East Bay Regional Park District

Wildfire Hazard Reduction and Resource Management Plan (WHRRMP) Fuels Management Program

Annual Summary of Work

Project Year 2023

May 14, 2024

EBRPD STEWARDSHIP DEPARTMENT
2950 PERALTA OAKS COURT
OAKLAND, CA 94605

East Bay Regional Park District

Contents

1 INTRODUCTION

This report details the fuel management activities and status of mitigation measures and impacts permitted under the EBRPD Wildfire Hazard Reduction and Resource Management Plan (WHRRMP), pursuant to project permits issued by the United States Fish and Wildlife Service and the California Department of Fish and Wildlife. This Annual Status Report is submitted in accordance with the conditions of the EBRPD WHRRMP Biological Opinion as well as the approved Mitigation and Monitoring Plan (MMP) (2017). This document includes a summary of work and monitoring activities, status of habitat, summary of Project Daily Monitoring Reports, observations of wildlife, and assessments of project performance standards.

EBRPD implemented ten fuels reduction projects in 2023, excluding grazing, pile burning, and maintenance. The primary activities in most of these projects were tree removal, ladder fuel removal, and brush thinning using hand tools or by mechanical means. All relevant conditions were adhered to during project work and nesting surveys, resource tailboards, woodrat nest relocation, and biological monitoring were conducted where appropriate and needed. Designated Biologists completed one hundred eighty (180) Daily Monitoring Reports (DMRs) to document project activities and biological observations and ensure compliance. Biologists also completed nesting bird and resource surverys, assessments, environmental trainings for crew and staff, and spot checks where appropriate, to document project activities and ensure compliance.

2 STATUS OF PROJECT AREA AND COVERED ACTIVITES

Nine fuels management projects were conducted in 2023. This section contains updates for all projects conducted under FEMA funded fuels management up to year 2024. Reporting on one non-FEMA project is also included in this section. In project descriptions below, the title of the project is listed followed by the date of Initial Treatment and the date of maintenance or reentry if applicable.

ALAMEDA WHIPSNAKE STUDY (2020)

Fourteen (14) RTAs were included in the Alameda whipsnake study. Traplines in brush were activated and sampled in 2016, treated in 2018-2019, sampled in 2019, treated in 2020, and were activated for a final time in 2021 to determine whether fuels related brush work has any effects on Alameda whipsnake. The study was conducted in the following RTAs: CC001, CC003, CC007, CC012, SR001, SR003, SR004, SR005, TI006, TI012, TI015, TI022, and WC011. The bulk of this work was conducted using hand tools; some heavy equipment work was conducted in RTA CC003. The treatment involved clearing 0.25 acre plots around traplines, which is similar to the brush island treatment. All work was monitored by Designated Biologists, who vouchered two sightings of AWS during work. EBRPD has received the final report for this study and will be releasing it to agency staff shortly.

AC001 (2023)

Treatment consisted of thinning of 2 acres of small diameter trees, reduction of ladder fuels, removal of fuels accumulation due to Sudden Oak Death (SOD) and PG&E debris, and brush reduction along Redwood Rd near the intersection of Skyline Blvd adjacent to Skyline Ranch Equestrian Center. The goal of the project was to increase spacing between trees to reduce fire hazard and improve forest heath. This project was conducted over 6 workdays. EBRPD also completed 1.2 acres of eucalyptus and understory thinning along Redwood Rd near the intersection of Skyline Blvd adjacent to Skyline Ranch Equestrian Center. The goal of the project was to increase spacing between trees to reduce fire hazard and improve forest heath. Eucalyptus stumps were treated to prevent sprouting. The project was conducted over 8 workdays.

General Habitat Quality. Scrub in RTA consists of coyote brush, sticky monkeyflower, bracken fern, sagebrush. The scrub is a mosaic of open and closed canopy and seems suitable for AWS. There is more scrub connected to these areas outside of RTA boundaries. PCE 1, 2 and 3 are all present. No use known. No treatment occurred within core scrub habitat in 2023. Core scrub acreage decreased from the pre-assessment survey because a portion of coastal scrub xeric habitat was reclassified by biologists as oak-bay woodland due to a significant canopy cover consisting of coast live oak and bay laurel. However, this was not the result of treatment within the RTA.

AC002 (2020)

In Anthony Chabot Regional Park, this project consisted of removal of small trees and clearing of ladder fuels in approximately 0.8 acre. The project was conducted over 8 days.

General Habitat Quality. Overall, core scrub habitat was of low habitat quality for AWS and a majority of removed brush was classified as coastal scrub (xeric) but consisted mostly of French broom and poison oak. The area is used heavily by people, dogs, and horses at the nearby stables, and disturbance is generally high. 2021: Marginal scrub quality, PCE2 low quality and isolated from contiguous habitat; poor PCE3. No use known.

AC006 (2019)

In Anthony Chabot Regional Park, this project consisted of tree limbing and clearing of ladder fuels in approximately 1 acre. The project was conducted over 6 days.

General Habitat Quality. The majority of this RTA is oak/bay woodland, at 44%, and coastal scrub/coyote brush scrub, adding up to 42%. Core scrub is described as 15% cover in this RTA with foraging/dispersal at 20% cover. PCE 1, 2 and 3 are all present. No use known.

AC007 (2019, 2021)

In Anthony Chabot Regional Park, this project consisted of brush reduction and clearing of ladder fuels in approximately 8 acres. The project was conducted over 30 days. No work occurred in AC007 in 2020. In 2021, the EBRPD Diablo Fuels Crew worked 1.1 acres clearing ladder fuels and creating burn piles.

General Habitat Quality. Large portions of the RTA are composed of core scrub, though the quality differs substantially due to various stages of succession and exotic invasives. Moderate to high-quality foraging habitat available (oak-bay woodland). No use known.

Anthony Chabot State Allocated/CalRecycle Funded Project (2022, 2023, 2024)

In Anthony Chabot Regional Park, this project consists of 443 acres of eucalyptus thinning across several RTAs: AC008a, AC008b, AC008c, AC010, AC013. The goal of the project is to reduce fire intensity by thinning overstocked eucalyptus plantation forests where mortality and tree health decline were

identified in winter 2020-2021. Biomass from tree removals is being carbonized on site or masticated in place.

General Habitat Quality. The majority of the work is in eucalyptus plantation, not suitable habitat for AWS.

AC012 (2018)

In Anthony Chabot Regional Park, this project consisted of brush reduction and clearing of ladder fuels in approximately 8 acres.

General Habitat Quality. The majority of this RTA is eucalyptus plantation and annual grassland. There is moderate quality *Baccharis* scrub with low quality dispersal and foraging habitat.
2021: Described as high-quality coyote brush scrub with low quality PCE2 and no PCE3 observed. No use known.

AC013 (2018)

In Anthony Chabot Regional Park, this project consisted of brush reduction and clearing of ladder fuels in approximately 8 acres.

General Habitat Quality. Good quality core scrub, mix of open and closed canopy coyote brush as a result of project activities. PCE 2 is of mixed quality but surrounded by unsuitable habitat (eucalyptus). No use known.

AC014 (2018)

In Anthony Chabot Regional Park, this project consisted of brush reduction and clearing of ladder fuels in approximately 8 acres.

General Habitat Quality. Core scrub is low quality with high quality foraging/dispersal habitat.

CC001 (2019, 2020, 2022, 2023)

In Claremont Canyon Regional Preserve, this 2019 project consisted of brush reduction and clearing of ladder fuels in approximately 16 acres. In 2020, the project continued with 13 days of work consisting of brush reduction and clearing of ladder fuels. The project was conducted over 36 days. No work occurred in CC003 in 2021. In 2022 large eucalyptus were thinned and removed close to homes in the WUI in approximately 11.4 acres. This work was conducted over 66 days. In 2023 the EBRPD Diablo Fuels Crew reduced brush and removed ladder fuels in approximately 3.6 acres close to homes in the WUI. This work was conducted over 24 days.

General Habitat Quality. Coyote brush scrub in the eastern edge of the RTA is described as high quality. Oak bay woodlands provide some PCE2. Burrows and outcrops are present at low density.

CC003 (2019, 2020)

In Claremont Canyon Regional Preserve, this project consisted of brush reduction and clearing of ladder fuels in approximately 3 acres. In 2020, the project continued with 13 days of work consisting of brush reduction and clearing of ladder fuels. The project was conducted over 36 days.

General Habitat Quality. Coyote brush scrub in the western portion of the RTA is of moderate quality as it is contiguous with foraging/dispersal habitat and offers a variable canopy for basking opportunities. Coyote brush scrub and north coastal scrub (xeric) in the middle portion of the RTA are patchy. Dispersal habitat is present and contiguous to core scrub. Small outcrops are present but lack crevices.

CC007 (2023)

In Claremont Canyon Regional Preserve, the goal of the project is to improve accessibility along Panoramic Trail between Claremont Canyon Stonewall and Panoramic Way "Skyfall" neighborhoods. Brush and French Broom removed from trailside to improve passage for emergency fire equipment. This work was conducted over 2 days.

General Habitat Quality. The entire RTA is excellent habitat for Alameda whipsnake. The entire RTA is coyote brush scrub and fulfills the definition of PCE 1. Although no rock outcrops were located during the survey, there were abundant mammal burrows (likely gopher burrows) throughout the breaks in the coyote brush scrub cover, and in the grassland along the trail, which could serve as refugia for this species.

CC008 (2022)

In Claremont Canyon Regional Preserve, 0.55 acres of brush reduction, ladder fuel and small tree removal. Removal of decommissioned building within RTA. This work was conducted over 4 days.

General Habitat Quality. High quality habitat in coastal scrub (xeric) PCE 1 core scrub. Moderate quality dispersal PCE 2 habitat present. Little to no PCE 3 observed.

CC010 (2022)

CC010 is located on a strategic evacuation route, on upper Claremont Boulevard toward Four Corners/ Grizzly Peak. 9.37 acres were treated in 2022. Brush reduction, ladder fuels reduction, and tree removals were conducted in unsuitable habitat. Work was conducted over 17 days.

General Habitat Quality. AWS: AWS has been verified in this area. High quality core scrub, with moderate quality PCE2. Little to no PCE 3 observed.

CC012 (2022)

In Claremont Canyon Regional Preserve, 3 acres of brush reduction and ladder fuel removal. RTA is located on the ridgeline adjacent to Grizzly Peak Blvd, a strategic evacuation route for the Oakland Hills. This work was conducted over 37 days.

General Habitat Quality. Scrub within RTA is patchy, fragmented, and was considered low quality prior to treatment; it has degraded post-treatment.

HP001 (2021)

HP001 is an RTA located at the Skyline Boulevard trailhead to Huckleberry Regional Botanic Preserve. The primary habitat within this RTA is mixed oak-bay woodland encroached upon by eucalyptus. The project area was 1.7 acres, consisting of tree removal, ladder fuel and brush reduction. No pallid manzanitas are in the project area. The project was conducted over 11 days.

General Habitat Quality. AWS: Poor quality, low to no potential for presence due to limited and fragmented scrub habitat. Grassland and oak woodland communities have no connectivity to PCE1. No use known.
CRLF: Low potential due to lack of hydrologic features and xeric upland habitat. No pallid manzanita in this RTA.

HP002 (2021)

HP002 is the RTA containing the majority of the pallid manzanitas and maritime chaparral in Huckleberry Regional Botanic Preserve. The project area totaled 13.6 acres; 0.9 acres of eucalyptus removal by crane on the trailhead side of the preserve and 11.1 acres conducted by hand work only in coastal scrub/oak-bay woodland. The work was conducted over eight days. In addition to fuels management goals, this work was performed to improve habitat quality for pallid manzanita, open overshading canopy, remove *Phytophthora* bearing species, and provide ground disturbance for potential seedling recruitment. Piles were burned in early 2023 to improve the seedbed and increase potential for recruitment.

General Habitat Quality. AWS: All PCEs are found within the RTA. PCE 1 is marginal; dense oak-bay woodland is found surrounding PCE1. Overall low potential for AWS. No use known.
CRLF: Low potential due to lack of hydrologic features and xeric upland habitat.
Pallid manzanita: Present within maritime chaparral. No signs of P cinnamomi were noted in 2022. Habitat quality is expected to improve as a result of management activities. Treatment removed eucalyptus and converted the infested area back to Northern maritime chaparral.

HP003 (2021)

Located downslope from a large swim club with many pallid manzanitas within its property lines, HP003 is a small (1.1 acre) RTA with a small population of pallid manzanita. Work was conducted by hand and took one day.

General Habitat Quality. AWS: Scrub habitat is present in the maritime chaparral, but vegetation cover is high, limiting light penetration and basking habitat. PCE2 is adjacent to poor quality PCE1. No use known.
CRLF: Low potential due to lack of hydrologic features and xeric upland habitat.
Pallid manzanita: Numerous A. pallida observed in RTA, primarily within the northern maritime chaparral cover type.

HP004 (2021)

HP004 is a small (1.3 acre) RTA on the south side of the preserve. Hand work occurred in 0.2 acres to reduce ladder fuels. The project took one day.

General Habitat Quality. AWS: No core scrub present. Chaparral patches are small and fragmented. No connectivity with PCE2.
CRLF: Low potential due to lack of hydrologic features and xeric upland habitat.
Pallid manzanita: Mature A. pallida present and in flower. No seedlings observed.

LC010 (2019)

In Lake Chabot Regional Park, this project consisted of brush reduction and clearing of ladder fuels in approximately 4.8 acres. The project was conducted over 10 days.

General Habitat Quality. Core scrub is of poor quality with very dense stands of coyote brush scrub. Foraging and dispersal habitat is medium to poor quality. PCE 3 is absent.
2021: RTA contains a portion of a larger patch of core scrub, moderate to low quality but still suitable. PCE2 moderate to low quality and frequently disturbed, PCE3 low quality. AWS is unlikely to occur.

2022: Small area of Baccharis scrub occurs and is adjacent to core scrub north of the RTA, considered suitable habitat. Moderate quality dispersal/foraging habitat present. Outcrops are minimal.

LE005 (2019)

In Leona Canyon Regional Preserve, this project consisted of brush reduction and clearing of ladder fuels in approximately 4.3 acres. The project was conducted over 13 days.

General Habitat Quality. Patches of core scrub habitat interspersed with successional grassland were observed during the 2020 Year 2 post-treatment assessment survey. These areas were previously mapped as coyote brush scrub but are better described as coastal scrub with patches of successional grassland interspersed. Oak-bay woodland and grassland are present; burrows and rock outcrops are absent.
2021: AWS: scrub habitat is dense and poor to marginal quality. PCE2 and PCE3 are low to moderate quality.
2022: Scrub habitat occurs at a high density in most areas, so dense that it is diminishing habitat quality. Suitable foraging/dispersal habitat present. Few outcrops present. No use known.

MK001 (2021)

This RTA in Miller-Knox Regional Shoreline contains 5.9 acres of mainly disturbed and non-native planted stands of eucalyptus and Monterey pine. Trees were thinned and ladder fuels were cleared. Along with MK002, this project took 30 days. No work occurred in 2022.

General Habitat Quality. AWS: Miller-Knox is outside the range of Alameda whipsnake. CRLF is highly unlikely to occur. The park is outside the range of pallid manzanita.

MK002 (2021)

0.5 acres was worked in this RTA in Miller-Knox Regional Shoreline. Vegetation cover consists of xeric coastal scrub, non-native coniferous stands, and annual grassland. Along with MK001, this project took 30 days. No work occurred in 2022.

General Habitat Quality. AWS: Miller-Knox is outside the range of Alameda whipsnake. CRLF is highly unlikely to occur. The park is outside the range of pallid manzanita.

MK003 (2022)

2.7 acres was worked in this RTA in Miller-Knox Regional Shoreline. Ladder fuels reduction, limbing up of trees, and burn piles built, all conducted by hand. Work was conducted over 3 days.

General Habitat Quality. AWS: Miller-Knox is outside the range of Alameda whipsnake. CRLF is highly unlikely to occur. The park is outside the range of pallid manzanita.

MK004 (2022)

3.2 acres was worked in this RTA in Miller-Knox Regional Shoreline. Ladder fuels reduction, limbing up of trees, tree removal, and burn piles built, all conducted by hand. Concurrently with MK005, work was conducted over 66 days.

General Habitat Quality. AWS: Miller-Knox is outside the range of Alameda whipsnake. CRLF is highly unlikely to occur. The park is outside the range of pallid manzanita.

MK005 (2020)(2022)

2020: In this RTA near homes along Miller-Knox Regional Shoreline, ladder fuel reduction, tree removal and brushing of French broom was conducted over 10 acres and took 14 days.
2022: Conducted concurrently with MK004, project was conducted over 16 days.

General Habitat Quality. AWS: Miller-Knox is outside the range of Alameda whipsnake. CRLF is highly unlikely to occur. The park is outside the range of pallid manzanita.

RD001 (2020) (2021) (2022)

2020: Over two days, in Redwood Regional Park the EBRPD Fuels Crew conducted ladder fuel and debris removal near the trail. Two pallid manzanitas are present, but within the work area, and have been caged for protection for several years. Habitat quality is poor with Monterey pine cover at 40%. Pallid manzanitas are present with lack of constituent species constituting maritime chaparral.
2021: Pine removal was conducted outside the FEMA delineated polygon.
2022: Work was conducted over 41 days in conjunction with RD002, RD003, RD004, RD005a-b, and RD011.

General Habitat Quality. AWS: Marginal quality with no known usage. Oak-bay woodland and grassland are present but not always contiguous with core scrub. Outcrops minimal.

RD002 (2022)

In 2022, work was conducted over 41 days in conjunction with RD002, RD003, RD004, RD005a-b, and RD011.

General Habitat Quality. No core scrub present. Oak-bay woodland and grassland are present but not always contiguous with core scrub. PCE3 is minimally present.

RD003 (2022)

In 2022, work was conducted over 41 days in conjunction with RD002, RD003, RD004, RD005a-b, and RD011.

General Habitat Quality. Core scrub is very dense and though contiguous with other patches it is impenetrable and lacks openings making it low quality scrub. Grassland and oak bay woodland are present. PCE3 is minimally present.

RD004 (2020)(2022)

In Redwood Regional Park crews removed trees and chipped debris over 3 work days. No work was conducted in 2021.
2022: Work was conducted over 41 days in conjunction with RD002, RD003, RD004, RD005a-b, and RD011.

General Habitat Quality. Core scrub was unaffected by treatment. Contiguous with other scrub outside RTA. Oak-bay woodland present, PCE3 absent. No use known.

RD005a, RD005b (2022)

In 2022, work was conducted over 41 days in conjunction with RD002, RD003, RD004, RD005a-b, and RD011.

General Habitat Quality. Little core scrub present with some connectivity to core scrub outside the RTA. Low quality foraging habitat due to dense vegetation with little light penetration and disturbed areas. No PCE 3 present. No use known.

RD009 (2023)

In Redwood Regional Park crews completed 2.6 acres of defensible space understory thinning surrounding Piedmont Stables equestrian facility. The goal of the project was to increase spacing between structures and trees to reduce fire hazard and to improve forest health. The project was conducted over 4 workdays. One Woodrat midden was dismantled and relocated outside the project area; no woodrat individuals were observed in the midden during the relocation process.

General Habitat Quality. Management (ladder fuel reduction and brush removal) was performed in the redwood forest and oak-bay woodland habitat within the RTA surrounding Piedmont Stables. Core scrub habitat was not impacted by fuels treatment activities. No use known.

RD011 (2022)

In 2022, work was conducted over 41 days in conjunction with RD002, RD003, RD004, RD005a-b, and RD011.

General Habitat Quality. Core scrub quality was decreased by thinning and clearing. Foraging/dispersal is present, outcrops absent. No use known.

SO001 (2023)

In Sobrante Ridge Regional Preserve, the project improved fire protection capacity adjacent to homes on Rain Cloud and Silver Belt Dr, Richmond by removing accumulations of dead and down material into burn piles, removal of small diameter pine and California bay trees, and pruning lower limbs of retained vegetation. Burn piles were prepared for Winter 2023-Spring 2024 burn season as part of Pallid regeneration efforts.

General Habitat Quality. Moderate quality of core scrub habitat. Northern maritime chaparral forms dense patches of manzanita and low woody scrub which lacks a mixture of open and closed canopies necessary for AWS thermoregulation. Coastal scrub xeric forms a loose canopy of shrubs. Moderate quality PCE2, no PCE 3.

Pallid manzanita: Numerous A. pallida observed in RTA, primarily in the northern portion of the RTA.

SR001 (2023)

In Sibley Regional Preserve, EBRPD conducted 1 acre of pine tree stand and understory thinning along Grizzly Peak Blvd, a critical evacuation route. The goal of the project was to increase spacing between residual trees, increase spacing between understory vegetation and tree canopies, and to reduce potential ember cast production from a ridgeline location. The project consisted of tree removal, brushing, and ladder fuels reduction. The project was conducted over 5 workdays.

General Habitat Quality. Core scrub habitat is present within the RTA as North Coastal Scrub (xeric). This vegetation type only makes up a small portion of the RTA, but the scrub patch extends east of the RTA and is contiguous with a larger, intact scrub patch. However, the scrub in this RTA is 'edge' habitat, bounded by a paved access road, making this core scrub of moderate habitat quality.

SR003 (2020)

EBRPD conducted brushing and ladder fuel removal in 3.9 acres of this ridgeline RTA. The project was conducted over 12 days.

General Habitat Quality. Habitat quality is described as "scrub habitat present but lacks cover density and connectivity; oak/bay woodland and grassland both present but no connectivity to PCE 1". Small outcrops and burrows are present. Core scrub is fragmented by surrounding roads, limiting dispersal potential. No use known.

SR004 (2019)

In Sibley Regional Preserve, this project consisted of brush reduction, tree removal, and clearing of ladder fuels in approximately 9 acres. The project was conducted over 23 days.

General Habitat Quality. In the northern portion of the work area, coyote brush scrub was converted to oak-bay woodland, which serves as dispersal habitat adjacent to core scrub. A significant portion of the RTA's understory was cleared adjacent to residences. These areas are lower quality dispersal habitats due to the absence of cover.
2022: Habitat is described as moderate with *Baccharis* and mesic coastal scrub. Foraging/dispersal is good quality. Outcrops are contiguous with oak-bay woodlands. No use known.

SR005 (2021)(2022)

SR005 is a large, 37.5 acre RTA adjacent to northern Huckleberry Preserve and the Skyline Boulevard trailhead to Sibley Volcanic Preserve.
2021: Brush reduction occurred in 1.52 acres and Monterey pine removal and limbing up was conducted on 6.5 acres. The work occurred over 19 days.
2022: Trees were removed along Grizzly Peak Road. The work occurred over 3 days.

General Habitat Quality. AWS: Alameda whipsnake core scrub (PCE 1) is present within the RTA as small, isolated patches of coastal scrub xeric and coyote brush scrub and are considered to be of poor quality. Suitable foraging/dispersal habitat (PCE 2) is present in oak-bay woodland and annual grassland that are contiguous with core scrub. Limbing and tree removal in oak-bay woodland has reduced canopy cover, allowing for greater light penetration, but since core scrub habitat is marginal, potential for AWS is minimal.
CRLF: No suitable breeding habitat. Unlikely to occur.
Pallid manzanita: Three individuals were mapped, one appearing dead. They are located in coniferous forest plantation. Fuels reduction work did not occur within 200ft of mapped individuals.

TI006 (2021)

Located in Tilden Regional Park, this 4-acre RTA consists of oak-bay woodland with eucalyptus plantation encroaching. It is directly below homes in the WUI in Kensington. Eucalyptus was thinned out and ladder fuels cleared with chips broadcast throughout the floor of the oak woodland. There is evidence of *P. ramorum* in mature oaks in this RTA. 48 days of work occurred in 2021.

General Habitat Quality. Eucalyptus plantation was thinned to half its pre-project density. Oak-Bay woodland and understory was thinned. No healthy oaks were removed, many signs of SOD.
AWS: No core scrub present and no PCE2/PCE3.
CRLF: No ponds or streams present, however, could serve as upland dispersal corridor if populations occur within 1-2 miles. A 2020 USFWS protocol level survey found no sign of CRLF in nearby Jewel Lake.
Pallid manzanita: None present.

TI012 (2018, 2019, 2020, 2021, 2023)

This RTA is the northern piece of the Grizzly Peak Strategic Ridgeline Fuel Break being established by EBRPD. Work occurred in the north in 2018 and 2019 and moved south in 2020; trees were removed and coyote brush was masticated in 12.9 acres northeast of Grizzly Peak Boulevard. The project was conducted over 20 days in 2020. In 2021, the project continued with 63 days of work in the same area, thinning eucalyptus stands and clearing ladder fuels. Chips were broadcast throughout the work area.

2023: In the footprint of the Ajax fire, the goal of the project was to remove dead or diseased trees, heavy surface fuel accumulations, and roadside vegetation along Shasta Road and Wildcat Canyon Rd to facilitate safer evacuations and reduce fire intensity adjacent to the Park Hills neighborhood. This 3.5 acre project was completed over 20 work days.

General Habitat Quality. Habitat quality is described as "dense, near-monoculture of *Baccharis* with French broom and poison oak." PCE 2 and 3 are present. The site is very mesic with northeast facing slopes and not ideal habitat for AWS. Areas previously identified as successional grassland have naturally been colonized by coyote brush scrub and now meet the criteria for core scrub for Alameda whipsnake. Patches of scrub remain where woodrat nests were left in place. Areas converted from scrub to successional grassland still qualify as foraging and dispersal habitat for AWS. No known usage.

Pallid manzanita: One individual in flower was mapped. ITP mitigation measures employed during work.

TI013 (2021)

This RTA in the Grizzly Peak Ridgeline Strategic Fuelbreak is 15.7 acres. Work was conducted to treat 3 acres of scrub and perform ladder fuel reduction, tree removals and brush reduction in 12.5 acres. This portion of the project took 6 days. No Post-Assessment has yet been completed for this RTA.

General Habitat Quality. AWS; Noted as high quality scrub with few invasives; PCE2 primarily oak-bay woodland. PCE3: Several exposed rocks in RTA, extensive rocky outcrop just southeast of the RTA. No burrow complexes observed.

TI014 (2021)
This project in the Grizzly Peak Ridgeline Strategic Fuelbreak is 2.8 acres. Brush and ladder fuel reduction and tree removals were conducted. This portion of the project took 29 days. No Post-Assessment has yet been completed for this RTA.

General Habitat Quality. AWS: Small patch of coyote brush scrub connected to adjacent core scrub outside the project area. Good quality PCE2. Little to no PCE3 in RTA.

TI015 (2021)
This RTA in the Grizzly Peak Ridgeline Strategic Fuelbreak is 1.5 acres. Brush and ladder fuel reduction occurred in mapped core scrub (.03 acres) and non PCE (1.2 acres). This portion of the project took 10 days.

General Habitat Quality. AWS: Diverse mix of coastal scrub on eastern edge of RTA. Annual grassland and oak-bay woodland adjacent to PCE1. Rocky outcrops and burrows are present.

TI016 (2020, 2021)
This RTA is a small 1.4 acre knob of eucalyptus plantation off Grizzly Peak Blvd. In 2021, a contractor thinned the stand in coordination with the TI014 and TI015 projects.

General Habitat Quality. No suitable Alameda whipsnake habitat was observed in the RTA; the entire area is characterized by eucalyptus forest. No burrows or rocky outcrops were observed.

TI022 (2023)

This RTA surrounds critical infrastructure on Vollmer Peak. The goal of the project is to maintain and improve defensible space. This 2.7 acre project was completed over 10 work days.

General Habitat Quality. AWS has been verified in this area. High quality PCE 1 and 2, no observed rocky outcroppings. Large stands of contiguous coyote brush scrub occupy this RTA and surrounding area. AWS is known to occur within Tilden Regional Park, and this contiguous scrub patch serves as high-quality AWS habitat. Areas of Coyote scrub were removed and chipped around the facilities at this RTA in order to create defensible space, resulting in a habitat re-classification to successional grassland.

WC003 (2018)

EBRPD removed surface and ladder fuels and thinned brush on 1 acre of this 1.7 acre RTA.

General Habitat Quality. Alameda whipsnake habitat is medium to lower quality throughout the RTA. The scrub habitat within the RTA qualifies as core scrub, contains diverse vegetation, and is adjacent to high-quality core scrub/PCE1 habitat outside of the RTA. The oak-bay woodland habitat was not substantially changed by treatment and continues to function as PCE2.

WC009 (2019, 2020)

Along the western edge of Wildcat Canyon Regional Park close to homes, EBRPD removed surface and ladder fuels and thinned brush on about 4 acres. The work was conducted using hand tools and took 10 workdays.

2020: EBRPD expanded the project area performing brush mastication and ladder fuels reduction. This project took 10 days.

General Habitat Quality. All work that occurred in the RTA was outside of core scrub habitat. No change to core scrub habitat occurred as a result of work activities. Daily monitoring occurred during work activities, and scrub removal was never observed at this site. The increase in core scrub between the pre and post assessments is not due to any vegetation management activities or actual change in habitat type. This increase occurred because in January 2020, a more precise improved mapping process was implemented utilizing ArcGIS which provides more accurate acreage. The difference in core scrub is a result of the difference on error between the old measurement techniques, and the improved techniques. Treatment did not result in any changes to core scrub acreage.

WC010 (2019, 2020)

2019: Along the western edge of Wildcat Canyon Regional Park close to homes, EBRPD worked to conduct initial treatment to create a fuel break, removing surface and ladder fuels and thinning brush on about 10.8 acres. The work was conducted using hand tools and took 26 workdays.

2020: EBRPD performed ladder fuel removal and brush mastication in this RTA. The work was conducted over 14 days.

General Habitat Quality. Habitat quality is very similar to WC009. Poor quality AWS habitat is present onsite. Dense patches of coyote brush, hemlock, French broom, and poison oak make up the existing PCE 1 (core scrub) habitats. Areas adjacent to core scrub consist of dense oak-bay woodland and riparian woodland. These areas meet definitions for PCE 1 and PCE 2, but due to the dense canopy cover with little light penetration and the lack of native plants, habitat quality is low. No rocky outcrops were observed on site.

WC011 (2019, 2020)

2019: Along the western edge of Wildcat Canyon Regional Park close to homes, EBRPD worked to conduct initial treatment to create a fuel break, removing surface and ladder fuels and thinning brush on about 33 acres. The work was conducted using hand tools and took 65 workdays.

2020: EBRPD Fuels Crew worked one day reducing noxious weeds in the RTA.

General Habitat Quality. This area is a northeast facing slope dominated by oak woodland and riparian. Although scrub was removed in the RTA this habitat type will grow back quickly and regrowth was observed onsite. Density of the scrub was reduced also but will be beneficial in the short-term as the sunlight penetration into scrub has increased.

3 STATUS OF MITIGATION MEASURES

The following details the status of mitigation measures employed during work. These permit-based measures are taken to protect resources and avoid resource damage or degradation, and take of species.
7.4. Work Period. EBRPD adhered to the work period conditions for AWS.
7.5. Daily Surveys. Each day of work was supervised by Designated Biologists and surveys were completed daily. No Covered Species were observed.
7.6. Exclusionary Barrier. EBRPD adhered to Directional Workplans in lieu of exclusionary barriers during work.
7.7. Coverboards. Coverboards were maintained and checked daily in all instances where heavy equipment was used to treat brush. No Covered Species were observed using coverboards.
7.8. Cease Operations Policy. N/A for the year 2022.
7.9. Vegetation Marked for Protection. Protected vegetation, including native shrubs and riparian vegetation, was marked and avoided during work.
7.10. Rock Outcroppings. Some tree removal occurred in eucalyptus plantations (unsuitable AWS habitat) with outcroppings. Rock outcroppings were avoided during work.
7.11. Ground Burrows. Ground burrows were avoided where possible. No Covered Species were observed using ground burrows.
7.12. Vegetation Removal Methods. Where possible, hand tools were used in work.
7.13. Spoils piles. Burn piles were sited away from concentrated burrow areas under the supervision of the Designated Biologists.
7.14. Burn Piles. Burn piles were sited and burned outside of suitable habitat. All burn pile conditions were adhered to during burning.
7.15. Skid Trails. No skid trails were sited near scrub habitat or rock outcrops.
7.16. Wood Chips and Landings. Designated Biologists oversaw the siting and depth of chip piles. No piles were placed near rock outcrops.
Pallid Manzanita
No work was conducted in RTAs containing pallid manzanita in 2022.
7.18. Work Period. Work was conducted near pallids only when the ground was dry.
7.19. Plant Surveys. No pallids are located near herbicide application areas.
East Bay Regional Park District
Wildfire Hazard Reduction and Resource Management Plan
Annual Status Report 2022
Page12
7.20. No Arctostaphylos species were removed.
7.21. No Cutting or Removal. No Arctostaphylos species were pruned.
7.22. Shading and Competition. In maritime chaparral and areas occupied by pallid manzanita, overshading trees and shrubs were removed to open canopy and exposure for pallids. All work was performed in the work window and by hand.
7.23. Herbicide Use. No herbicide was applied within 300 feet of pallid manzanitas.
7.24. Goat grazing. No goat grazing was conducted in pallid RTAs.
7.26. P. cinnamomi. Testing was conducted in pallid RTAs in 2021. Only Huckleberry tested positive for P. cinnamomi. Known infections are mapped. All buffer conditions relevant to P. cinnamomi and pallid manzanita were adhered to.

4 TAKE OF COVERED SPECIES

No take of Covered Species was documented during Project Year 2023.

5 COVERED SPECIES HABITAT IMPACTS

Fuels work is typically performed in grassland, brush/scrub, oak woodland, and pine and eucalyptus plantations. Only brushland qualifies as AWS habitat and is subject to impact reporting requirements, although all changes in vegetation cover are reportable (Appendix 1). Within that habitat type, brush scrub within Critical Habitat is referred to as PCE 1. Within suitable AWS habitat, brush scrub is referred to as Core Scrub. When describing general habitat characteristics, all native scrub is referred to as core scrub.

The Biological Opinion allows 96 acres of "Degraded" (30-70% scrub) sore scrub and 226.6 acres of "Loss (amount of treated core scrub converted to grassland habitat, generally assumed to be 70% of the amount treated)" (Biological Opinion, Table 15). In other words, the BO defines Degraded as remaining shrub islands and Loss as interstitial spaces between those islands, when the treatment is the 30-70 shrub island approach. The ITP states that "the Project is expected to cause the permanent loss, by conversion to dispersal/foraging habitat, of approximately 226.6 acres of sore scrub habitat, and the Project will degrade, by fragmentation, approximately 96 acres of core scrub habitat" (ITP, p. 14).

Table 1 reports the cumulative acreage of core scrub removed in and outside of critical habitat by low-impact (hand tools) and high-impact (heavy equipment).

Scrub removed from core scrub complexes totals 44.048 acres total cumulative. In 2023, acres of impact were as follows:
Critical Habitat, High Impact: 1.3
Critical Habitat, Low Impact: 2.74
Suitable Habitat: High Impact: 0.238
Suitable Habitat: Low Impact: 2.04

20.8 acres of creation and enhancement were noted in 2023 where non-native / non-core scrub vegetation was treated and core scrub recruited in its place.

Table 1. Cumulative Project core scrub impacts by project year.

EBRPD Core Scrub Changes and Impact Types, Total Project Wide								
	Critical Habitat			Suitable Habitat				
Project Year		Acreage Scrub Cleared			Acreage Scrub Cleared		Creation	Enhancement
		Low Impact	High Impact		Low Impact	High Impact		
2018	CC003*	2.75		TI012	0.27	0.87		
	CC007*	0.75		AC012		0.31		
	CC008*	1.50		AC013		0.80		
	CC012*	1.00		AC014		8.50		
	SR003*	0.75						
	SR004*	1.00						
	SR005*	2.00						
	TI006*	0.75						
	TI015*	1.25						
	TI022*	1.00						
	WC011*	0.75						
	WC003	0.27						
2019								
	CC003	0.50	0.58	AC007	0.00	0.08		
	WC010	0.01	0.31	TI012	0.00	0.34		
	WC011	0.01	0.74	LE005	3.24			
2020								
	CC003		1.9	AC002	0.2			
	TI012		2.96					
2021	-	-	-	-	-	-		
2022								
	CC003							1.62
	TI012							1.07
	RD001	0.13						
	RD011	0.19						
	CC008		0.15					
	CC010		0.27					
	TI013		0.77					
	AC006				0.83			
2023								
	CC007	0.23		HP002			0.77	
	TI022		1.30	CC012		0.238	0.04	
	CC001	2.51		RD003	0.4			
				SR004				0.04
				SR005	See Notes			
				TI014	0.26			
				TI015	1.38			
				AC007				19.95
	Total Impacts	**17.35**	**8.98**		**6.58**	**11.138**	**0.81**	**22.68**

** Alameda whipsnake study*

Pallid Manzanita

In HP002, where the largest concentration of pallid manzanita in Huckleberry is located, pile burning was conducted to encourage regeneration of pallids in January 2023. Designated Biologists will be performing seedling surveys every spring during blooming time, the results of which will be included in annual reports when available.

In SO001, while the fuels crew was conducting a project, one live branch of a pallid manzanita was trimmed accidentally, see figure 1. The error was noted by the Designated Biologist and activity around the individual ceased. This action was determined by the Designation Biologist unlikely to affect the health of the individual. See DMR SO001 dated 7/14/23 for details. This individual will be monitored specifically in annual surveys, the results of which will be included in annual reports when available.

Figure 1. A. pallida branch cut in Sobrante Ridge Regional Preserve July 14, 2023.

Pile burning will be conducted to encourage regeneration of pallids Winter 2023-2024, weather permitting. Designated Biologists will be performing seedling surveys every spring during blooming time, the results of which will be included in annual reports when available.

CA red-legged frog

To date, no work has been conducted in or near CRLF habitat. USFWS protocol level surveys in 2020 and 2022 failed to detect CRLF in and around Jewel Lake, Wildcat Canyon/ Wildcat Creek.

5 STATUS OF CONSERVATION MEASURES

All relevant Project Conservation Measures were implemented during work in 2023. Conservation measures prevented take in maritime chaparral occupied by pallid manzanitas and supported the recovery of pallid manzanitas by removing overshading species and *Phytophthora* vectors. Without observing Covered Species during work, it is difficult to determine which, and whether, conservation measures play a role in preventing take; however, no take was documented during any project activities.

6 SUMMARY OF MONITORING REPORTS AND OBSERVATIONS OF WILDLIFE

One hundred eighty (180) Daily Monitoring Reports were filed in 2023. These reports detail the work location, crew and foreman, status of tailboard training, work events and times they occurred, wildlife observations, and contain representative photos of work occurring. All DMRs are attached with this report packet.

One CNDDB observation of Alameda whipsnake was made during work in 2021. The AWS was observed outside a non-FEMA work area during defensible space work. A biological monitor vouchered the observation. No AWS were observed during work in 2022. One observation of Alameda whipsnake was made in 2023 at the Tilden Botanic Garden by EBRPD employees, verified by photo documentation, see figure 2. The observation was not related to fuels reduction work.

Many observations of San Francisco Dusky-footed Woodrat middens (*Neotoma fuscipes* ssp*. annectens*) were made during work. Although not in FEMA funded RTAs, two deceased adult individuals were found within RTA AC008a/b. The first individual was not in an active treatment area, no visible signs of injury, undetermined cause of death; see DMR dated 8/9/23 for details. The second individual was found on a trail used by heavy equipment to transport logs, evidence of crushing injuries suggest individual may have died as a result of treatment activities; see DMR dated 8/23/23 for more details. In cases where nest removal was critical to fuel treatment success, nests were dismantled and moved in accordance with the approved San Francisco Dusky-footed Woodrat Protocol (EBRPD 2019). Use of this protocol allowed nests to be relocated without harming woodrats.

Dirca occidentalis was vouchered in several new areas including in Redwood Regional. This 1B.2 shrub is the target of focused documentation along the Berkeley Hills ridgeline. It is possible that removal of overgrown and invasive vegetation is encouraging *Dirca* to recolonize this area.

Figure 2. AWS vouchered in Tilden Park Botanic Garden October 7, 2023.

7 SOILS AND HYDROLOGY

This section discusses the detection of previously undocumented hydrologic features as well as any areas of Project-related surface erosion. The following features were identified in or around project areas in the year 2023:

- CC008
  - Ephemeral drainage: 37.866706, -122.233420 (top of drainage)
- HP003
  - Ephemeral rivulet across trail from road above: 37.837790, -122.184292
- RD004
  - Ephemeral, potentially runoff from adjacent properties: 37.829300, -122.186722 to 37.829338, -122.186268
- RD009: There are several ephemeral drainages observed in the RTA, consistent with the National Wetlands Inventory mapping data. These drainages had flows present, and likely due to the recent storm events.
  - Ephemeral stream/drainage that flows south over cobbles from the northeastern end of the RTA: 37.807289, -122.164197
  - Ephemeral stream/drainage, a portion is concrete lined, that flows south from the northeastern end of the RTA: 37.807095, -122.163934
  - Ephemeral stream/drainage flowing over cobbles and some large rocks: 37.807605, -122.164556
  - Ephemeral drainage/stream flows south from the northwestern end of the RTA: 37.807870, -122.166116
  - Ephemeral drainage/stream flowing over cobbles: 37.807579, -122.166957
- TI006
  - Ephemeral drainage: 37.906577, -122.267211
  - Ephemeral drainage: 37.906288, -122.267832
- WC009
  - Ephemeral drainage sourced from culvert. Appears heavily impacted by recent heavy rainfall: 37.9341, -122.29799.
  - Ephemeral drainage sourced from culvert. Appears heavily impacted by recent heavy rainfall: 37.933733, -122.297016.
  - Ephemeral drainage: 37.931443, -122.294076
  - Ephemeral drainage: 37.931765, -122.294994
- WC010
  - Ephemeral drainage flows into storm drain: 37.928712, -122.291324.
- WC011
  - Culvert at the base of a cement wall that serves as a stormwater drainage likely with ephemeral flow after heavy rain events: 37.909320, -122.271069. Culvert was backfilled at the time of the survey and may require maintenance.

REMEDIAL MEASURES

- AC001: If removing further vegetation within the vicinity, seed or just should be implemented: 37.803367, -122.170878
- AC002: Post-treatment bioturbation noted: 37.799786, -122.169447

- CC001: Post-treatment eroding trail cut. Straw wattles may stabilize in event of rain. 37.863210, -122.242535
- LE005: Pre-existing exposed, loose, rocky soils : 37.785354, -122.149788
- MK005: Project related trail rutting may need to be addressed following project: 37.9140724, -122.3750051
- RD009: Unvegetated slope within eastern work area could washout during rain events. Jut may stabilize slope post treatment: 37.806377, -122.164082
- SR005: Pre-existing rocky slope: 37.850728.-122.202056. Along roadside Seed or jute cover should be implemented.
- TI006: Relatively bare hillside with loose debris and some exposed soils, with water seeping downhill and onto the trail from the direction of uphill residences: 37.906625, -122.266749. Remedial measures installed 2023.
- WC009
    - Non-treatment related: 37.932519, -122.296031. Actively being controlled by plastic tarp and sandbags.
    - Non-treatment related: 37.933807, -122.297134. Culvert drainage may need erosion control in future with plastic tarp/jute fabric.
    - 37.934555, -122.297542. Actively being controlled by rocks placed in bed of hillside drainage.
    - Non-treatment related: 37.931438. -122.294058. Eroded drainage ditch next to work area.
- WC011
    - Hillside drainage remains present: 37.920697, -122.282808. Erosion control measures including jute fabric may be necessary.
    - Hillside drainage with an eroding, steep slope that could be susceptible to washout: 37.917652, -122.279767. Recommend installing jute fabric to stabilize the slope.

8 PERFORMANCE CRITERIA

Because initial treatments within each RTA will occur over multiple years and the frequency of initial treatments within each RTA are not anticipated to occur at regular intervals, annual acreage standards cannot be established. Rather, these performance standards are based on Year 10 (post-implementation) final acreages. Therefore, the annual reports will benchmark against Year 10 standards and determine if adaptive management will be required to meet performance criteria by Year 10.

Performance standards relating to AWS habitat are based on the habitat definitions from the BO and the MMP in Section 2.2 and are described below.

4.1.1 Non-AWS Habitat Conversion Acreages

By Year 10, the acreage of each vegetation community type that does not support AWS habitat (e.g., Eucalyptus Forest/Plantation) within each RTA will not exceed the post-implementation acreages defined in the BO (Tables 2 and 3). This will ensure that non-AWS vegetation community types do not increase in acreage during Project implementation.

4.1.2 AWS Habitat Conversion Acreages

By Year 10, following conversion of AWS core scrub/PCE 1 habitat to foraging/dispersal/PCE 2 habitat, the reductions of AWS core scrub/PCE 1 habitat acreages within each RTA will not exceed the reduction in acres defined in the BO (Tables 2 and 3). In this way, habitat impacts will not exceed the maximum thresholds of take for AWS defined in the BO (Tables 2 and 3).

4.1.3 Primary Constituent Element 1 and Core Scrub Thinning

As described in the BO, thinning treatments will consist of the removal of contiguous areas of shrubs (rather than even thinning treatments) totaling up to 70 percent of woody aerial cover, creating a patchwork of remaining closed-canopy "shrub islands" within treated areas (USFWS 2013). These patches must total to at least 30 percent overall woody plant aerial cover on an annual basis following initial treatments.

4.1.4 Woody Vegetation Composition

In each portion of the treatment area where there is woody vegetation removal (e.g., shrub "island" creation), using the methods described in the WHRRMP, no more than 10% of the canopy coverage removed may return due to re-sprouts or seedlings. For example, if woody species comprised 80 percent of aerial cover prior to treatment within a portion of a treatment area where all woody plants were removed, the resprouts/seedlings of those plants could not comprise more than 8 percent of the aerial cover of the total area where woody plant removal occurred. This applies to all woody species, both native and exotic.

4.2 Exotic Species Management

These performance standards focus on the removal and treatment of individual exotic plants and do not pertain to the conversion of exotic dominated vegetation communities. Because significant levels of exotic woody plant recruitment are anticipated following the initial treatments, performance standards relating to reductions in exotic species plant cover focus on gradual reductions in exotic plant cover. It is anticipated that as exotic plants are removed, they will be replaced with native species through natural recruitment (see Sections 4.2.1 and 4.2.2 below).

Appendix 5 contains an accounting of exotic vegetation cover for exotic species of concern as defined in the MMP and as measured in post-treatment assessments (Appendix 3). Exotic vegetation cover is tracked year over year by RTA, and focuses on aggressive, invasive exotics likely to proliferate following treatment.

4.2.1 Tree Re-sprouting

To prevent the successful re-sprouting of treated exotic trees, all observed basal re-sprouts and seedlings must be removed/treated within one year of the initial treatment (generally the cut-stump method) of exotic trees.

4.3 Wood Chip Placement

These performance criteria are based on the Proposed Project description from the BO and focus on what proportion of an RTA can be covered with wood chips, the depth of the applied wood chips, and the location of the distributed wood chips in relation to sensitive resources.

4.3.1 Extent and Depth of Wood Chip Placement

Within a treatment area, the aerial cover of woodchips cannot exceed 20 percent of the treatment area if a tracked chipper is used, or 10 percent of the treatment area if chipping is confined to roadways and landings. Additionally, the depth of applied wood chips cannot exceed 6 inches (USFWS 2013).

4.3.2 Wood Chip Locations

Wood chips cannot be placed within 50 feet of rock outcrop/PCE 3 habitat (USFWS 2013) and AWS core scrub/PCE 1 habitat, within 100 feet of pallid manzanita shrubs, or in areas that drain directly into areas that contain pallid manzanita shrubs. By Year 10, wood chips placed within treated and/or disturbed AWS foraging/dispersal/PCE 2 habitat must be fully decomposed.

4.4 Soil Stability and Erosion

Performance standards that relate to soil stability and surface erosion are described below.

4.4.1 Surface Erosion

Unless noted during the initial site assessment, no accelerated surface erosion (i.e. rills) resulting from vegetation treatment activities (e.g., vehicle tracks, upturned roots, and heavy equipment) or other disturbances can be present within the treatment area.

See Table 2 for accounting of the status of these Performance Criteria.

Table 2. Performance Criteria Table for Fuel Management MMP

PERFORMANCE CRITERIA TABLE FOR EBRPD FUELS MANAGEMENT, MMP TABLE 7. PROJECT YEAR FOUR				
Title		Description	Status	Note
4.1.1	Non-AWS Habitat Conversion Acreages	Non-AWS habitats have not increased in size or extent.	Met	See Appendix 1
4.1.2	AWS Habitat Conversion Acreages	AWS habitat areas have not been reduced in size/extent more than what was quantified in the BO.	Met	See Appendix 1
4.1.3	PCE 1 and Core Scrub Thinning	Following treatment in core scrub/PCE 1 habitats, the remaining "shrub islands" constitute more than 30 percent of the treated core scrub/PCE 1 area where post-treatment habitat is classified as core scrub/PCE 1.	Met	See Appendix 3
4.1.4	Woody Vegetation Composition	By year 10, less than 10 percent of the treated woody vegetation returned as seedlings/resprouts on an aerial cover basis (e.g., if initial woody aerial cover of a treated area was 50 percent, and all woody plants were removed, no more than 5 percent of the woody aerial cover of the total area is comprised of woody seedlings or basal resprouts.)	N/A	
4.2.1	Tree Re-sprouting	No basal resprouts/seedlings of treated woody exotic plants are present in an area after 1 year following initial treatment.	Ongoing	
4.3.1	Extent and Depth of Wood Chip Placement	Wood chips do not comprise more than 20 percent (if a track chipper is used) or 10 percent (if chipping is confined to roadways and landings) of a treated area, and the depth of wood chips is 6 inches or less.	Not Met	See Table 4, two pile depths exceed 6 inches
4.3.2	Wood Chip Locations	No wood chips are present within 50 feet of rock outcrop/PCE 3 habitat, core scrub/PCE 1 habitat (after a BO amendment), or 100 feet of any pallid manzanita plants. By Year 10, all wood chips have decomposed.	Met	See Appendix 3
4.4.1	Surface Erosion	No areas of accelerated surface erosion resulted from vegetation treatment activities.	Not Met	See Section 6

APPENDIX 1. VEGETATION COVER TABLE

Park name	RTA ID	Vegetation Type	Baseline (BO)	Acreage Pre-Assess	Acreage Previous	2018	2019	2020	2021	2022	2023
Anthony Chabot	RTA-AC001	Coastal Scrub (xeric)	1.527	0.62	0.6				0.6		0.49
Anthony Chabot	RTA-AC001	Broom Scrub	0.000	0.06	0.05				0.05		0.06
Anthony Chabot	RTA-AC001	Coyote Brush Scrub	-	0.31	-				0.3		0.3
Anthony Chabot	RTA-AC001	Coniferous forest/Plantation	0.151	0.25	0.25				0		0.25
Anthony Chabot	RTA-AC001	Developed/Disturbed/Landscaped	0.335	0.2	0.2				0.2		0.2
Anthony Chabot	RTA-AC001	Eucalyptus Forest/Plantation	1.317	0.95	0.96				0.95		0.96
Anthony Chabot	RTA-AC001	Oak-Bay Woodland/Forest	4.351	5.7	5.77				5.77		5.9
Anthony Chabot	RTA-AC001	Redwood forest	0.000	0.41	0.41				0.41		0.41
Anthony Chabot	RTA-AC001	Successional grassland	1.957	1.07	1.07				1.07		0.22
Anthony Chabot	RTA-AC001	California Annual Grassland									0.85
Anthony Chabot	RTA-AC002	Coastal Scrub (xeric)	1.978	1.3					0.15	0.00	
Anthony Chabot	RTA-AC002	Coastal Scrub (mesic)									0.28
Anthony Chabot	RTA-AC002	Developed/Disturbed/Landscaped	0.361	0.12					0	0.36	
Anthony Chabot	RTA-AC002	Annual Grassland		0.2				0.63	0.64	0.64	
Anthony Chabot	RTA-AC002	Coyote Brush Scrub		0.2				0.75	0.63	0.75	0.18
Anthony Chabot	RTA-AC002	Coniferous Forest		0.03					0	0.00	
Anthony Chabot	RTA-AC002	Oak-Bay Woodland		0.21				0.2	0.11	0.20	0.43
Anthony Chabot	RTA-AC002	Non-native Coniferous Forest	0.144	0.01				0.09	0.41	0.09	0.34
Anthony Chabot	RTA-AC002	Successional Grassland		0.41				0.41	0.64	0.41	0.6
Anthony Chabot	RTA-AC002	Broom scrub	-	-				-	0.44	0.00	0.44
Anthony Chabot	RTA-AC002	Riparian Woodland									0.04
Anthony Chabot	RTA-AC002	Eucalyptus Forest Plantation									0.01
Anthony Chabot	RTA-AC002	Serpentine Bunchgrass Prairie									0.16
Anthony Chabot	RTA-AC003	Coastal Scrub (xeric)	3.194								
Anthony Chabot	RTA-AC003	Eucalyptus Forest/Plantation	0.000								
Anthony Chabot	RTA-AC003	Oak-Bay Woodland/Forest	1.556								
Anthony Chabot	RTA-AC006	Coastal Scrub (xeric)	6.530	6.5				7.94	6.9	0.85	0.97
Anthony Chabot	RTA-AC006	Coastal Scrub (mesic)	-	-						0.83	0.04
Anthony Chabot	RTA-AC006	Coniferous forest/Plantation	0.929	0.9				0.15	0.37	2.43	2.43
Anthony Chabot	RTA-AC006	Coyote Brush Scrub	6.444	6.4				3.82	2.78	2.23	2.23
Anthony Chabot	RTA-AC006	Developed/Disturbed/Landscaped	0.734	0				0.6	1.37	0.00	
Anthony Chabot	RTA-AC006	Eucalyptus Forest/Plantation	1.517	1.5				0.7	0.37	0.39	0.39
Anthony Chabot	RTA-AC006	Oak-Bay Woodland/Forest	13.745	13.5				13.07	15.33	19.41	19.35
Anthony Chabot	RTA-AC006	Successional grassland	0.880	0.9				2.6	2.17	4.15	5.25
Anthony Chabot	RTA-AC006	Broom Scrub									0.04
Anthony Chabot	RTA-AC006	Riparian Woodland									0.07
Anthony Chabot	RTA-AC007	California Annual Grassland	1.169	0			0	14.63	0	14.15	11.13
Anthony Chabot	RTA-AC007	Coastal Scrub (xeric)	1.100	0			0	0	0	0.48	0.48
Anthony Chabot	RTA-AC007	Coniferous forest/Plantation	8.557	7.8			7.8	7.8	7.8	0.00	
Anthony Chabot	RTA-AC007	Coyote Brush Scrub	45.622	39			11.13	~~39~~	11.04	20.60	30.11
Anthony Chabot	RTA-AC007	Developed/Disturbed/Landscaped	4.744	4.88			4.88	4.88	4.88	4.30	4.34
Anthony Chabot	RTA-AC007	Eucalyptus Forest/Plantation	21.932	24.38			28.38	24.38	28.38	25.69	26.21
Anthony Chabot	RTA-AC007	Oak-Bay Woodland/Forest	7.239	6.83			5.83	6.83	5.92	7.80	11.17
Anthony Chabot	RTA-AC007	Successional grassland	7.209	24.38			39.1	~~0~~	39.1	9.27	6.72
Anthony Chabot	RTA-AC007	Broom Scurb									1.21
Anthony Chabot	RTA-AC007	Coastal Scrub (mesic)									1.13
Anthony Chabot	RTA-AC007	Non-native conifer forest									3.3
Anthony Chabot	RTA-AC007	Redwood Forest									1.18
Anthony Chabot	RTA-AC011	Coastal Scrub (xeric)	3.649								
Anthony Chabot	RTA-AC011	Coyote Brush Scrub	10.057								
Anthony Chabot	RTA-AC011	Developed/Disturbed/Landscaped	1.853								
Anthony Chabot	RTA-AC011	Eucalyptus Forest/Plantation	94.904								
Anthony Chabot	RTA-AC011	Oak-Bay Woodland/Forest	1.406								
Anthony Chabot	RTA-AC011	Successional grassland	0.235								
Anthony Chabot	RTA-AC012	Coastal Scrub (xeric)	3.408	3.408	n/a	3.4	0	-	0	0.00	year 6
Anthony Chabot	RTA-AC012	Coyote Brush Scrub	6.010	6.01	5.39	5.65	9	8.13	13.76	12.88	
Anthony Chabot	RTA-AC012	Eucalyptus Forest/Plantation	16.517	16.5	n/a	15.82	16.65	16.53	13.74	13.54	
Anthony Chabot	RTA-AC012	Successional grassland	2.461	2.46	n/a	1.9	0.75	3.74	-	0.00	
Anthony Chabot	RTA-AC012	Developed/Disturbed/Landscaped	0.000	0	0		2	-	-	0.00	
Anthony Chabot	RTA-AC012	California Annual Grassland	-	-	-	-	-	-	0.89	1.97	
Anthony Chabot	RTA-AC013	Coyote Brush Scrub	6.173	16.64	13.66	16.64	16.54	20.18	16.54	18.50	18.5
Anthony Chabot	RTA-AC013	Developed/Disturbed/Landscaped	3.231	6.24	6.24	6.24	6.75	7.26	6.75	7.70	7.73
Anthony Chabot	RTA-AC013	Eucalyptus Forest/Plantation	179.507	178	178.88	178.88	178.62	176.49	178.62	175.70	175.7

Anthony Chabot	RTA-AC013	Successional grassland	16.765	6.24	6.24	6.24	7.5	6.55	7.5	6.70	6.71
Anthony Chabot	RTA-AC013	California Annual Grassland									0.78
Anthony Chabot	RTA-AC014	California Annual Grassland	4.650	4.6	n/a	4.65	2.8	0	0.89	1.21	Year 6
Anthony Chabot	RTA-AC014	Coyote Brush Scrub	58.071	56.7	n/a	56.70	60.4	65.93	59.88	53.14	
Anthony Chabot	RTA-AC014	Developed/Disturbed/Landscaped	3.226	2.8	n/a	2.79	2.8	0.02	3.01	3.00	
Anthony Chabot	RTA-AC014	Eucalyptus Forest/Plantation	0.416	1.9	n/a	1.86	0.93	4.37	2.53	2.52	
Anthony Chabot	RTA-AC014	Oak-Bay Woodland/Forest	10.782	11.1	n/a	11.15	13.9	12.5	6.15	10.36	
Anthony Chabot	RTA-AC014	Riparian Woodland	0.124	0.009	n/a	0.09	0.093	0.34	0.08	0.08	
Anthony Chabot	RTA-AC014	Successional grassland	15.683	15.8	n/a	15.8	10.2	9.56	9.27	4.92	
Claremont Canyon	RTA-CC001	California Annual Grassland	1.088	3.59	n/a	n/a				0.00	1.31
Claremont Canyon	RTA-CC001	Coastal Scrub (xeric)	1.919	0.00	n/a	0.419				0.00	0.076
Claremont Canyon	RTA-CC001	Coyote Brush Scrub	0.751	3.90	n/a	n/a				2.70	0.11
Claremont Canyon	RTA-CC001	Developed/Disturbed/Landscaped	0.387	0.42	n/a	n/a				0.93	3.06
Claremont Canyon	RTA-CC001	Eucalyptus Forest/Plantation	12.539	10.74	n/a	n/a				9.67	8.97
Claremont Canyon	RTA-CC001	Oak-Bay Woodland/Forest	2.116	2.20	n/a	n/a				2.21	3.10
Claremont Canyon	RTA-CC001	Successional grassland	0.165	1.66	n/a	n/a				3.46	2.34
Claremont Canyon	RTA-CC003	Coniferous forest/Plantation	0.000	0			0	0	0	0.00	
Claremont Canyon	RTA-CC003	Coyote Brush Scrub	9.922	8.9			5.24	3.14	2.25	5.04	3.78
Claremont Canyon	RTA-CC003	Coastal Scrub (xeric)	0.000				0	2.1	2.25	1.06	1.06
Claremont Canyon	RTA-CC003	Developed/Disturbed/Landscaped	0.702	1			1	1.8	3.41	3.41	2.46
Claremont Canyon	RTA-CC003	Eucalyptus Forest/Plantation	0.203	0.25			0.25	0	0	0.00	0
Claremont Canyon	RTA-CC003	Oak-Bay Woodland/Forest	0.007	0			0	0.5	1.1	1.10	1.1
Claremont Canyon	RTA-CC003	Successional grassland	2.962	3.85			3.85	7.1	3.86	0.00	0.81
Claremont Canyon	RTA-CC003	Annual grassland	N/A	N/A						0.72	4.14
Claremont Canyon	RTA-CC003	French Broom									0.44
Claremont Canyon	RTA-CC006	Coastal Scrub (xeric)	0.993	n/a	n/a	0.743					0.6
Claremont Canyon	RTA-CC006	Oak-Bay Woodland/Forest	2.350	n/a	n/a	n/a					2.36
Claremont Canyon	RTA-CC006	California Annual Grassland									0.03
Claremont Canyon	RTA-CC006	Coyote Brush Scrub									0.16
Claremont Canyon	RTA-CC006	Broom Scrub									0.2
Claremont Canyon	RTA-CC007	Coyote Brush Scrub	0.915	1.7	1.45	0.95					0.09
Claremont Canyon	RTA-CC007	Developed/Disturbed/Landscaped	0.806	0.806	0.806	n/a					
Claremont Canyon	RTA-CC007	California Annual Grassland									0.23
Claremont Canyon	RTA-CC007	Coastal Scrub (xeric)									0.40
Claremont Canyon	RTA-CC007	Ruderal									0.17
Claremont Canyon	RTA-CC007	Oak-bay Woodland/Forest									0.19
Claremont Canyon	RTA-CC007	Successional Grassland									0.58
Claremont Canyon	RTA-CC007	Serpentine Bunchgrass Prairie									0.05
Claremont Canyon	RTA-CC008	Coyote Brush Scrub	0.535	0.536	n/a	-0.214					
Claremont Canyon	RTA-CC008	Developed/Disturbed/Landscaped	0.926	0.928	n/a	n/a					0.28
Claremont Canyon	RTA-CC008	Eucalyptus Forest/Plantation	0.277	0.276	n/a	n/a					
Claremont Canyon	RTA-CC008	Oak-Bay Woodland/Forest	2.254	2.26	n/a	n/a					1.93
Claremont Canyon	RTA-CC008	California Annual Grassland									0.68
Claremont Canyon	RTA-CC008	Successional Grassland									0.21
Claremont Canyon	RTA-CC008	Coastal Scrub (xeric)									0.91
Claremont Canyon	RTA-CC010	Coastal Scrub (xeric)	0.104	0.58						0.58	0.58
Claremont Canyon	RTA-CC010	Coyote Brush Scrub	0.169	1.09						0.82	0.82
Claremont Canyon	RTA-CC010	Developed/Disturbed/Landscaped	0.127	0						0.00	
Claremont Canyon	RTA-CC010	Eucalyptus Forest/Plantation	0.809	0.68						0.68	0.68
Claremont Canyon	RTA-CC010	Oak-Bay Woodland/Forest	4.959	2.74						2.74	2.74
Claremont Canyon	RTA-CC010	North Coastal Scrub xeric	0.000	0.58						0.58	0.58
Claremont Canyon	RTA-CC010	Riparian	0.000	0.44						0.44	0.44
Claremont Canyon	RTA-CC010	Ruderal	0.000	0.62						0.00	
Claremont Canyon	RTA-CC010	CA Annual Grassland	0.000	0						0.63	0.63
Claremont Canyon	RTA-CC012	Coastal Scrub (xeric)	0.833	0.833	n/a	0.333					0.87
Claremont Canyon	RTA-CC012	Developed/Disturbed/Landscaped	1.567	1.567	n/a	n/a					
Claremont Canyon	RTA-CC012	California Annual Grassland									0.68
Claremont Canyon	RTA-CC012	Non-native Coniferous Forest									0.17
Claremont Canyon	RTA-CC012	Oak-Bay Woodland/Forest									0.41
Claremont Canyon	RTA-CC012	Succesional Grassland									0.1
Claremont Canyon	RTA-CC012	Coyote Brush Scrub									0.04
Claremont Canyon	RTA-CC012	Broom Scrub									0.14
Huckleberry Botanic	RTA-HP001	Coastal Scrub (xeric)	0.157	0.17					0.039	0.18	0.18

Huckleberry Botanic	RTA-HP001	Eucalyptus Forest/Plantation	1.553	1.51					1.07	1.07	1.07
Huckleberry Botanic	RTA-HP001	Oak-Bay Woodland	-	0.022					0.42	0.42	0.42
Huckleberry Botanic	RTA-HP001	Developed	0.000	0					0	0.04	0.04
Huckleberry Botanic	RTA-HP002	Coastal Scrub (xeric)	0.274	0.27					0.27	0.00	0.00
Huckleberry Botanic	RTA-HP002	Coastal Scrub (mesic)	0.000	0					0	0.27	0.27
Huckleberry Botanic	RTA-HP002	Developed/Disturbed/Landscaped	0.236	0.22					0.24	0.24	0.24
Huckleberry Botanic	RTA-HP002	Eucalyptus Forest/Plantation	0.277	0.28					0.77	0.00	0.00
Huckleberry Botanic	RTA-HP002	Northern Maritime Chaparral	2.448	2.43					2.45	3.22	3.22
Huckleberry Botanic	RTA-HP002	Oak-Bay Woodland/Forest	10.383	10.23					9.79	9.79	9.79
Huckleberry Botanic	RTA-HP003	Northern Maritime Chaparral	1.116	0.58					0.58	0.54	0.54
Huckleberry Botanic	RTA-HP003	Oak-Bay Woodland	0.000	0.53					0.53	0.58	0.58
Huckleberry Botanic	RTA-HP004	Coastal Scrub (xeric)	0.191	0.51					0.51	0.00	0.00
Huckleberry Botanic	RTA-HP004	Coastal Scrub (mesic)	0.000	0					0	0.06	0.06
Huckleberry Botanic	RTA-HP004	Coyote Brush Scrub	0.263	0					0	0.00	0.00
Huckleberry Botanic	RTA-HP004	Developed/Disturbed/Landscaped	0.006	0.01					0.01	0.01	0.01
Huckleberry Botanic	RTA-HP004	Oak-Bay Woodland/Forest	1.153	1.51					1.51	1.51	1.51
Huckleberry Botanic	RTA-HP004	Successional grassland	0.012	0					0	0.00	0.00
Huckleberry Botanic	RTA-HP004	Northern Maritime Chaparral	0.000	0.05					0.05	0.05	0.05
Lake Chabot	RTA-LC010	California Annual Grassland	1.790	2.4			1.58	1.76	1.76	1.76	1.76
Lake Chabot	RTA-LC010	Coyote Brush Scrub	0.225	0.48			0.1	0.06	0.06	0.06	0.6
Lake Chabot	RTA-LC010	Developed/Disturbed/Landscaped	0.000	0.48			0.45	0.71	0.57	0.57	0.57
Lake Chabot	RTA-LC010	Oak-Bay Woodland/Forest	2.773	1.92			2.67	2.25	2.4	2.40	2.4
Leona Canyon	RTA-LE005	Coastal Scrub (xeric)	4.281	4.15			0.14	0.9	1.77	1.77	1.7
Leona Canyon	RTA-LE005	Coniferous forest/Plantation	0.160	0.15			0.1	0.1	0.11	0.11	0.13
Leona Canyon	RTA-LE005	Oak-Bay Woodland/Forest	0.140	0.2			2.55	2.55	2.53	2.53	2.66
Leona Canyon	RTA-LE005	Developed/Disturbed/Landscaped	-	-			1.61		0.15	0.15	
Leona Canyon	RTA-LE005	Successional Grassland						0.11	0.02	0.02	
Leona Canyon	RTA-LE005	California Annual Grassland									0.02
Leona Canyon	RTA-LE005	Riparian Woodland									0.06
Miller/Knox	RTA-MK001	California Annual Grassland	1.503	1.49					1.9	2.90	3.29
Miller/Knox	RTA-MK001	Coastal Scrub (xeric)	1.598	0.77					0.67	0.90	0.012
Miller/Knox	RTA-MK001	Coniferous forest/Plantation	1.719	2.45					1.9	0.48	0.43
Miller/Knox	RTA-MK001	Developed/Disturbed/Landscaped	0.565	0.54					0.67	0.57	0.69
Miller/Knox	RTA-MK001	Eucalyptus Forest/Plantation	0.506	0.49					0.52	0.57	0.58
Miller/Knox	RTA-MK001	Successional Grassland	0.000	-					0.16	0.00	0
Miller/Knox	RTA-MK001	Oak-Bay Woodland/Forest	0.000	0						0.44	0.22
Miller/Knox	RTA-MK001	Coastal Scrub (mesic)									0.7
Miller/Knox	RTA-MK002	Coastal Scrub (xeric)	0.300						0.00	0.00	
Miller/Knox	RTA-MK002	Coniferous forest/Plantation	0.150	0.14					0.22	0.00	
Miller/Knox	RTA-MK002	Oak-Bay Woodland	-	0.28					0.46	0.22	0.22
Miller/Knox	RTA-MK002	California Annual Grassland	-	0.0003					0.13	0.23	0.23
Miller/Knox	RTA-MK003	California Annual Grassland	0.784	1.41							1.64
Miller/Knox	RTA-MK003	Coastal Scrub (xeric)	1.225	0.5							
Miller/Knox	RTA-MK003	Developed/Disturbed/Landscaped	0.530	0.522							0.5
Miller/Knox	RTA-MK003	Eucalyptus Forest/Plantation	0.155	0.217							0.28
Miller/Knox	RTA-MK003	Broom Scrub		0.85							
Miller/Knox	RTA-MK003	Oak-Bay Woodland									0.07
Miller/Knox	RTA-MK003	Successional Grassland									0.21
Miller/Knox	RTA-MK004	Coastal Scrub (xeric)	0.251	0.238							
Miller/Knox	RTA-MK004	Developed/Disturbed/Landscaped	0.000	0.016							
Miller/Knox	RTA-MK004	Non-native Coniferous Forest	2.871	2.44							1.84
Miller/Knox	RTA-MK004	Riparian Woodland	0.041	0.474							
Miller/Knox	RTA-MK004	California Annual Grassland		0.129							0.5
Miller/Knox	RTA-MK004	Coastal Scrub (mesic)		0.109							0.45
Miller/Knox	RTA-MK004	Oak-Bay Woodland									0.05
Miller/Knox	RTA-MK004	Successtional Grassland		0.317							0.32
Miller/Knox	RTA-MK005	California Annual Grassland	0.000	4.86			4.8	5.63	5.54	5.54	4.06
Miller/Knox	RTA-MK005	Coastal Scrub (xeric)	8.113	0.172			0.17	0.35	1.19	1.19	0.14
Miller/Knox	RTA-MK005	Coniferous forest/Plantation	0.742	-			0	0	0	0.00	0
Miller/Knox	RTA-MK005	Developed/Disturbed/Landscaped	1.056	1.1			1.1	2.4	2.05	1.24	1.08
Miller/Knox	RTA-MK005	Non-native Coniferous Forest	0.104	2.59			2.59	1.62	1.24	1.24	1.24
Miller/Knox	RTA-MK005	Broom scrub	-	1.21			1.21	0	0	0.00	0.02

Miller/Knox	RTA-MK005	Coastal Scrub (mesic)									0.73
Miller/Knox	RTA-MK005	Successional Grassland									2.73
Redwood	RTA-RD001	Coastal Scrub (xeric)	0.039	0						0.00	
Redwood	RTA-RD001	Coniferous forest/Plantation	38.532	0						0.00	
Redwood	RTA-RD001	Coyote Brush Scrub	1.952	2.17						2.04	2.04
Redwood	RTA-RD001	Developed/Disturbed/Landscaped	0.101	0.009						0.10	0.10
Redwood	RTA-RD001	Eucalyptus Forest/Plantation	16.356	16.47						16.45	16.45
Redwood	RTA-RD001	Non-native Coniferous Forest	0.185	33.62						33.62	33.62
Redwood	RTA-RD001	Oak-Bay Woodland/Forest	1.543	6.418						6.57	6.57
Redwood	RTA-RD001	Successional grassland	7.399	7.32						7.32	7.32
Redwood	RTA-RD002	Eucalyptus Forest/Plantation	5.008	2.87						1.40	1.57
Redwood	RTA-RD002	Oak-bay woodland	0.000	1.7						2.91	2.87
Redwood	RTA-RD002	Coyote brush scrub	0.000	0.41						0.24	0.17
Redwood	RTA-RD002	CA annual grassland	0.000	0.026						0.46	0.02
Redwood	RTA-RD002	Non-Native Coniferous									0.38
Redwood	RTA-RD003	Coniferous forest/Plantation	0.713	0						0.00	0
Redwood	RTA-RD003	Coyote Brush Scrub	4.587	3.836						3.45	3.44
Redwood	RTA-RD003	Developed/Disturbed/Landscaped	0.666	0						0.00	0
Redwood	RTA-RD003	Eucalyptus Forest/Plantation	10.616	5.78						5.91	5.89
Redwood	RTA-RD003	Oak-Bay Woodland/Forest	4.216	8.9						9.17	9.07
Redwood	RTA-RD003	Redwood Forest	0.582	1.96						1.97	2.82
Redwood	RTA-RD003	Riparian Woodland	6.232	6.657						6.60	5.94
Redwood	RTA-RD003	California Annual Grassland									0.44
Redwood	RTA-RD004	Coniferous forest/Plantation	0.113	0.13						0.11	
Redwood	RTA-RD004	Coyote Brush Scrub	1.331	1.43						1.43	0.17
Redwood	RTA-RD004	Developed/Disturbed/Landscaped	5.691	1.85						1.84	0.41
Redwood	RTA-RD004	Eucalyptus Forest/Plantation	0.926	0.97						0.92	0.32
Redwood	RTA-RD004	Non-native Coniferous Forest	11.990	11.61						11.61	9.18
Redwood	RTA-RD004	Oak-Bay Woodland/Forest	8.267	9.7						9.51	10.33
Redwood	RTA-RD004	Successional grassland	0.050	2.37						2.49	6.86
Redwood	RTA-RD004	Coastal Scrub (mesic)									0.64
Redwood	RTA-RD005a	Eucalyptus Forest/Plantation	1.103	0.644						0.55	0.55
Redwood	RTA-RD005a	Coyote brush scrub		0.03						0.03	0.03
Redwood	RTA-RD005a	Oak-bay woodland		0.033						0.13	0.127
Redwood	RTA-RD005a	Redwood		0.395						0.40	0.395
Redwood (Roberts)	RTA-RD005b	Coyote Brush Scrub	0.468	0.23						0.23	0.23
Redwood (Roberts)	RTA-RD005b	Developed/Disturbed/Landscaped	2.069	1.75						1.75	1.75
Redwood (Roberts)	RTA-RD005b	Non-native Coniferous Forest	4.499	2.95						3.11	3.11
Redwood (Roberts)	RTA-RD005b	Oak-Bay Woodland/Forest	0.314	1.21						1.26	1.26
Redwood (Roberts)	RTA-RD005b	Redwood Forest	1.097	1.21						1.75	1.75
Redwood (Roberts)	RTA-RD005b	CA annual grassland	0.000	0.36						0.36	0.36
Redwood	RTA-RD009	Coastal Scrub (xeric)	0.036	0.53							0.53
Redwood	RTA-RD009	Coastal Scrub (mesic)		0.08							0.08
Redwood	RTA-RD009	Coyote Brush Scrub	0.931	0.09							0.09
Redwood	RTA-RD009	Developed/Disturbed/Landscaped	2.184	1.48							1.29
Redwood	RTA-RD009	Eucalyptus Forest/Plantation	5.801	3.87							3.87
Redwood	RTA-RD009	Oak-Bay Woodland/Forest	0.692	2.56							2.56
Redwood	RTA-RD009	Redwood Forest		0.48							0.48
Redwood	RTA-RD009	Riparian Woodland		0.56							0.56
Redwood	RTA-RD009	California Annuel Grassland									0.19
Redwood	RTA-RD011	Coastal Scrub (xeric)	0.607	0						0.00	
Redwood	RTA-RD011	Oak-Bay Woodland/Forest	0.412	0.5						0.50	0.5
Redwood	RTA-RD011	Coyote brush scrub	0.000	0.519						0.33	0.33
Redwood	RTA-RD011	Successional grassland	0.000	0						0.19	0.19
Sibley Volcanic	RTA-SR001	Coyote Brush Scrub	N/A	1.048	-0.52	-1.02					0.15
Sibley Volcanic	RTA-SR001	Non-native Coniferous Forest	2.621	2.66	2.62	2.66					2.18
Sibley Volcanic	RTA-SR001	Oak-Bay Woodland/Forest	N/A	4.22	N/A	4.22					3.91
Sibley Volcanic	RTA-SR001	Developed/Disturbed/Landscaped	0.065	n/a	0.06	n/a					0.18
Sibley Volcanic	RTA-SR001	California Annual Grassland									0.11
Sibley Volcanic	RTA-SR001	Coastal Scrub (Mesic)									0.86
Sibley Volcanic	RTA-SR001	Coastal Scrub (Xeric)									0.18
Sibley Volcanic	RTA-SR001	Successional Grassland									0.3

Sibley Volcanic	RTA-SR003	Coastal Scrub (xeric)	0.918	1.64	n/a	0.89		2.6	0.61	0.63	0.63
Sibley Volcanic	RTA-SR003	Developed/Disturbed/Landscaped	0.034	0	n/a	n/a		0.02	0	0.00	
Sibley Volcanic	RTA-SR003	Eucalyptus Forest/Plantation	0.413	1.64	n/a	n/a		0.4	0.19	0.19	0.19
Sibley Volcanic	RTA-SR003	Oak-Bay Woodland/Forest	2.086	3.28	n/a	n/a		11.4	11.09	11.09	11.09
Sibley Volcanic	RTA-SR003	Successional grassland	13.019	9.84	n/a	n/a		1.86	0.97	0.48	0.48
Sibley Volcanic	RTA-SR003	Coyote brush scrub	N/A	N/A	n/a	n/a		0	3.08	3.55	3.55
Sibley Volcanic	RTA-SR004	Oak-Bay Woodland/Forest	8.730	7.15			8.7	8.73	9.12	7.80	8.76
Sibley Volcanic	RTA-SR004	Developed/Disturbed/Landscaped	0.260	0.65			1.47	1.47	0	0.21	0.2
Sibley Volcanic	RTA-SR004	Coastal Scrub	3.680	4.55			2.45	2.45	1.84	2.10	
Sibley Volcanic	RTA-SR004	Coyote Brush Scrub	0.280	N/A				0	0.19	0.27	0.26
Sibley Volcanic	RTA-SR004	Broom scrub	N/A	N/A					1.3	1.40	
Sibley Volcanic	RTA-SR004	California Annual grassland	N/A	N/A						0.32	0.33
Sibley Volcanic	RTA-SR004	Eucalyptus Forest/Plantation	N/A	N/A						0.24	0.24
Sibley Volcanic	RTA-SR004	Non-native Coniferous Forest	N/A	N/A						0.61	0.12
Sibley Volcanic	RTA-SR004	Successional Grassland									0.74
Sibley Volcanic	RTA-SR004	Coastal Scrub (mesic)									2.1
Sibley Volcanic	RTA-SR004	Coastal Scrub (xeric)									0.04
Sibley Volcanic	RTA-SR004	Riparian Woodland									0.02
Sibley Volcanic	RTA-SR005	Coniferous forest/Plantation	2.281	2.1	2.1	2.28			1.73	1.73	
Sibley Volcanic	RTA-SR005	Coyote Brush Scrub	4.485	4.2	3.7	4.48			0.7	0.7	0.7
Sibley Volcanic	RTA-SR005	Developed/Disturbed/Landscaped	1.640	1.54	1.54	1.64			1.64	1.64	1.99
Sibley Volcanic	RTA-SR005	Eucalyptus Forest/Plantation	4.126	6.5	6.5	4.13			1.74	1.4	1.4
Sibley Volcanic	RTA-SR005	Non-native Coniferous Forest	7.002	6.54	6.54	7.00			7.44	7.06	9.16
Sibley Volcanic	RTA-SR005	Oak-Bay Woodland/Forest	14.950	14	14	14.95			16.64	16.59	16.59
Sibley Volcanic	RTA-SR005	Riparian Woodland	0.593	0	0	0.00			0.19	0.19	0.19
Sibley Volcanic	RTA-SR005	Successional grassland	0.000	0	0	0.59			4.71	0	
Sibley Volcanic	RTA-SR005	Coastal scrub (xeric)		0	0	2.32			2.46	3.21	2.5
Sibley Volcanic	RTA-SR005	Annual grassland	N/A							4.71	4.71
Sibley Volcanic	RTA-SR005	Broom Scrub									0.15
Sobrante Ridge	RTA-SO001	Northern Maritime Chaparral	0.749								
Sobrante Ridge	RTA-SO001	Oak-Bay Woodland/Forest	3.303	3.5							3.5
Sobrante Ridge	RTA-SO001	Coastal Scrub (Xeric)		0.55							0.55
Tilden	RTA-TI006	Oak-Bay Woodland/Forest	6.217	6.19	7.4				7.4	9.20	9.428
Tilden	RTA-TI006	Riparian Woodland	0.015	0.013	0.01				0.01	0.01	0.015
Tilden	RTA-TI006	Developed/disturbed	0.000	0.59	2.6				2.6	2.60	0.507
Tilden	RTA-TI006	Eucalyptus	0.000	3.83	0.7				0.7	0.70	0.725
Tilden	RTA-TI006	Non-native Coniferous Forest									0.026
Tilden	RTA-TI006	Successional Grassland									0.04
Tilden	RTA-TI012	California Annual Grassland	5.914	5.85	n/a	8.17	7.95	-	8.17	10.51	Year 6
Tilden	RTA-TI012	Coastal Scrub (xeric)	8.625	8.55	n/a	0.91	1.18	-	3.08	3.08	
Tilden	RTA-TI012	Coastal Scrub (mesic)		-	-	-	-	-	0.17	0.17	
Tilden	RTA-TI012	Coniferous forest/Plantation	6.788	6.75	n/a	6.36	5.32	-	3.09	0.00	
Tilden	RTA-TI012	Coyote Brush Scrub	6.177	6.12	n/a	16.34	14.93	-	8.85	9.93	
Tilden	RTA-TI012	Developed/Disturbed/Landscaped	3.499	2.7	n/a	2.7	2.72	-	1.91	1.90	
Tilden	RTA-TI012	Eucalyptus Forest/Plantation	36.260	35.91	n/a	34.5	34	-	19.16	19.15	
Tilden	RTA-TI012	Non-native Coniferous Forest	1.816	1.8	n/a	1.82	1.82	-	1.38	3.81	
Tilden	RTA-TI012	Oak-Bay Woodland/Forest	17.222	17.1	n/a	17.25	17.75	-	34.96	38.67	
Tilden	RTA-TI012	Redwood Forest	0.210	5.4	n/a	0.91	0.91	-	6.2	3.16	
Tilden	RTA-TI012	Successional grassland	4.303	4.23	n/a	1.82	4.28	-	0.77	10.51	
Tilden	RTA-TI013	California Annual Grassland	0.083	-							
Tilden	RTA-TI013	Coastal Scrub (xeric)	1.209	-							
Tilden	RTA-TI013	Coniferous forest/Plantation	0.453	-							
Tilden	RTA-TI013	Coyote Brush Scrub	2.122	1.6				1.6	1.63	1.63	1.24
Tilden	RTA-TI013	Developed/Disturbed/Landscaped	1.362	1.5				1.5	1.55	1.55	1.55
Tilden	RTA-TI013	Eucalyptus Forest/Plantation	1.445	1.3				1.3	1.34	1.34	1.34
Tilden	RTA-TI013	Non-native Coniferous Forest	1.678	2				2	1.96	1.96	2.01
Tilden	RTA-TI013	Oak-Bay Woodland/Forest	6.420	8.9				8.9	8.9	8.90	8.9
Tilden	RTA-TI013	Riparian Woodland	0.938	0.2				0.2	0.18	0.18	0.18
Tilden	RTA-TI013	Successional Grassland									0.34
Tilden	RTA-TI014	Coyote brush scrub	0.277	2.07				2.07	0.26	0.26	
Tilden	RTA-TI014	Developed/Disturbed/Landscaped	0.042	0.13				0.13	0.13	0.13	0.13
Tilden	RTA-TI014	Eucalyptus Forest/Plantation	3.198	2.07				2.07	2.07	2.07	2.17
Tilden	RTA-TI014	Oak-Bay Woodland/Forest	0.003	0.84				0.84	0.84	0.84	0.83
Tilden	RTA-TI014	Redwood Forest	0.015	0.24				0.24	0.24	0.24	0.13
Tilden	RTA-TI014	Successional Grassland									0.27

Tilden	RTA-TI015	California Annual Grassland	1.201	5.4	5.4			1.13	1.9	1.91	1.91
Tilden	RTA-TI015	Coastal Scrub (xeric)	5.637	5.61	5.61			4.51	5.9	5.88	6.06
Tilden	RTA-TI015	Coniferous forest/Plantation	3.859	3.83	3.83			3.7	1.7	0.00	
Tilden	RTA-TI015	Coyote Brush Scrub	5.924	5.94	4.69			4.91	6.2	6.23	4.84
Tilden	RTA-TI015	Developed/Disturbed/Landscaped	9.887	9.88	9.88			9.9	10.5	10.65	10.65
Tilden	RTA-TI015	Eucalyptus Forest/Plantation	0.030	0.3	0.3			0.12	0.1	0.12	0.12
Tilden	RTA-TI015	Non-native Coniferous Forest	1.216	1.24	1.24			1.65	0.2	1.92	1.92
Tilden	RTA-TI015	Oak-Bay Woodland/Forest	21.445	21.43	21.43			22.62	21	20.85	20.67
Tilden	RTA-TI015	Redwood Forest	4.322	4.32	4.32			4.3	5.9	5.95	5.95
Tilden	RTA-TI015	Successional grassland	0.504	0.5	0.5			1.07	0.5	0.41	1.79
Tilden	RTA-TI016	Eucalyptus Forest/Plantation	1.365	1.4						0.68	0.68
Tilden	RTA-TI016	Non-native Coniferous Forest								0.47	0.4
Tilden	RTA-TI016	Oak-Bay Woodland								0.21	0.29
Tilden	RTA-TI022	California Annual Grassland	0.027	0.02							0.09
Tilden	RTA-TI022	Coastal Scrub (mesic)									0.12
Tilden	RTA-TI022	Coastal Scrub (xeric)	1.751	1.74							
Tilden	RTA-TI022	Coyote Brush Scrub	0.779	0.774							1.18
Tilden	RTA-TI022	Developed/Disturbed/Landscaped	1.184	1.77							0.85
Tilden	RTA-TI022	Non-native Coniferous Forest	2.420	2.4							0.59
Tilden	RTA-TI022	Successional grassland	0.282	0.281							1.62
Tilden	RTA-TI022	Oak-Bay Woodland Forest									2.01
Wildcat Canyon	RTA-WC003	California Annual Grassland	0.190	0.58	0.58	0.35	0.25	0.25	0.25	0.18	0.350
Wildcat Canyon	RTA-WC003	Coyote Brush Scrub	0.910	0.935	0.935	0.64	0.88	0.88	0.72	0.76	
Wildcat Canyon	RTA-WC003	Coastal Scrub Mesic	0.000	0						0.12	0.870
Wildcat Canyon	RTA-WC003	Developed/Disturbed/Landscaped	0.000	0						0.03	0.030
Wildcat Canyon	RTA-WC003	Oak-Bay Woodland/Forest	0.567	0.187	0.187	0.66	0.5	0.5	0.69	0.59	0.430
Wildcat Canyon	RTA-WC004	California Annual Grassland	3.594	2.72							
Wildcat Canyon	RTA-WC004	Coastal Scrub (xeric)	3.370	0.98							
Wildcat Canyon	RTA-WC004	Coyote Brush Scrub	0.000	1.19							
Wildcat Canyon	RTA-WC004	Developed/Disturbed/Landscaped	0.257	0.18							
Wildcat Canyon	RTA-WC004	Oak-Bay Woodland/Forest	0.738	2.37							
Wildcat Canyon	RTA-WC004	Eucalyptus forest	0.000	0.52							
Wildcat Canyon	RTA-WC009	Coastal Scrub (xeric)	2.965	1.15			1.15	2.39	2.38	2.10	
Wildcat Canyon	RTA-WC009	Coyote Brush Scrub	0.000	0			0	0	0	0.00	
Wildcat Canyon	RTA-WC009	Developed/Disturbed/Landscaped	0.365	1.15			1.15	0.347	0.35	0.36	0.37
Wildcat Canyon	RTA-WC009	Oak-Bay Woodland/Forest	6.170	5.75			5.75	4.78	4.78	5.66	6.15
Wildcat Canyon	RTA-WC009	Riparian Woodland	1.974	3.45			3.45	3.79	3.79	3.33	2.85
Wildcat Canyon	RTA-WC009	Coastal Scrub (mesic)									2.11
Wildcat Canyon	RTA-WC010	Coastal Scrub (xeric)	5.272	0				0	2.89	2.18	1.72
Wildcat Canyon	RTA-WC010	Coyote Brush Scrub	0.000	3.1				3.79	0	0.88	0.88
Wildcat Canyon	RTA-WC010	Developed/Disturbed/Landscaped	0.181	0.2				0.22	0.2	0.00	0.15
Wildcat Canyon	RTA-WC010	Eucalyptus Forest/Plantation	0.114	0.1				0	0.05	0.05	
Wildcat Canyon	RTA-WC010	Oak-Bay Woodland/Forest	5.23	5.2				5.19	6.88	6.74	6.74
Wildcat Canyon	RTA-WC010	Riparian woodland	0	0				1.51	0.75	0.75	0.75
Wildcat Canyon	RTA-WC010	Successional grassland	0	0				0.09	0.04	0.00	0.32
Wildcat Canyon	RTA-WC010	California Annual Grassland	0	0							0.16
Wildcat Canyon	RTA-WC010	Broom Scrub	0	0							0.08
Wildcat Canyon	RTA-WC011	Coastal Scrub (xeric)	11.2728537	11.3		10.8	10.22	10.22	8.38	0.00	
Wildcat Canyon	RTA-WC011	Coastal Scrub (mesic)								7.50	7.50
Wildcat Canyon	RTA-WC011	Broom Scrub									0.26
Wildcat Canyon	RTA-WC011	Developed/Disturbed/Landscaped	2.35867288	2.3		2.3	3.58	3.58	3.9	0.00	0.014
Wildcat Canyon	RTA-WC011	Eucalyptus Forest/Plantation	1.267	1.26		1.26	1.11	1.11	1.11	0.36	0.36
Wildcat Canyon	RTA-WC011	Non-Native Coniferous Forest	0.000	0						0.05	0.05
Wildcat Canyon	RTA-WC011	Oak-Bay Woodland/Forest	14.123	13.96		13.96	14.31	14.31	16.24	18.70	18.7
Wildcat Canyon	RTA-WC011	Riparian Woodland	1.418	1.43		1.43	1.39	1.39	1.39	3.40	3.4
Wildcat Canyon	RTA-WC011	Redwood Forest	0.000	0		0				0.28	0.28
Wildcat Canyon	RTA-WC011	Successional grassland	0.000	0		0	0	0	0	0.00	
Wildcat Canyon	RTA-WC011	California Annual Grassland	0.000	0		0				4.60	4.60
Wildcat Canyon	RTA-WC011	Coyote Brush Scrub	4.481	4.5		4.5	3.83	3.83	3.2		

** WHIPSNAKE TRAPLINE TREATMENT AREAS (.25 AC EACH)

Cells indicated n/a - Indicates a post-assessment has not been performed in this quarter

Acreage Previous = Acreage previously treated in same category (carryover)

APPENDIX 2. PERMIT COMPLIANCE TABLE

Resource Area	Timing of Implementation	Subapplicant	Reporting Requirements	Report Timing
All	Prior, during, and after project implementation	All subapplicants	One paper and one electronic copy of all plans or submittals required in compliance with the **Environmental and Historic Preservation review**, including those summarized herein, shall be provided to FEMA RIX a minimum of 2 weeks prior to submittal to applicable agencies, to allow for FEMA review and coordination. This time line may be modified with written consent from FEMA RIX Regional Environmental Officer.	When applicable-see below
All	Prior, during, and after project implementation	All subapplicants	The subapplicants, in coordination with Cal OES, will complete all reporting required in compliance with the **Environmental and Historic Preservation review**, including those summarized herein. Unless otherwise stipulated in writing by FEMA, reports will be submitted directly to FEMA for its review prior to submittal to other applicable agencies. In January of each calendar year following project implementation, Cal OES will provide to FEMA an updated Mitigation Monitoring and Work Plan Summary. Each plan update should include at a minimum: 1) a statement of compliance with each commitment that was be implemented as part of this project (including applicable BMPs, Mitigation Measures, Terms and Conditions, Plans, and Reporting in the FEIS, BO, and NLAA documentation), 2) an updated schedule for submittal of anticipated required plans including identification of agencies that each plan will be submitted to, and 3) updated names and contact information for each person responsible for the respective commitment.	Wen applicable-see below
All	Prior, during, and after project implementation	All subapplicants	All subapplicants must notify FEMA of **any changes to the project description**, including planned Best Management Practices (BMPs).	When applicable
All	Prior, during, and after project implementation	All subapplicants	Subapplicants will submit to FEMA, through Cal OES, a complete **Mitigation Monitoring and Work Plan Summary** to FEMA prior to initiation of project activities. Each plan should include at a minimum: 1) a list of all commitments that will be implemented as part of this project (including applicable BMPs, Mitigation Measures, Terms and Conditions, Plans, and Reporting in the FEIS, Biological Opinion, and National Marine Fisheries Service concurrence documentation), 2) a schedule for submittal of all required plans including identification of agencies that each plan will be submitted to, and 3) name and contact information for each person responsible for the respective commitment.	Prior to project initiation
Biological Resources	Prior to project implementation	All subapplicants	At least 20 working days prior to the date that the project is initiated in the field, the applicant or project proponent shall submit the **name(s) and credentials of biological monitors** who will serve as the onsite project biological monitors to the USFWS for review and approval. The biological monitor(s) shall have demonstrated knowledge of the biology, ecology, and field experience identifying Alameda whipsnakes and California red-legged frogs, as well as botanical knowledge in regards to the pallid manzanita. No project activities shall begin until the applicant or project proponents have received written approval from the USFWS that the biological monitor(s) are qualified to conduct the work. Information included in a request for authorization as a USFWS-approved biological monitor should include, at a minimum: (1) relevant education; (2) relevant training on species identification, survey techniques, handling individuals of different age classes, and handling of different life stages by a permitted biologist or recognized species expert authorized for such activities by the USFWS; (3) a summary of field experience conducting requested activities (to include project/research information); (4) a summary of biological opinions under which they were authorized to work with the listed species and at what level (such as construction monitoring versus handling), including the names and qualifications of persons under which the work was supervised as well as the amount of work experience on the actual project; (5) a list of Federal Recovery Permits [10(a)1(A)] held or under which are authorized to work with the species (to include permit number, authorized activities, and name of permit holder); and (6) any relevant professional references with contact information. The USFWS will provide written approval within 10 business days of receipt of the provided information.	Prior to ground disturbance
Biological Resources	During project implementation	All subapplicants	The **USFWS-approved biological monitor(s) shall be onsite during implementation of project activities that may result in take of federally listed species**. Additionally, the biological monitor will be given the authority through communication with the project manager or their designee to stop any work that may result in take of the California red-legged frog, Alameda whipsnake, and/or other listed species. If the USFWS-approved biological monitor exercises this authority, the USFWS and FEMA shall be notified by telephone and electronic mail within one (1) working day. The USFWS contact is the Coast Bay/Forest Foothills Division Chief, Endangered Species Program, at the Sacramento Fish and Wildlife Office at telephone (916) 414-6600.	When applicable
Biological Resources	During project implementation	All subapplicants	Based on training from the biological monitor, all contractors, their employees, and agency personnel involved in the implementation of the project will check for the presence of **Alameda whipsnakes or California red-legged frogs next to stationary vehicles, prior to operating the vehicles**. If found, the biological monitor will be contacted prior to operating the vehicle. The biological monitor will contact the USFWS and FEMA immediately if an Alameda whipsnake or California red-legged frog is found, to determine necessary steps.	When applicable
Biological Resources	During project implementation	All subapplicants	If the USFWS-approved biological monitor exercises stop work authority, the USFWS and FEMA will be notified by telephone and electronic mail within one working day. The USFWS-approved monitor shall be the contact for any employee or contractor who might inadvertently kill or injure a California red-legged frog and/or an Alameda whipsnake; or anyone who finds a dead, injured, or entrapped individual of these two listed species. **The USFWS-approved biological monitor shall possess a working cellular telephone whose number will be provided to the USFWS and FEMA.**	When applicable
Biological Resources	Prior to project implementation	All subapplicants	Sensitive habitat areas, including Alameda whipsnake and California red-legged frog habitat, known populations of pallid manzanita, and wetlands shall be **clearly indicated on the project plans**. These plans will be submitted to the USFWS for review and approval, with a copy to FEMA, prior to project implementation.	Prior to project implementation
Biological Resources	Prior to project implementation	All subapplicants	The USFWS-approved biological monitor(s) will be onsite to monitor the initial vegetation removal and/or ground disturbance activities. The USFWS-approved biological monitor(s) shall perform a **clearance survey for listed species immediately prior to the initial ground disturbance.** In areas where California red-legged frog or Alameda whipsnake could occur, work will not commence until the biological monitor has determined that no California red-legged frogs or Alameda whipsnakes are in the work area.	Provide records to FEMA after survey
Biological Resources	Prior to project implementation	All subapplicants	**Pre-implementation surveys would be conducted to determine the presence of special-status plants** within the project areas where vegetation management activities would be conducted. Botanists would conduct a botanical survey for the listed species during the blooming period for each species before vegetation management activities start. All special-status plants would be clearly flagged with high visibility flagging and avoided.	Provide records to FEMA after survey

Resource Area	Timing of Implementation	Subapplicant	Reporting Requirements	Report Timing
Biological Resources	Prior to project implementation	All subapplicants	To avoid and minimize disturbance to active nesting or fledging, work during avian nesting and fledging season (February 1 through July 31) will only be undertaken if the **treatment area was cleared by an avian biologist.** If active bird nests are present, a 50-foot non-disturbance zone will be maintained, unless adjustment is approved by the USFWS-approved biological monitor. If an injured bird is found, the USFWS, FEMA, and the nearest wildlife rehabilitation center will be called.	When applicable
Biological Resources	Prior to project implementation	EBRPD (HMGP 1731-16-34)	Prior to implementing any activity within any recommended treatment areas (RTAs) containing pallid manzanitas, EBRPD will develop a USFWS-approved long-term adaptive **management plan for all stands of pallid manzanitas** that occur on EBRPD lands	Prior to project implementation
Biological Resources	During project implementation	All subapplicants	Each year or prior to any wildfire hazard reduction activities within a watershed supporting pallid manzanitas, an **appropriately timed survey of the site** to be treated will be conducted by a qualified person approved by the USFWS to identify areas infected with P. cinnamomi.	Provide records to FEMA after survey
Noise	During project implementation	All subapplicants	Each sub-applicant will develop a **noise control plan** for its portion of the proposed and connected actions. The noise control plan will identify procedures for predicting construction noise levels at sensitive receptors prior to beginning work and will describe noise reduction measures required to reduce the increased noise levels to the maximum extent possible. Noise mitigation measures will include but will not be limited to the following: - Equipment will be maintained to reduce noise levels to the maximum extent possible (e.g., exhaust mufflers). - Hours of work will be limited to 7:00 a.m. to 7:00 p.m. Monday through Friday and 8:00 a.m. to 5:00 p.m. on Saturday. No work will be completed on Sunday. - Noise complaints will be addressed promptly by the subapplicant and alternate means of project implementation used when feasible.	Prior to project initiation
Air Quality	Prior to project implementation	EBRPD (HMGP 1731-16-34)	At least 30 days before any proposed burning, EBRPD must prepare a smoke management plan and submit it to **Bay Area Air Quality Management District (BAAQMD) for review (regulation 5-408.1)**. The plan must be consistent with EPA's Interim Air Quality Policy on Wildland and Prescribed Fires and must comply with other requirements listed in the BAAQMD regulation.	When applicable
Biological Resources	After project implementation	EBRPD (HMGP 1731-16-34)	**Permanent photographic stations** would be established to display the changes in vegetation cover and ephemeral stream channels after the initial fuels management treatment. Included within the annual assessment developed by the EBRPD, a representative photograph would be captured of the project site from a consistent location. Pre-treatment assessments would record the latitude and longitude and compass bearing of the photo. This photograph would be used in combination with other data on vegetation and habitat, as a guide to track recovery of an area towards the vegetation management goal.	Annual
~~Biological Resources~~	~~During project implementation~~	~~City of Oakland (PDM-PJ-09-CA-2006-0004)~~	~~Cal OES and Oakland will develop and implement a USFWS-approved long-term management plan for the pallid manzanita similar to the one being developed by EBRPD.~~	~~Prior to project implementation~~
Biological Resources	After project implementation	EBRPD (HMGP 1731-16-34)	EBRPD will coordinate with the USFWS on the Pallid Manzanita Management Plan, which will include requirements for EBRPD to acquire, preserve, and manage lands containing the pallid manzanita that are currently unprotected on private lands. **EBRPD will educate and work with adjacent landowners to minimize the potential for the introduction and spread of P. cinnamomi** into areas containing the pallid manzanita.	Prior to project implementation
~~Biological Resources~~	~~During project implementation~~	~~City of Oakland (PDM-PJ-09-CA-2006-0004)~~	~~City of Oakland will provide documentation of its outreach to private landowners in the Oakland Hills (e.g., Oakland Hills Tennis Club, Sunrise Assisted Living Facility, and the proposed Crestmont development) to monitor the Presidio clarkia subpopulations on their lands and control invasive species as required under their management plans that were developed during the California Environmental Quality Act process (e.g., Center for Biological Diversity 2007; Kanz in litt. 2009; EBRPD 2009; Oakland 2006).~~	~~Annual~~
~~Biological Resources~~	~~During project implementation~~	~~City of Oakland (PDM-PJ-09-CA-2006-0004)~~	~~City of Oakland will increase education of Oakland road maintenance and vegetation and fire management teams in how to avoid and minimize impacts to the Presidio clarkia including delaying their activities (e.g., mowing and weed-whacking) in areas with Presidio clarkia (Chadbourne Way, Old Redwood Road, and Redwood Regional Park subpopulations) until after the Presidio clarkia have set seed (late summer, early fall).~~	~~Annual~~
~~Biological Resources~~	~~During project implementation~~	~~City of Oakland (PDM-PJ-09-CA-2006-0004)~~	~~City of Oakland will provide documentation of its outreach to private landowners in the Oakland Hills (e.g., Colgett Drive, Kimberlin Heights Drive, and Crestmont Drive) to remove trees where they have been planted in suitable Presidio clarkia habitat as is being done at Redwood Regional Park and the San Francisco Presidio.~~	~~Annual~~
Biological Resources	Prior to project implementation	EBRPD (HMGP 1731-16-34)	**Pallid Manzanita Management Plan**: Prior to implementing any activity within any recommended treatment areas (RTAs) containing pallid manzanitas, EBRPD will develop a USFWS-approved long-term adaptive management plan for all stands of pallid manzanitas that occur on EBRPD lands (nearly 75 percent of pallid manzanita plants range-wide occur on EBRPD lands and thus will be covered under this management plan). The plan will be designed to ensure the long-term persistence of the pallid manzanita stands and to guide future management actions in and around this species, including (1) managing and expanding existing pallid manzanita stands in such a way as to maximize individual plant health, maintain species genetic integrity and diversity, and promote stand regeneration in perpetuity; (2) establishing or restoring additional pallid manzanita stands in areas that are not subject to fuel management or other incompatible uses; and (3) controlling the spread of the fungal pathogen, P. cinnamomi, within and between pallid manzanita stands.	Prior to project implementation
Biological Resources	During project implementation	EBRPD (HMGP 1731-16-34)	EBRPD will compensate at a 2:1 ratio for the permanent loss of 193.1 acres of core scrub habitat for the Alameda whipsnake by purchasing, preserving, and managing in perpetuity under a **conservation easement at least 453.2 acres** of suitable core scrub habitat for the Alameda whipsnake at USFWS-approved location(s) within its designated critical habitat. EBRPD will record the conservation easement within 9 months of EBRPD initiating the proposed project. The long-term endowment funding for the compensation areas will be in place within 9 months of EBRPD initiating the proposed project. The preserved habitat will be managed for the benefit of the Alameda whipsnake under a USFWS-approved compensation plan with a long-term endowment to provide funding for management of these areas in perpetuity. Currently, EBRPD is considering purchasing and preserving in perpetuity under a conservation easement high quality core scrub habitat within an important dispersal corridor within Alameda whipsnake designated critical habitat Unit 6.	Within 9 months of EBRPD initiating the proposed project

Resource Area	Timing of Implementation	Subapplicant	Reporting Requirements	Report Timing
Biological Resources	Prior, during, and after project implementation	All subapplicants	Each subapplicant will prepare and submit **Mitigation and Monitoring Plans (MMPs)** to Cal OES, for its submittal to FEMA and the USFWS. No work shall commence until the MMPs are approved by both FEMA and the USFWS. The MMPS will include, but are not limited to, the applicable measures listed herein.	Prior to project implementation
Biological Resources	Prior to project implementation	All subapplicants	Each applicant will have a final **USFWS-approved 10-year MMP prior to their initiation of the proposed project.** The MMPs shall include interim and final success criteria for the cover of native and invasive plant species, the cover of suitable listed species habitat, and the decomposition of wood chips within all proposed treatment areas. Cal OES shall ensure that the applicants develop and implement USFWS-approved contingency plans in case the interim and final success criteria are not achieved.	Prior to project implementation
Biological Resources	During project implementation	All subapplicants	The U.S. Fish and Wildlife Service (USFWS) and FEMA must be **notified within 24 hours** of the finding of any injured or dead California red-legged frog or Alameda whipsnake. Injured California red-legged frogs and Alameda whipsnakes shall be cared by a licensed veterinarian or other qualified person, such as the USFWS-approved biologist for the proposed action. Notification must include the date, time, and precise location of the specimen/incident, and any other pertinent information. Dead animals should be sealed in a zip lock bag containing a piece of paper indicating the location, date and time when it was found, and the name of the person who found it; and the bag should be frozen in a freezer in a secure location. The applicant shall submit a post-construction compliance report prepared by the onsite biologist to the Sacramento Fish and Wildlife Office within sixty (60) calendar days of the date of the completion of construction activity. This report shall detail (i) dates that construction occurred; (ii) pertinent information concerning the success of the project in meeting the avoidance and minimization measures; (iii) an explanation of failure to meet such measures, if any; (iv) known project effects on the California red-legged frog and Alameda whipsnake, if any; (v) occurrences of incidental take of these listed species, if any; (vi) documentation of employee environmental education; and (vii) other pertinent information.	When applicable
Biological Resources	After project implementation	All subapplicants	The applicant shall submit a post-construction **compliance report prepared by the onsite biologist** to the Sacramento Fish and Wildlife Office within sixty (60) calendar days of the date of the completion of construction activity. This report shall detail (i) dates that construction occurred; (ii) pertinent information concerning the success of the project in meeting the avoidance and minimization measures; (iii) an explanation of failure to meet such measures, if any; (iv) known project effects on the California red-legged frog and Alameda whipsnake, if any; (v) occurrences of incidental take of these listed species, if any; (vi) documentation of employee environmental education; and (vii) other pertinent information.	Within sixty (60) calendar days of the date of the completion of construction activity
Biological Resources	Prior to project implementation	All subapplicants	**USFWS-approved habitat performance standards for the 10-year monitoring period** will be developed by each applicant prior to project implementation. During the 10-year project monitoring period, should success criteria not be achieved at the projected rate, adaptive management practices and additional measures will be implemented to improve progress towards the vegetation management goals. This could include more frequent maintenance projects, new methods or techniques for control, and higher performance objectives for successive years. The adaptive actions will be determined annually through an analysis of data collection and review of photographic documentation. Treatment areas may be assessed individually, and adaptive measures will be implemented to move towards attainment of the vegetation management goals identified for each treatment area. Non-native invasive control and native species revegetation success criteria are provided in each applicant's MMP along with measures to be taken if criteria are not met, and a discussion of the adaptive management process (UCB 2013, Oakland 2013, EBRPD 2013).	Prior to project implementation
Biological Resources	After project implementation	All subapplicants	The **MMPs will include monitoring of vegetation management goals** through assessing the succession of vegetation within each habitat type throughout the 10-year timeframe of the project. The MMPs include the goal of protecting and promoting native vegetation communities while reducing wildfire risk. Success criteria include requirements for achieving a minimum percent cover of plant species to support native vegetation communities and habitats. Monitoring will be conducted annually for 10 years, and the results will be addressed in an annual report submitted to appropriate agencies, including USFWS, by March 31 of each year. The reports will include a summary of the maintenance and monitoring activities, recovery, percent cover of federally listed species habitat, measures implemented at each to aid in the recovery of the habitat towards the vegetation management goal outlined in the plan, and a summary of the proposed follow-up action for the upcoming year. The report will also include incidental observations of wildlife, comparative photos of the sites, assessment of vegetation criteria attained, and suggestions for future adaptive management. Photographic documentation will be conducted before and after implementation using established photo point stations and camera angles.	Annual (by March 31)
Biological Resources	After project implementation	All subapplicants	Through **pre- and post-assessment surveys, each area will be inspected for evidence of severe erosion** as a result of vegetation management. The survey will record the conditions on site and monitor the recruitment of native vegetation into the areas where trees have been removed, and the information will then be used to develop any amendments to the prescription for the treatment area, if needed. This will include actions to mitigate potential negative impacts from erosion. The post-assessment survey will be done annually for the first 10 years. The resulting survey information will then be used to modify, if needed, the maintenance and treatment methods to correct any potential negative outcomes, such as erosion, and to achieve the vegetation goals. In the event that natural recruitment does not occur as anticipated, additional introduction of native plant species will be implemented. Species introduced will include an assemblage of woody shrubs, forbs, and tree seedlings expected to thrive in the newly opened canopies. If severe erosion is occurring at a site, only native plant seeds or stock shall be used for erosion control, unless otherwise approved by USFWS. If necessary, fencing; signs; maintenance; access control; jute fabric; sediment traps; mulch; straw wattles (without plastic monofilament netting); biodegradable measures such as waddles, Curlex® erosion blankets, and chips; vegetation management; exotic species control; or any other commonly used erosion control technique may be used to promote the ecological health of the sites.	Annual

Resource Area	Timing of Implementation	Subapplicant	Reporting Requirements	Report Timing
~~Biological Resources~~	~~After project implementation~~	~~UC Berkeley (PDM-PJ-09-CA-2005-03 and PDM-PJ-09-CA-2005-011)~~	~~The overall vegetation recruitment and retention goal for native plants is between 70 and 90%, depending upon location and floral community type. The Draft UCB MMP states that success will be achieved if the "native" metrics are attained or exceeded. Therefore, the overall goal is defined as achieving the projected "native/exotic" ratios rather than assuring that succession is proceeding fast enough given uncertainties, such as weather, climate change, pest infestation, diseases, and fires. Should success criteria not be met, maintenance measures may be implemented more frequently or by use of different maintenance approaches, substituting new methods for those that do not demonstrate adequate efficacy. Coppiced (re-sprouted) stumps may be treated with differing methods until 100% mortality is achieved. The latent seed stock is expected to require between 5 and 10 years of continuous treatment to ensure that any naturally germinating exotic trees are removed. Seeds that are carried onto the project areas from adjacent areas (typically upslope) would require treatment until all possible seed sources have been eliminated. In areas containing other exotic vegetation (e.g. broom) in exceedance of stated goals, the project manager would select from a suite of approaches to achieve annual metrics for each floral community.~~ ~~**As unanticipated results are recorded (both positive and negative)**~~, ~~these would further inform the project manager such that future maintenance either expands upon successful methods or discontinues those methods found to be unsuitable or ineffective. This process of adaptive management would be employed throughout the project life-cycle.~~	~~Annual~~
~~Biological Resources~~	~~After project implementation~~	~~City of Oakland (PDM-PJ-09-CA-2006-0004)~~	~~The progress of the project implementation will be monitored at least one time per year for 10 years. The protocol for monitoring will involve Oakland's project representative or his/her designee and/or USFWS- and/or NMFS-approved biological consultants to walk within the removal areas to inspect for control of the target species (e.g., pine, eucalyptus, French broom). Monitoring will include an assessment of the natural recruitment and expansion of native floral communities in relation to the vegetation management goals and will be timed to coincide with the optimal periods for identification of performance metrics (Oakland 2013). Monitoring will include photographic documentation at the macro level for each project site and habitat type. Photographs will be taken within the project area to capture floral composition and monitor the success of the vegetation goals (Oakland 2013).~~	~~Annual~~
~~Biological Resources~~	~~After project implementation~~	~~City of Oakland (PDM-PJ-09-CA-2006-0004)~~	~~The methods for measuring performance will include use of maps of existing vegetation, annual onsite monitoring, and aerial photographic measures in Years 3 and 7 to determine the coverage of vegetation types. If the vegetation cover does not meet the goals, actions will be taken to achieve the desired distribution of plants and species.~~	~~Annual~~
Biological Resources	After project implementation	EBRPD (HMGP 1731-16-34)	Following initial fuels treatment, monitoring, maintenance and **reporting will occur on an appropriate schedule for the ongoing achievement of vegetation management goals**. Post-treatment monitoring will consider the environmental characteristics (erosion/soil stability, tree sprouting, resulting vegetative composition, invasive non-native plant species, wildlife habitat, special status species, etc.) to inform the ongoing management strategies to achieve desired vegetation management goals as described in the WHRRMP and MMP. Assessments will record the percent coverage of the treated site by desirable (native species habitat) and target non-desirable species (weeds, invasive plants, re-sprouted target plants). This information will be used to inform the adaptive management strategy and develop a prescription for further action on the site to attain the vegetation management goals identified in the WHRRMP and MMP. The frequency by which a post-treatment area will be monitored over a 10-year monitoring period will be determined by specific site conditions after treatment and in accordance to an adaptive management process. Proposed frequency schedule will include monitoring at least annually for the first five years, and then once in years seven and 10. All information regarding pre- and post-treatment activities will be included in a WHRRMP database for future reference and development of adaptive management strategies.	When applicable
Biological Resources	During project implementation	All subapplicants	Subapplicants will ensure that herbicide operators record in writing the herbicide treatment data and report to the applicable County(ies).	When applicable

APPENDIX 3. CHIP DEPTH TABLE

CHIP DEPTHS IN TREATMENT AREAS 2023			
RTA	Pile #	Avg Depth (in)	Area (SQ FT)
Anthony Chabot			
AC001	Absent		
AC002	1	3.2	10
AC003	NA		
AC006	Absent		
AC007	1	7.2	2000
AC011	NA		
AC012	1	5.3	1000
	2	3.2	1500
	3	3.7	3000
AC013	Absent		
AC014	1	3.5	400
	2	3.4	2600
Claremont Canyon			
CC001	1	6.9	3200
	2	5.9	1000
	3	4.2	5000
CC003	Absent		
CC006	1	3.7	6000
CC007	Absent		
CC008	Absent		
CC010	1	5.1	400
	2	2.4	80,000
CC012	Absent		
Huckleberry			
HP001	1	6.2	2160
HP002	Absent		
HP003	Absent		
HP004	Absent		
Lake Chabot			
LC010	Absent		
Leona Canyon			
LE005	Absent		
Miller Knox			
MK001	1	25	100
	2	4	2500

	3	2	1000
MK002	1	2	800
MK003	1	2.8	500
MK004	1	3.2	700
	2	2.7	300
	3	4.3	400
MK005	1	5.6	2100
	2	4	2800
	3	4.2	15,000
Redwood			
RD001	1		
RD002	1	3.9	15,285
	2	5.3	13,440
	3	4.1	13,000
RD003	Absent		
RD004	Absent		
RD005a	Absent		
RD005b	Absent		
RD009	1	4	500
RD011	Absent		
Sibley			
SR001	Absent		
SR003	Absent		
SR004	1	1.8	180
	2	3.5	500
SR005	Present	Determined chips generated from non-fuels related work, see post assessment for more detail	
Sobrante Ridge			
SO001	Absent		
Tilden			
TI006	1	5.1	4400
TI012	1	3.4	500
	2	2.4	1500
	3	0.36	800
TI013	1	2.7	100
TI014	1	6.05	1,000
	2	3.15	2,000
TI015	1	0.8	2,000
TI016	1	2.6	9,000
TI022	1	1.5	70,567

Wildcat			
WC003	1	2.25	10
WC004	NA		
WC009	1	2.1	600
	2	2.3	300
WC010	Absent		
WC011	Absent		

APPENDIX 4. EXOTIC VEGETATION TABLE

RTA ID	Species	2018	2019	2020	2021	2022	2023
Anthony Chabot							
RTA-AC001	*Carduus pycnocephalus*						<1%
	Eucalyptus sp						6%
	Genista monspessulana				1%		<1%
	Ilex aquifolium				<1%		<1%
	Pinus sp.				<1%		
	Pinus radiata				3%		
	Prunus sp				<1%		
	Rubus armeniacus				<1%		
RTA-AC002	*Genista monspessulana*		10%	85%	7%		17%
	Maytenus boaria				2%		1%
	Schinus terebinthifolius		<1%	ND			
	Eucalyptus sp		<1%	<1%	<1%		<1%
	Cupressus macrocarpa		1%	<1%			
	Pinus radiata		5%	23%	3%		<1%
	Cotoneaster sp		1%	1%	1%		<1%
	Prunus sp		<1%	<1%			
	Dittrichia			<1%			<1%
	Cortaderia sp						<1%
	Conium maculatum						<1%
	Hedera helix						<1%
RTA-AC003	NA						
RTA-AC006	*Pinus radiata*			<1%	<1%	<1%	1%
	Cotoneaster sp			<1%	<1%	<1%	<1%
	Acacia sp		<1%	5%	<1%	<1%	<2%
	Genista monspessulana		<1%	10%	0.1	1%	1.26
	Eucalyptus sp		5%			<1%	<2%
RTA-AC007	*Cortaderia selloana*	ND		<1%	ND	ND	<1%
	Eucalyptus sp	14.25%	14.25%	25%	See Note	<1%	<1%
	Genista monspessulana	3%	<2%	<1%	See Note	3%	3%
	Pinus radiata	<1%	<1%		See Note	<1%	<1%
	Rubus armeniacus	ND	<3%		ND	ND	ND
	Ailanthus altissima	<1%			ND	ND	ND
	Cotoneaster	ND	ND	ND	<1%	<1%	<1%
	Acacia	ND	ND	ND	<1%	<1%	ND
	Carduus	ND	ND	ND	ND	<1%	<1%
	Conium	ND	ND	ND	ND	<1%	<1%
	Dittrichia	ND	ND	ND	ND	<1%	<1%
	Phalaris	ND	ND	ND	ND	<1%	<1%
		ND	ND	ND	ND	<1%	
RTA-AC011	NA						
RTA-AC012	*Eucalyptus sp*	55.61%	59%	59%	19.40%	48%	year 6
	Acacia melanoxylon	ND	<1%	<1%	ND	<1%	
	Carduus pycnocephalus	<1%	ND	ND	ND	<1%	
	Cortaderia selloana	<1%	ND	ND	ND	<1%	
	Conium maculatum	4%	ND	ND	ND	<1%	
	Cirsium sp	<1%	ND	ND	ND	<1%	
	Dittrichia graveolens	ND	ND	ND	ND	<1%	

	Genista monspessulana	ND	ND	ND	ND	<1%	
	Cotoneaster sp	ND	ND	ND	ND	<1%	
	Phalaris sp	ND	ND	ND	ND	<1%	
RTA-AC013	*Eucalyptus sp*	80%	50%	84%	84%	ND	ND
	Carduus pycnocephalus	<8%	ND	ND	ND	ND	<1%
	Cynara cardunculus	<1%	ND	ND	ND	ND	ND
	Conium maculatum	<3%	ND	ND	ND	<1%	<1%
	Dittrichia graveolens						<1%
	Cirsium vulgare						<1%
	Silibum marianum						<1%
RTA-AC014	*Pinus radiata*	<1%	<1%	<1%	<1%	<1%	Year 6
	Eucalyptus sp	ND	<1%	1%	<1%	<1%	
	Cytisus scoparius	ND	<1%	ND	ND	ND	
	Genista monspessulana	ND	<1%	ND	<1%	<1%	
	Cortaderia selloana	<1%	ND	ND	ND	ND	
	Foeniculum vulgare	<1%	ND	ND	ND	ND	
	Dittrichia graveolens	<1%	ND	ND	ND	ND	
	Cotoneaster	ND	ND	ND	ND	<1%	
Claremont Canyon							
RTA-CC001	*Genista monspessulana*	<1%				<1%	5%
	Cotoneaster sp	<1%				<1%	
	Acacia					<1%	
	Eucalyptus					51%	
RTA-CC003	*Genista monspessulana*	5-10%		<1%	20%	20-30%	2
	Conium maculatum	<1%		<1%	<1%		<1%
	Cirsium sp	<1%		<1%	<1%	1%	
	Senapis sp	<1%			<1%		
	Silybum mariannum	ND	ND	ND	ND	2%	<1%
	Carduus sp.	ND	ND	ND	ND	1%	<1%
RTA-CC006	*Pinus*					1%	1%
	Genista monspessulana					1%	5%
	Euphorbia oblangata						1%
	Ageratina adenophora						1%
RTA-CC007	*Dittrichia graveolens*						1%
RTA-CC008	*Eucalyptus globulus*						1%
	Ageratina adenophora						<1%
	cotoneaster pannosus						<1%
	Genista monspessulana						1%
	Arundo donax						<1%
	Pinus radiata						<1%
	Conium maulatum						<1%
	Dipsacus fullonum						<1%
	Hedera helix						<1%
	Vinca minor						<1%
RTA-CC010	*Genista monspessulana*					<1%	<1%
	Eucalyptus sp					6%	6%

	Cotoneaster sp					<1%	<1%
	Carduus sp.					<1%	<1%
	Conium					<1%	<1%
	Dittrichia					<1%	<1%
	Prunus					<1%	1%
	Cortaderia					<1%	<1%
	Acacia dealbata					2%	2%
	Silybum marianum						<1%
	Euphorbia oblongata						<1%
	Euphorbia lathyrus						<1%
RTA-CC012	*Conium maculatum*					<1%	<1%
Huckleberry							
RTA-HP001	*Eucalyptus sp*	70%	70%	70%		<1%	<1%
	Genista monspessulana	<1%	<1%	<1%		27%	27%
	Hedera helix	<1%	ND	ND		0%	
	Vinca major	<1%	ND	ND		0%	
	Deleria odorata	<1%	ND	ND		0%	
	Rubus armeniacus	<1%	ND	ND		0%	
	Pinus radiata	<1%	ND	ND		0%	
	Conium maculatum	<1%	ND	ND		0%	
RTA-HP002	*Deleria odorata*	<1%	ND	ND		ND	
	Vinca major	<1%	ND	ND		ND	
	Genista monspessulana	<1%	<1%	<1%		ND	
	Eucalyptus sp	<1%	<1%	<1%		ND	
	Pinus radiata	<1%	<1%	<1%		<1%	<1%
	Rubus armeniacus	<1%	ND	ND		ND	
	Centaurea solsticialis	<1%	ND	ND		ND	
	Hirschfeldia incana	<1%	ND	ND		ND	
RTA-HP003	*Pinus radiata*	<1%	<1%	<1%	ND	ND	<1%
RTA-HP004	*Genista monspessulana*	<1%	<1%	<1%	6%	<1%	<1%
Lake Chabot							
RTA-LC010	*Rubus armeniacus*	5%	<1%	<1%	ND	ND	
	Eucalyptus sp	<1%	<1%	<1%	ND	ND	
	Prunus sp	<1%	<1%	<1%	ND	<1%	<1%
	Nerium sp	ND	<1%	<1%	ND	ND	
	Conium maculatum	<1%	ND	ND	ND	ND	<1%
	Cotoneaster	ND	ND	ND	ND	<1%	
	Cirsium vulgare						<1%
	Carduus pycnocephalus						2%
	Dittrichia graveolens						<1%
Leona Canyon							
RTA-LE005	*Genista monspessulana*	20%	<1%	<2%	2%	<1%	<1%
	Pinus radiata	3%	ND	<1%	<1%	<1%	<1%
	Rubus armeniacus	5%	ND	ND	ND	ND	
	Prunus	ND	ND	ND	<1%	ND	
Miller Knox							

RTA-MK001	*Eucalyptus sp*			3%	40%	>2	See Note
	Acacia melanoxylon			ND	2%	ND	<1%
	Pinus radiata			ND	50%	ND	See Note
	Genista monspessulana			15%	55%	9%	See Note
	Cortaderia	ND	ND	ND	ND	ND	<1%
	Cotoneaster	ND	ND	ND	ND	ND	<1%
	Prunus sp						<1%
RTA-MK002	*Genista monspessulana*			5%	2%	2%	2%
RTA-MK003	*Genista monspessulana*			10%		2%	10%
	Rubus armeniacus			5%		0%	3%
	Ageratina adenophora			3%		0%	5%
RTA-MK004	*Rubus armeniacus*			5%			
	Pinus radiata			50%			
	Genista monspessulana			5%			<2%
	Cotoneaster sp			<1%			<2%
	Acacia melanoxylon						<2%
	Hedera helix						<2%
	Foeniculum vulgare						<2%
RTA-MK005	*Genista monspessulana*		10%	2%	3%	<1%	<1%
	Pinus radiata		20%	10%	10%	7%	7.30%
	Cotoneaster sp		5%		ND	<1%	<1%
	Acacia sp		10%		ND	<1%	<1%
	Rubus armeniacus		2%	1%	1%	ND	
	Pittosporum		<1%		ND	ND	
Redwood							
RTA-RD001	*Conium*				<1%		
	Carduus				<1%		
RTA-RD002	*Delairea odorata*					<1%	
	Conium sp.					<1%	<1%
	Eucalyptus sp.					27.9	
	Genista monspessulana						<1%
	Carduus						<2%
RTA-RD003	*Genista monspessulana*					<1%	<1%
	Cotoneaster sp					<1%	<1%
	Hedera helix					<1%	
	Conium sp.					<1%	
RTA-RD004	*Genista monspessulana*					<1%	
	Carduus					<1%	
	Pinus radiata					<1%	
	Cotoneaster sp						<1%
	Eucalyptus globulus						<1%
RTA-RD005a	*Genista monspessulana*					<1%	<1%
	Hedera helix					<1%	<1%
	Acacia melanoxylon						<1%

RTA-RD005b	*Genista monspessulana*					5%	5%
	Ilex aquifolium					<1%	
	Cotoneaster					<1%	<1%
	Eucalyptus globulus						<1%
RTA-RD009	*Eucalyptus globulus*						40%
	Genista monspessulana						1%
	Prunus cerasifera						2%
	Conium maculatum						3%
	Carduus pycnocephalus						1%
	Cirsium vulgrae						<1%
RTA-RD011	*Conium*					5%	
	Genista monspessulana					<1%	1%
Sobrante Ridge							
RTA-SO001	*Cardus pycnocephalus*						<1%
Sibley							
RTA-SR001	*Pinus radiata*						27%
	Genista monspessulana						see note
	Conium maculatum						see note
	euphorbia oblangata						see note
	Centaurea solstitialis						<1%
RTA-SR003	*Genista monspessulana*			<1%	*see note	5%	
	Cotoneaster sp			ND	*see note	ND	
	Eucalyptus sp			2%	*see note	10%	
	Pinus radiata			<1%	*see note	15%	
	Carduus sp			ND	ND	<1%	
	Cirsium vulgare			ND	ND	2%	
	Cortaderia jubata			ND	ND	<1%	
RTA-SR004	*Genista monspessulana*		10%	5%	10%	10%	<1%
	Eucalyptus sp		5%	<1%	ND	2%	2%
	Pinus radiata		1%	1%	2%	2%	<1%
	Prunus sp		ND	<1%	ND	ND	
	Conium maculatum		ND	<1%	ND	ND	
	Carduus pycnocephalus		ND	<1%	ND	ND	
	Ilex aquifolium		ND	ND	<1%	ND	
	Myosois discolor						<1%
	Centaurea solstitialis						<1%
RTA-SR005	*Rubus armeniacus*				5%	2%	2%
	Genista monspessulana				5%	2%	2%
	Prunus sp				1%	<1%	<1%
	Eucalyptus sp				4.50%	5%	5%
	Pinus radiata				20%	19%	19%
	Conium					2%	2%
	Ilex sp						<1%
	Cedrus deodara						<1%
	Cotoneaster sp						<1%
Tilden							

RTA-TI006	Eucalyptus sp				3%	9%	9%
	Ilex aquifolium				<1%	ND	
	Genista monspessulana				3%	2%	1%
	Pinus radiata				<1%	1%	1%
	Acacia sp				<1%	ND	
	Prunus					1%	
	Cotoneaster					1%	
RTA-TI012	*Cotoneaster sp*		<5%	ND	<5%	ND	
	Eucalyptus sp		40%	ND	<40%	25%	
	Genista monspessulana		<1%	ND	<1%	<1%	
	Pinus radiata		10%	ND	10-15%	2%	
	Rubus armeniacus		<1%	ND	<1%	ND	
	Carduus		ND	ND	ND	<1%	
	Crataegus		ND	ND	ND	<1%	
	Hedera helix		ND	ND	ND	<1%	
RTA-TI013	*Genista monspessulana*			30%	30%	ND	
	Pyracantha			2%	2%	ND	
	Ilex aquifolium			<1%	<1%	ND	
	Euphorbia lathyrus						<1%
	Pinus radiata						<1%
RTA-TI014	*Pinus radiata*			<1%		<1%	
	Eucalyptus sp			59%		ND	1%
	Cotoneaster sp			<1%		ND	
	Pinus radiata			<1%		ND	
	Conium maculatum						1%
	Cirsium vulgare						1%
RTA-TI015	*Genista monspessulana*			<1%		<1%	1%
	Eucalyptus sp			<1%		ND	
	Pinus radiata			2%		ND	
	Acacia sp			<1%		ND	
	Cotoneaster					<1%	<1%
	Centaurea soltitialis						<1%
	Centaurea meitensis						<1%
	Euphorbia oblongata						<1%
	Dittrichia graveolens						<1%
	Cortaderia jubata						<1%
RTA-TI016	*Eucalyptus sp*			75%			9.20%
	Genista monspessulana			3%			1%
	Cotoneaster sp			<1%			ND
	Pinus radiata			<1%			1%
RTA-TI022	*Genista monspessulana*						<1%
	Euphorbia oblongata						<1%
	Dittrichia graveolens						<1%
	Conium maculatum						<1%
	Centaurea soltitialis						<1%
	Rubus armeniacus						<1%
	Foeniculum vulgare						<1%

Wildcat							
RTA-WC003	*Pinus radiata*	<1%	<2%	2%	<1%	1%	
	Prunus sp	<1%	3%	3%	1%	1%	
	Carduus pycnocephalus	<1%	ND	ND	ND	ND	2%
	Rubus armeniacus	5%	ND	ND	ND	ND	
	Conium maculatum	<1%	ND	ND	ND	ND	
	Cytisus scoparius	ND	ND	ND	<1%	<1%	5%
	Cirsium vulgare						<1%
	Foeniculum vulgare						<1%
	Rhamphospermum nigrum						5%
RTA-WC004	NA						
RTA-WC009	*Genista monspessulana*	5%		2%	2%	10%	3%
	Hedera helix	<1%				ND	<1%
	Conium maculatum	ND	ND	ND	<1%	ND	<1%
	Cortaderia	ND	ND	ND	<1%	ND	<1%
	Foeniculum vulgare	ND	ND	ND	ND	ND	<1%
	Cirsium sp	ND	ND	ND	ND	ND	<1%
	Carduus					ND	<1%
	Echium candicans						<1%
	Prunus sp						<1%
RTA-WC010	*Eucalyptus sp*		<1%	<1%	2%		
	Genista monspessulana		17%	5%	15%	15%	15%
	Cytisus scoparius		<1%	ND	ND	ND	
	Conium		ND	ND	10%	10%	10%
	Carduus		ND	ND	<1%	<1%	20%
	Cirsium sp					2%	<1%
	Hedera helix					<1%	<2%
RTA-WC011	*Pinus radiata*	1%	1%	<1%	<1%	<1%	
	Genista monspessulana	ND	<10%	10-15%	10-15%	15	15%
	Hedera helix	ND	4%	30%	30%	<1%	<2%
	Eucalyptus sp	ND	3%	3%	3%	ND	
	Maytenus boaria	ND	ND	<1%	2%	ND	
	Cotoneaster sp	ND	ND	<1%	<1%	ND	
	Rubus armeniacus	ND	1%	ND	<1%	ND	
	Acacia sp	ND	ND	ND	<1%	ND	
	Cirsium	ND				2%	<1%
	Conium	ND				<10%	10%
	Carduus pycnocephalus						20%
	*ND = Not Detected						