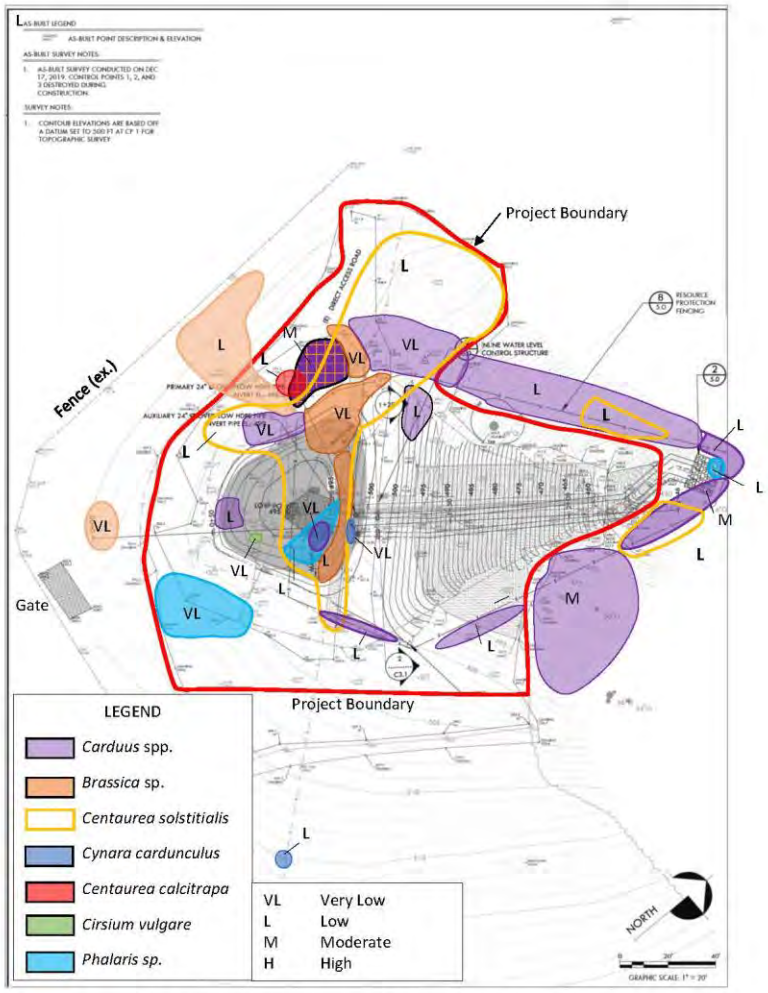


Figure A-3. Pond CR4 – Distribution of Invasive Plant Species, 2023

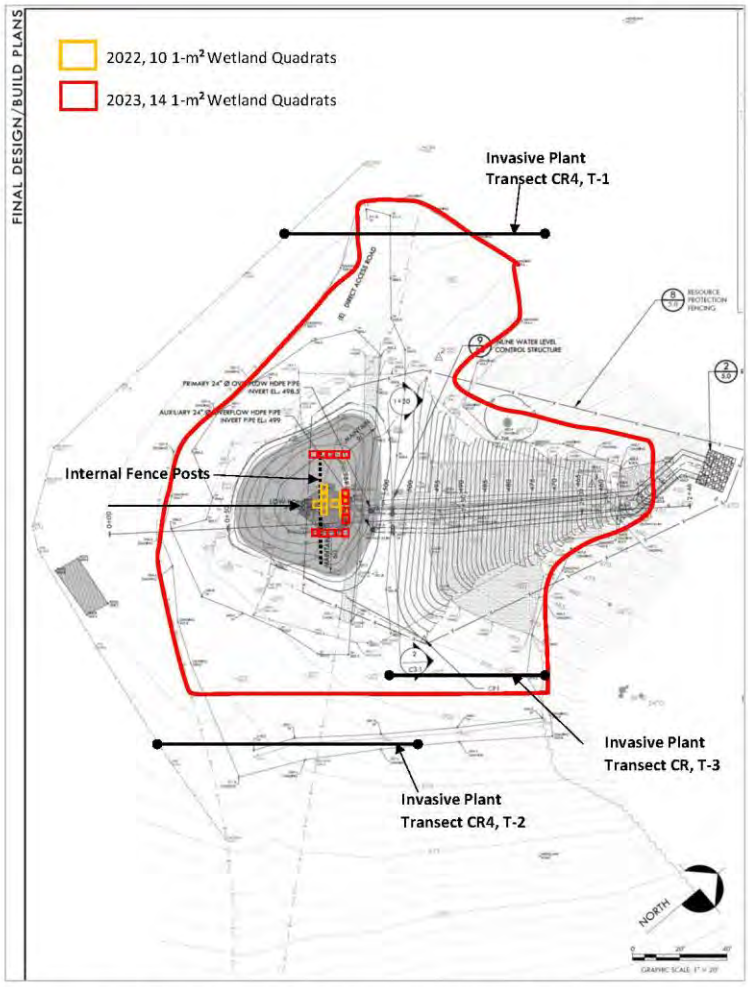


Figure A-4. Pond CR4 – Wetland and Invasive Plant Monitoring Transects, 2023

Wetland Vegetation and Invasive Plant Cover Monitoring Results

Table A-1. Plant Species Observed within Wetland Monitoring Sites, Quadrat Sampling

				Average Percent Cover by Site	
Scientific Name	Common Name	Plant Guild[2]	Wetland Indicator Status[1]	CR1	CR4
Festuca perennis	Italian ryegrass	EAG	FAC	1.4	1.8
Polypogon monspeliensis	Rabbitsfoot grass	EAG	FACW	-	8.1
Medicago polymorpha	Bur clover	EAF	FACU	0.1	-
Polygonum aviculare	Knotweed	EAF	FAC	49.1	-
Vicia sativa	Spring vetch	EAF	UPL	0.4	-
Sonchus asper	Sow thistle	EAF	FAC	0.1	-
Schoenoplectus sp.	Bulrush	NPF	OBL	-	0.8
Rumex crispus	Curly dock	EPF	FAC	-	1.6
Xanthium spinosum	Spiny clotbur	EAF	FACU	0.1	-
Xanthium strumarium	Cocklebur	NAF	FAC	2.6	0.6
Avena sp.	Wild oat	EAG	UPL	0.1	-
Chenopodium murale	Goosefoot	EAF	FACU	2.2	-
Crypsis schoenoides	Swamp pricklegrass	EAG	FACW	-	3.9
Lactuca serriola	Wild lettuce	EAF	FACU	-	3.3
Eleocharis macrostachys	Spikerush	NPF	OBL	-	15.4
Hypochaeris glabra	Cat's ear	EAF	UPL	-	0.1
Leymus triticoides	Creeping wild rye	NPG	FAC	-	3.5
Persicaria amphibia	Water smartweed	NPF	OBL	-	1.6
Epilobium ciliatum	Willow herb	NAF	FACW	-	0.3
Bare	-	-	-	34	52

[1] Wetland vegetation cover is defined as the combined cover of native and nonnative species with a wetland indicator status of facultative (FAC), facultative wetland (FACW), or obligate (OBL) based on the Arid West Regional Wetland Plant List (Lichvar et al. 2020). Species with a facultative upland (FACU), upland (UPL), or no indicator (NI) wetland indicator status are not considered wetland species.

[2] Plant guilds are defined as: exotic annual grass (EAG), exotic annual forb (EAF), exotic perennial grass (EPG), exotic perennial forb (EPF), native annual grass (NAG), native annual forb (NAF), native perennial grass (NPG), and native perennial forb (NPF).

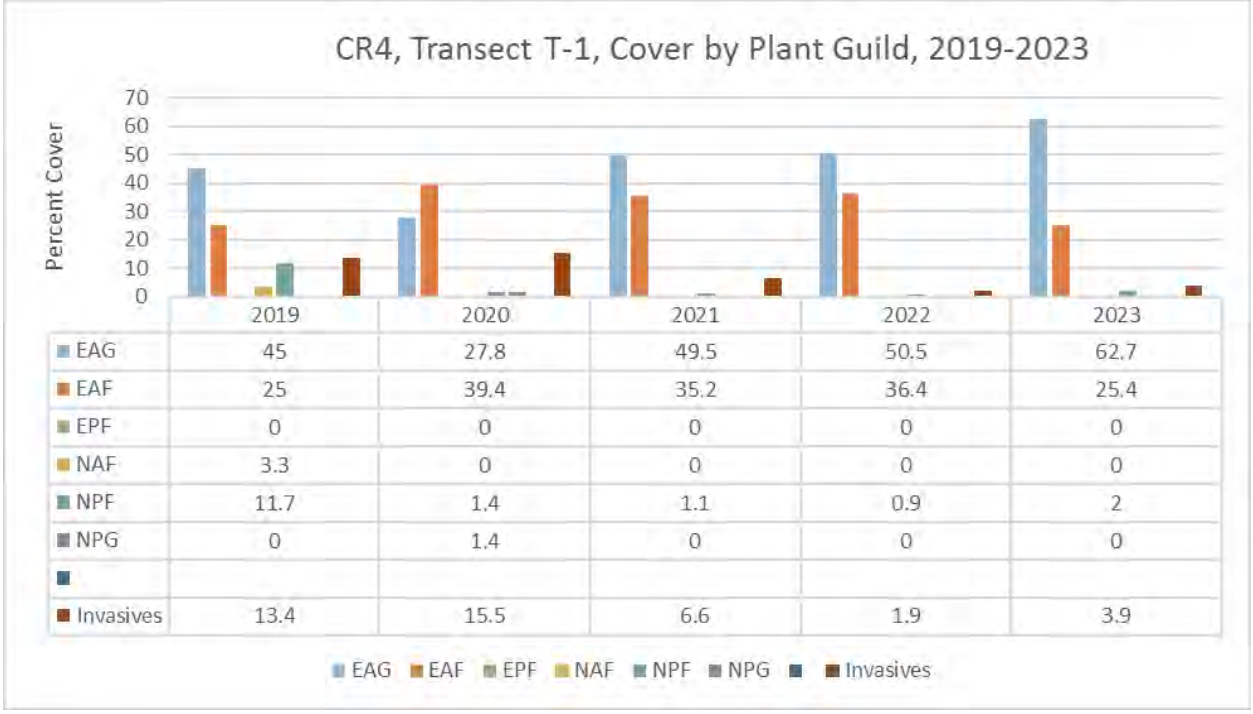


Figure A-5. CR1, Transect T-1, Plant Cover, by Guild, 2019 -2023

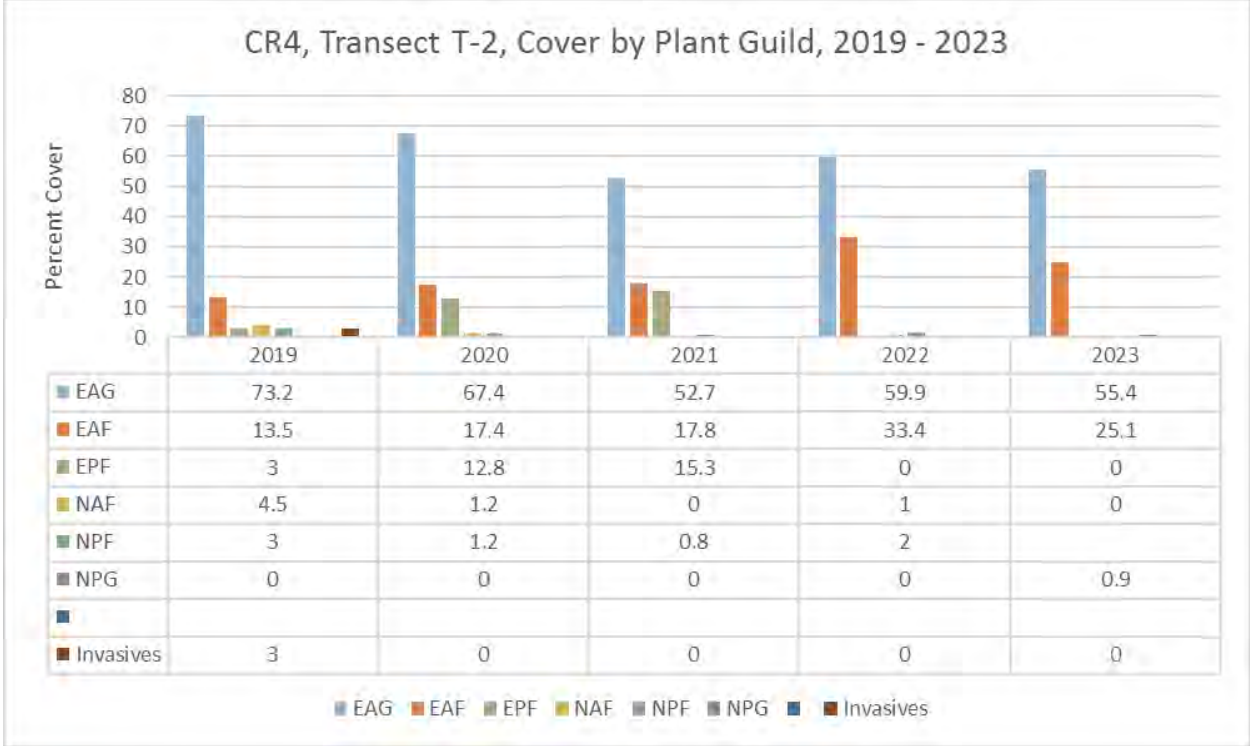


Figure A-6. CR1, Transect T-2, Plant Cover, by Guild, 2019-2023

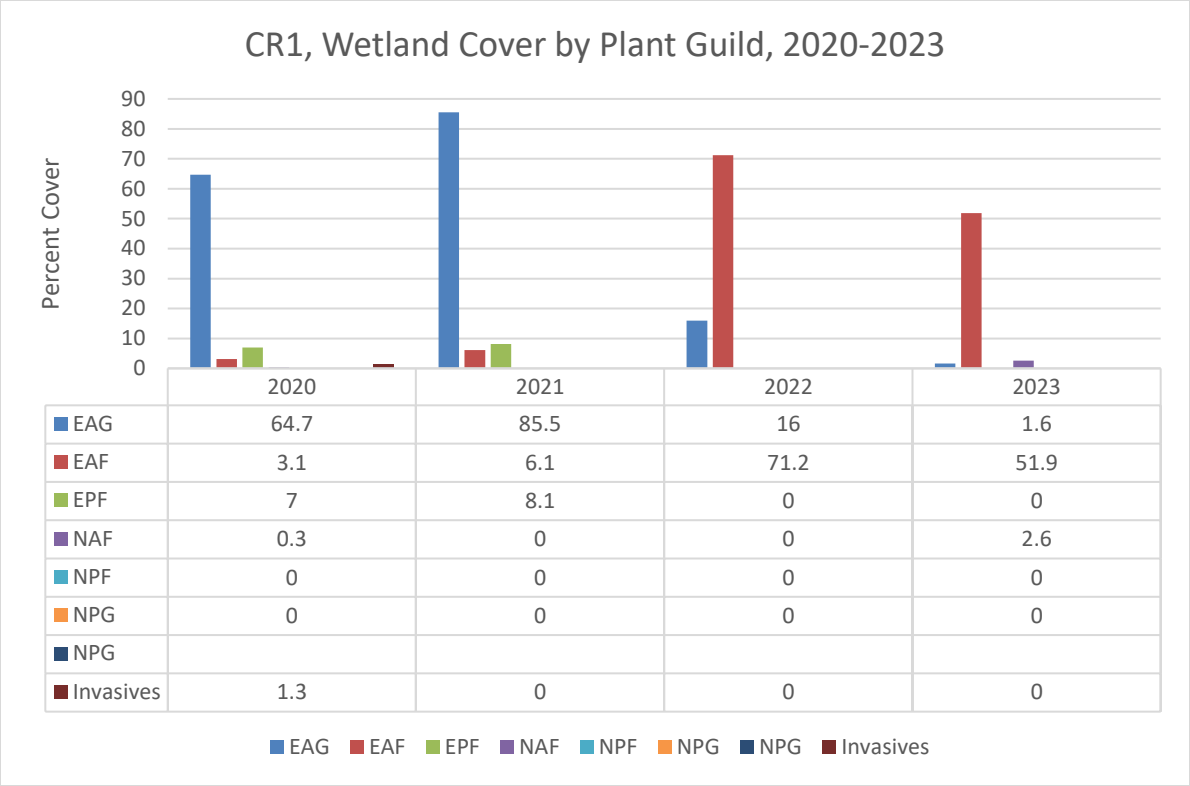


Figure A-7. CR1, Wetland Quadrats, Plant Cover, by Guild, 2020-2023

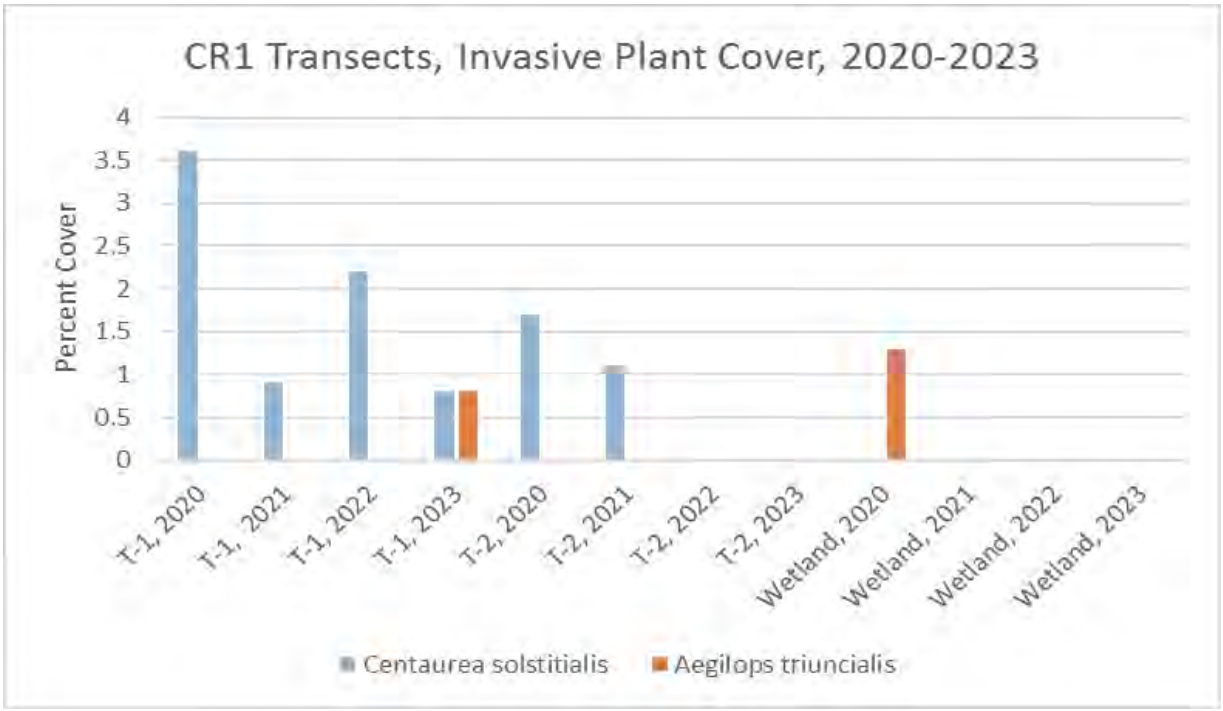


Figure A-8. CR1 Transects, Invasive Plant Cover, by Species, 2020-23

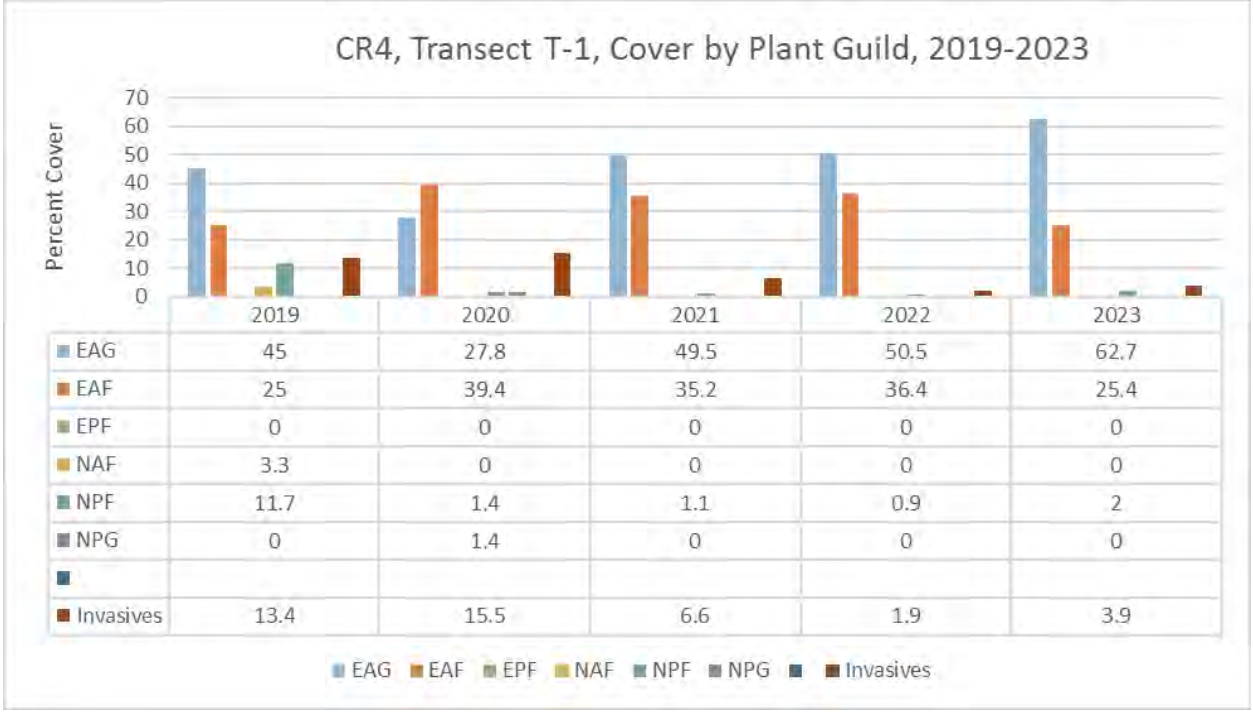


Figure A-9. CR4, Transect T-1, Plant Cover, by Guild, 2019 -2023

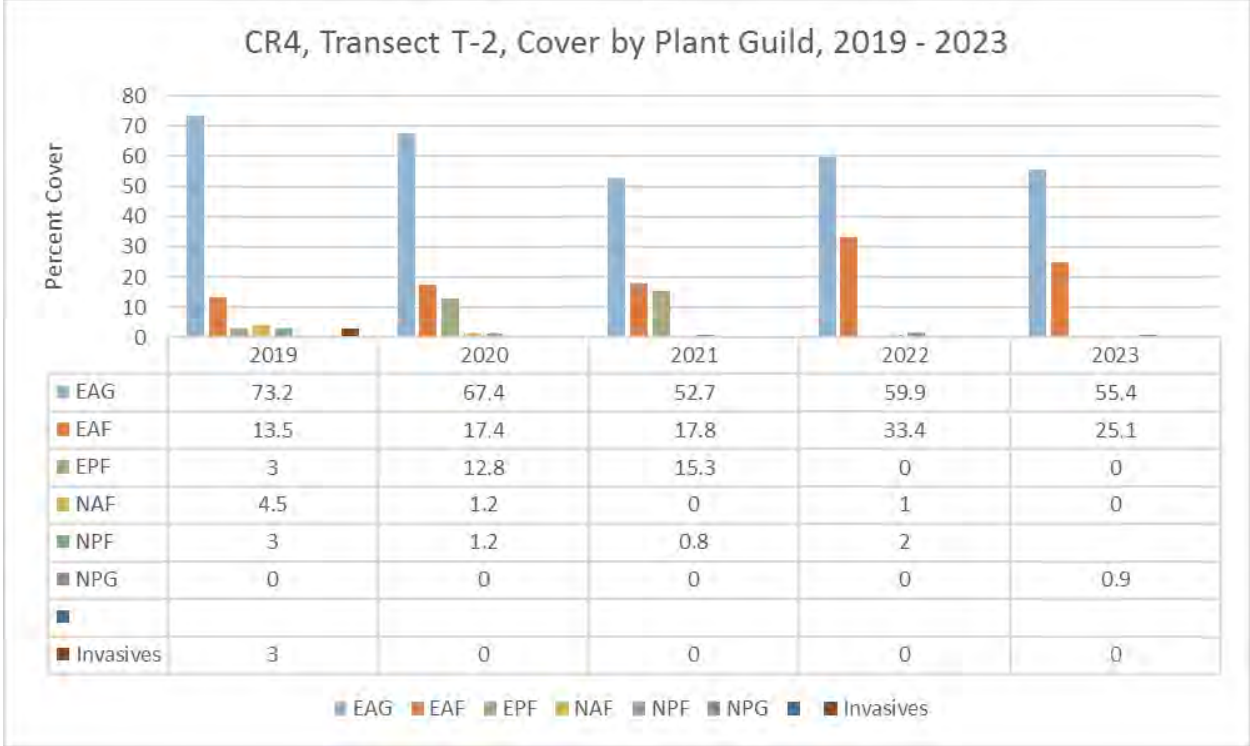


Figure A-10. CR4, Transect CR4.2, Plant Cover, by Guild, 2019 -2023

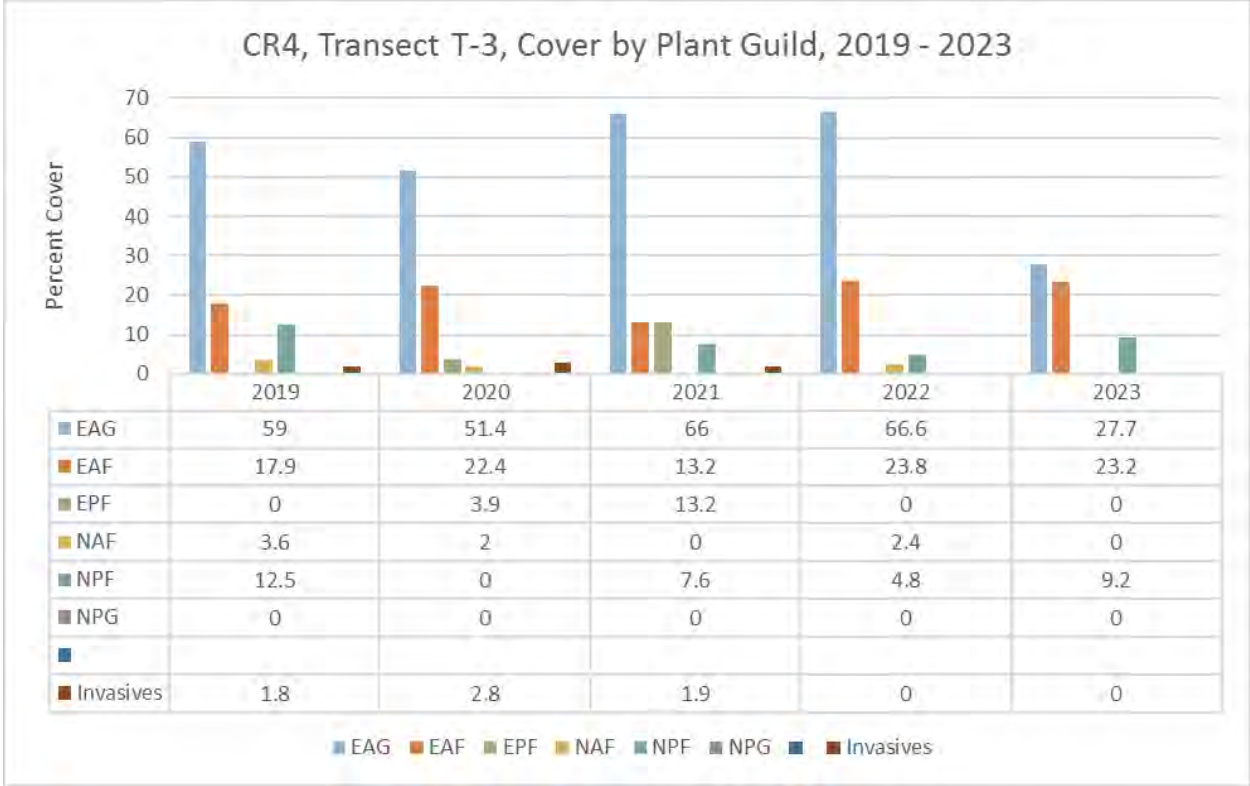
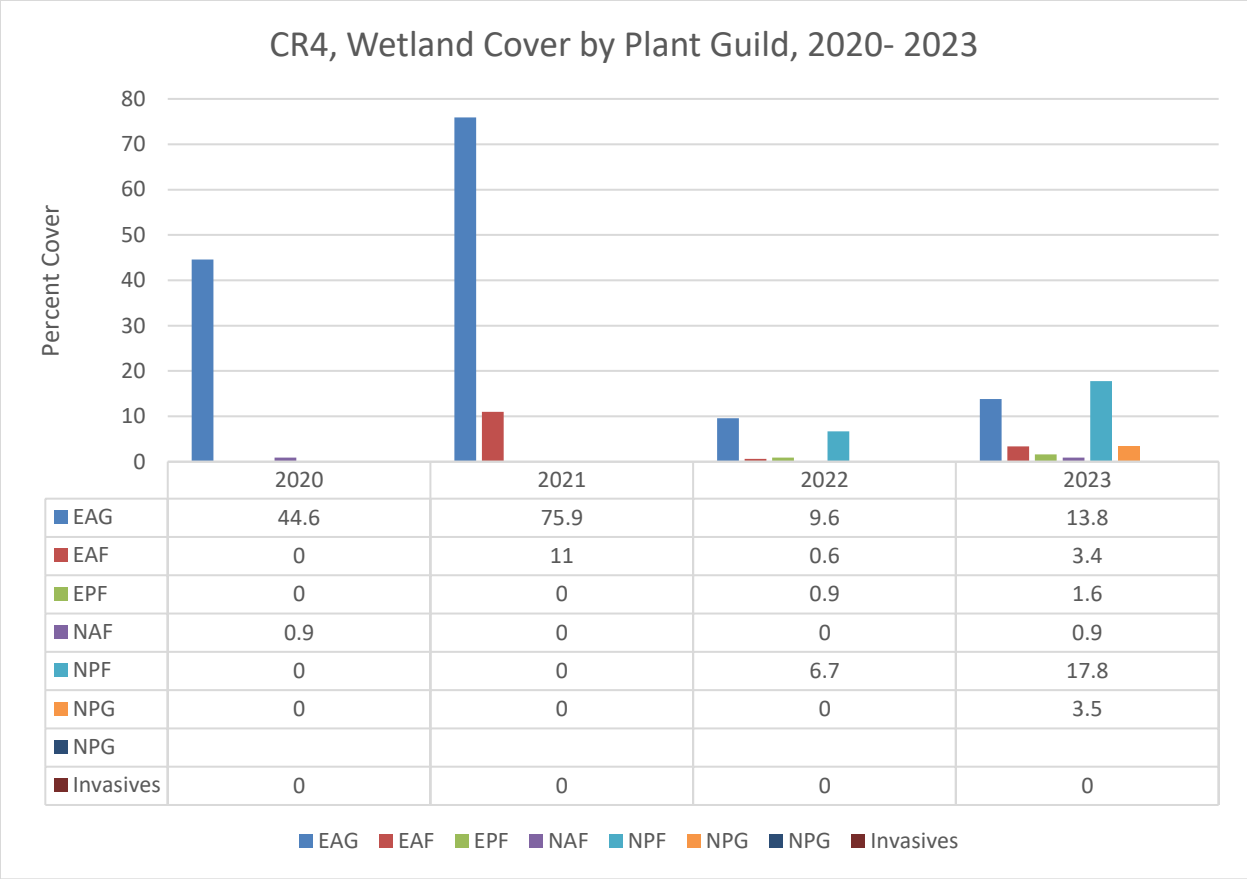


Figure A-11. CR4, Transect CR4.3, Plant Cover, by Guild, 2019-2023



	2020	2021	2022	2023
EAG	44.6	75.9	9.6	13.8
EAF	0	11	0.6	3.4
EPF	0	0	0.9	1.6
NAF	0.9	0	0	0.9
NPF	0	0	6.7	17.8
NPG	0	0	0	3.5
NPG				
Invasives	0	0	0	0

Figure A-12. CR4, Wetland Quadrats, Plant Cover, by Guild, 2020-2023

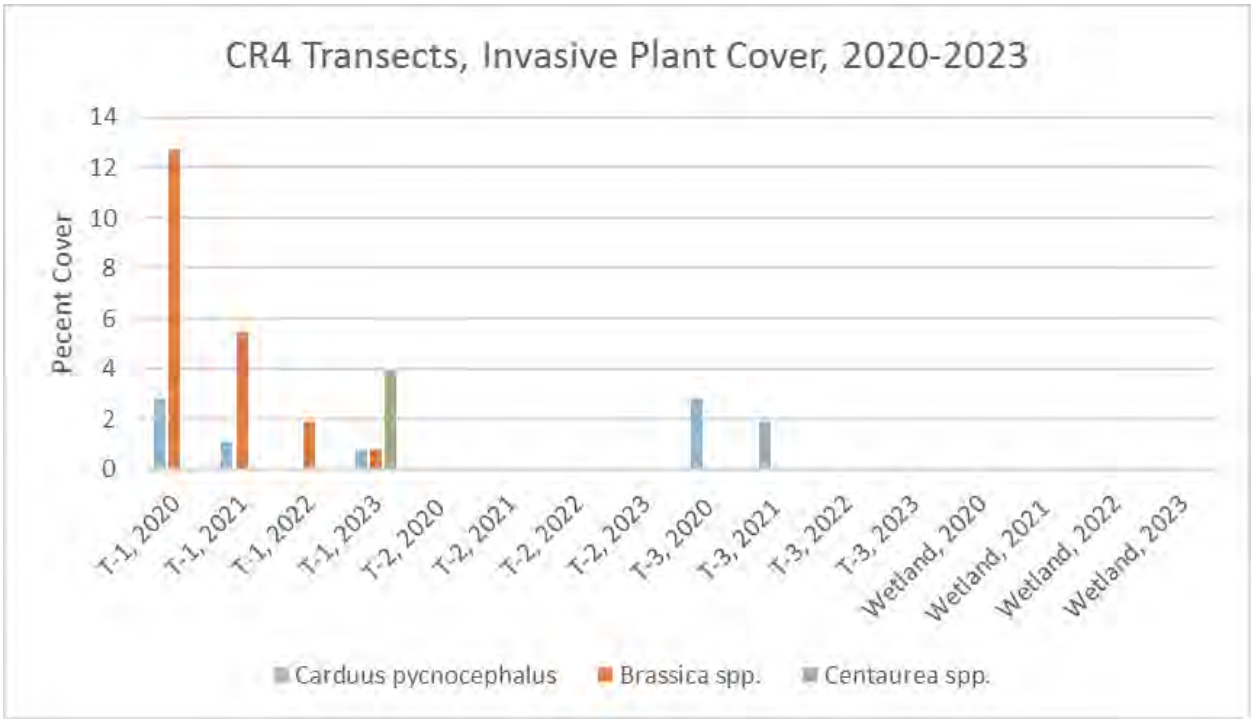


Figure A-13. CR4 Transects, Invasive Plant Cover, by Species, 2020-2023

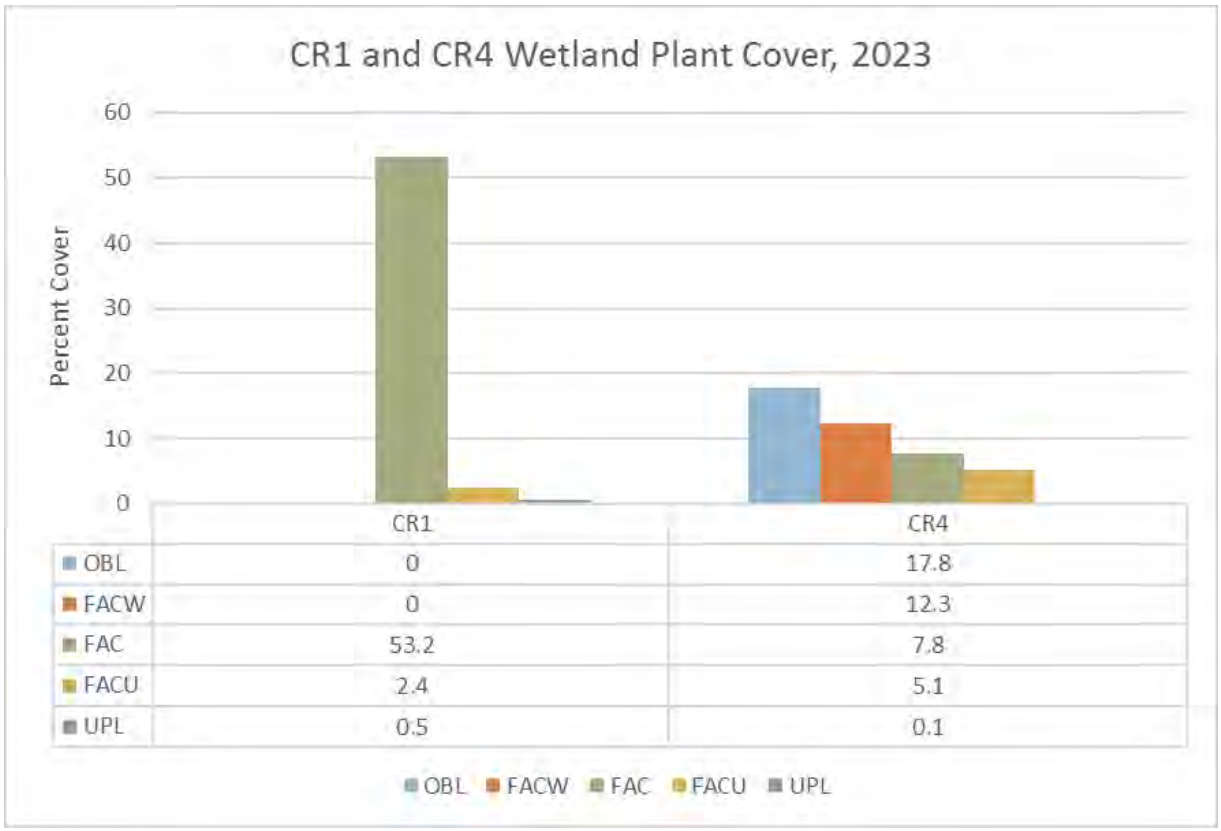


Figure A-14. CR1 and CR4 Wetlands, Plant Cover by Wetland Indicator Status, 2023 (Year 4)

Appendix A. Year 4 Hydrologic Data

Table B-1. Staff Plate Readings

Date	Water Depth (ft) CR1	Water Depth (ft) CR4	Notes
1/22/2023	Full/Overflowing	Full/Not Overflowing	
1/30/2023	7.4	5.7	
2/8/2023	7.3	5.6	
2/15/2023	6.7	5.45	
2/22/2023	6.0	5.35	
3/7/2023	6.7	5.9	
4/19/2023	5.7	5.9	
4/26/2023	4.75	5.9	
5/10/2023	2.9	5.9	
5/22/2023	1.1	5.8	
5/30/2023	0	5.8	
6/23/2023	0	5.6	
7/5/2023	0	5.2	
7/24/2023	0	5.05	
7/27/2023	0	4.85	
11/2/2023	0	3.1	

Appendix B. Year 4 Precipitation Data

Table B-2. Rain Guage Data (Provided by SCVHA)

Date	Rainfall (in)	Precipitation to Date (in)
9/19/2022	0.90	0.90
11/2/2022	0.50	1.40
11/6/2022	0.10	1.50
11/7/2022	0.35	1.85
11/9/2022	1.40	3.25
12/2/2022	0.70	3.95
12/4/2022	1.25	5.20
12/5/2022	0.10	5.30
12/6/2022	0.45	5.75
12/12/2022	2.50	8.25
12/28/2022	1.35	9.60
12/29/2022	0.10	9.70
12/30/2022	0.10	9.80
1/1/2023	1.6	11.4
1/5/2023	2.1	13.5
1/8/2023	0.85	14.35
1/9/2023	2	16.35
1/10/2023	0.8	17.15
1/12/2023	0.4	17.55
1/14/2023	1.8	19.35

Date	Rainfall (in)	Precipitation to Date (in)
1/15/2023	0.4	19.75
1/16/2023	1.75	21.5
1/19/2023	0.25	21.75
1/20/2023	0.30	22.05
2/6/2023	0.85	23.90
2/22/2023	0.15	24.05
2/23/2023	1.05	25.10
2/27/2023	0.90	26.00
3/1/2023	0.75	26.75
3/5/2023	0.50	27.25
3/7/2023	0.10	27.35
3/10/2023	0.95	29.90
3/20/2023	0.15	30.05
3/23/2023	2.00	32.05
3/30/2023	0.95	33.00
5/4/2023	0.90	33.90
5/6/2023	0.10	34.00

Appendix C. Infrastructure Monitoring Reports and Data

Coyote Ridge Property Stock Pond Habitat Restoration

Prepared for Camara Environmental

By David Sands, Go Native, Inc.

Inspection date: May 26, 2023 8:30 am

Metcalf Road Entry gate to Staging Area

The main gate and the next cattle gate were intact and operational. The entry road was eroded as usual, some minor road work. No wildlife observed. This pic is by the old staging area.

CR01

- The cattle fence and gate are intact.
- Perimeter pond exclusion fences and gates – fences and gates intact, no obvious incursion by the cattle. Grazing evident outside the perimeter fence.
- Overflow pipes and debris guards – intact
- Berm conditions and integrity – good vegetation growth, no evidence of erosion

- Side slopes in and outside the perimeter fence – good vegetation growth, no evidence of erosion
- Water level and staff gauge – staff gauge intact, no measurable water
- Observations, comments, and recommendations – pond was full at some point this winter, currently empty. No recommendations.

CR04

- Cattle fence and gates intact.
- Perimeter pond exclusion fences and gates - perimeter fences intact, no obvious incursion by the cattle. Grazing evident outside the perimeter fence.
- Overflow pipes and debris guards - intact
- Berm conditions and integrity - good vegetation growth, no evidence of erosion
- Side slopes in and outside the perimeter fence - good vegetation growth, no evidence of erosion

- Water level and staff gauge - staff gauge intact, pond is full
- Restoration pond vegetation – good vegetation coverage
  Observations, comments, and recommendations – everything looked good, no observable issues. No recommendations. 44

Appendix D. As-Built Survey

Not included here, provided in Year 1 report.