

# East Bay Regional Park District

## Wildfire Hazard Reduction and Resource Management Plan (WHRRMP)

### Fuels Management Program

### Annual Summary of Work

### Project Year 2018

6/10/2020

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 WHRRMP Biological Opinion and Incidental Take Permit 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 assessment of project performance standards.

## Summary of Fuel Management Work

A total of six projects in eighteen RTAs were conducted in 2018. Projects consisted of a combination of brush thinning, clearing, and tree removal. In general, brush thinning activities are considered an impact to core scrub. Brush was treated utilizing Directional Workplans and the “brush island” approach, resulting in reduction of 100% to 50% canopy cover in 50 foot patches. These areas meet the definition of PCE1 or core scrub as defined by the Biological Opinion, and therefore do not result in conversion of AWS habitat.

### WHIPSNAKE STUDY

Fourteen RTAs are included in the Alameda whipsnake study. Traplines in brush were activated and sampled in 2016, treated in 2018, and will be activated again in 2019 to determine whether brush work has any effects on Alameda whipsnake. The study is being 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 by Civicorps crews, using hand tools. The treatment involves clearing 0.25 acre plots around traplines, which is similar to the brush island treatment. All work was monitored by Designated Biologists.

### AC012, AC013, AND AC014

These three RTAs are located in Anthony Chabot Regional Park, outside of the boundary of AWS Critical Habitat. The projects were conducted together by one contractor and took 44 working days. Eucalyptus, decadent pines, and ladder fuels were removed and brush was treated using the brush island approach. All work was monitored by Designated Biologists and 78 Monitoring Reports were generated during work

monitoring. These projects are contiguous and were treated together simultaneously. The same photomonitoring point is used for all three of the RTAs (Section 8).

*General Habitat Quality.* In areas where eucalyptus thinning occurred, habitat quality is expected to be generally the same as prior to thinning. In areas where brush was treated, habitat quality for AWS is considered to be unchanged as no habitat conversion occurred.

#### TI012

In this RTA in Tilden Regional Park, at the edge of the wildland-urban interface in the Berkeley Hills, decadent pines were removed and brush was thinned into brush islands. This project took 50 working days from July to November of 2018. All work was monitored by Designated Biologists.

*General Habitat Quality.* Where pine was removed, native habitat is expected to improve as native oak and bay trees will benefit from decreased competition for moisture and light. In areas where brush was treated, habitat quality for AWS is considered to be unchanged as no habitat conversion occurred.

#### WCO03

At the northern edge of Wildcat Canyon Regional Park, EBRPD removed surface and ladder fuels and thinned brush on 1 acre of this 1.7 acre RTA. The work was conducted using hand tools and a small Bobcat and took 11 workdays. All work was monitored by Designated Biologists.

*General Habitat Quality.*

Fuels treatments consisting of removal of ladder fuels and dense vegetation opened up patches of the scrub/poison oak complex. In areas where brush was treated, habitat quality for AWS is considered to be unchanged as no habitat conversion occurred.

## COVERED SPECIES HABITAT IMPACTS

In general, special status species habitats were not impacted sufficiently to be considered to require recovery. PCE 1 and core scrub AWS habitat types were treated utilizing the brush island treatment, and were largely not converted. 2 acres of AWS core scrub outside of Critical Habitat was considered lost and not expected to recover (Anthony Chabot). A total of 37.81 acres of AWS PCE1/core scrub, both inside and outside of Critical Habitat, was managed using the brush island approach, and remain thinned core scrub. TI012 gained several acres of scrub since the baseline vegetation survey was conducted and thus is reported to have 10.22 acres of Enhanced habitat. No work occurred in or near California red-legged frog habitat.

Work in 2018 was primarily performed in brush/scrub areas, pine forest and eucalyptus plantation. 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, scrub within Critical Habitat is referred to as PCE 1 and PCE 2. Within suitable AWS habitat, but outside of designated Critical Habitat, brush scrub is referred to as Core Scrub.

The Biological Opinion allows 96 acres of “Degraded” (30-70% scrub) core 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)” (BO, 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 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 core scrub habitat, and the Project will degrade, by fragmentation, approximately 96 acres of core scrub habitat” (ITP, p. 14).



*Figure 1. Completed mosaic of core scrub habitat typical of “50-50” brush island treatment, Anthony Chabot Regional Park. Photo credit Sequoia Ecological Consulting.*

Table 1 breaks out Alameda whipsnake habitat where work was performed by Managed, Degraded, Loss/Converted, Created, and Enhanced acreage. For the purpose of clarity, EBRPD uses the same impact reporting table for both CDFW and USFWS (derived from the Effects Analysis Detail Table, Appendix D of the Biological Assessment, and Table 15 of the Biological Opinion, EBRPD Acres of Alameda Whipsnake Habitat Disturbance and Creation). Table 2 details the exact acreage of core scrub removed by impact type. Note that work conducted in Anthony Chabot Regional Park is located outside the boundary of AWS Critical Habitat.

Table 1. Summary of AWS habitat treatments in 2018.

Alameda Whipsnake Habitat, EBRPD Fuel Management Impacts											
AWS Habitat Impacts											
Park	RTA ID	Managed**		Degraded		Loss/Converted		Created		Enhanced	
		AWS CH	Core Scrub*	AWS CH	Core Scrub*	AWS CH	Core Scrub*	AWS CH	Core Scrub*	AWS CH	Core Scrub*
Anthony Chabot	AC012		0.62								
	AC013		1.59								
	AC014		17				2				
Claremont Canyon	CC003	2.75									
	CC007	0.75									
	CC008	1.5									
	CC012	1.00									
Sibley Regional	SR003	0.75									
	SR004	1.00									
	SR005	2.00									
Tilden Regional	TI012	4.83								10.22	
	TI006	0.75									
	TI015	1.25									
	TI022	1.00									
Wildcat Regional	WC011	0.75									
	WC003	0.27									
<b>Total</b>		18.6	19.21				2			10.22	
Max. Impact (BO)	Table 15	n/a		n/a		226.6		0			1.5
Max. Impact (ITP)		n/a		96		226.6		n/a		n/a	

\*Core scrub is suitable Alameda whipsnake habitat outside of federally-designated Critical Habitat (CH).

Table 2. 2018 core scrub removal and type of impact.

EBRPD Core Scrub Impacts and Impact Types, Year 2018						
	Critical Habitat			Suitable Habitat		
	Acreage Scrub Cleared			Acreage Scrub Cleared		
	Low Impact	High Impact		Low Impact	High Impact	
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					
<b>Total Impacts</b>	13.77	0.00		0.27	10.48	

\* Alameda whipsnake study: Only .25 ac of scrub cleared per trapline, no islands created

\*\* This work does not necessarily constitute lost or degraded habitat if less than 50% of scrub cover is removed

Managed core scrub complex area measured in 2018 measured 18.6 acres in Critical Habitat and 19.21 acres in Suitable Habitat. Scrub removed from core scrub complexes totaled 13.77 acres in Critical Habitat using low impact methods, 0.27 acres in Suitable Habitat using low impact methods, and 10.48 acres in

Suitable Habitat using high impact methods. 2 acres were permanently lost in Suitable Habitat, and 10.22 acres of core scrub were gained in Critical Habitat in the RTA TI012 since the baseline assessment in 2012.

## SUMMARY OF MONITORING REPORTS AND OBSERVATIONS OF WILDLIFE

No Listed Species were observed during work in 2018 and no take occurred. However, many observations of San Francisco Dusky-footed Woodrat (*Neotoma fuscipes* ssp. *annectens*) were made during work. Observations were mainly of nests, which were buffered and protected. No Dusky-footed woodrats were harmed during work.

Though not part of this Project, an active Golden Eagle nest was observed in Sibley Regional Park near a pile burning location. The GOEA were observed in the nest and believed to be incubating eggs. The pile burning was postponed until after fledging to avoid disturbing the eagles, and hatching was detected on April 4.

The lack of observations of Listed Species is more likely a result of work occurring outside of known occupancy areas than a consequence of implementation of avoidance measures. The work in Anthony Chabot Regional Park occurred outside of AWS Critical Habitat, and there are no verified observations of this species in the work area. The work footprint buffer areas for the traplines in the Alameda whipsnake study were very small (.25 acre each) and in many cases located in suboptimal habitat. Finally, the remainder of project work (WC003, TI012) was focused in areas very close to developed/urban areas with frequent human visitation, bisected by busy roads, and with no known prior observations of Listed Species. Therefore, in most of the 2018 work areas we would not expect to encounter AWS or California red-legged frog.

## MITIGATION AND MONITORING PLAN (MMP) 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).*

Table 3 contains an accounting of exotic vegetation cover for exotic species of concern as defined in the MMP and as measured in post-treatment assessments Table 3. Cover of Exotic Vegetation in Treated RTAs.

Table 3. Cover of Exotic Vegetation in Treated RTAs.

COVER OF EXOTIC SPECIES IN WORK AREAS, YEAR 2018		
RTA	SPECIES	PERCENT COVER
AC012	<i>Eucalyptus sp.</i>	55.61
AC012	<i>Carduus pycnocephalus</i>	<1.0
AC012	<i>Cortaderia selloana</i>	<1.0
AC012	<i>Conium maculatum</i>	1.00
AC012	<i>Cirsium vulgare</i>	<1.0
AC013	<i>Eucalyptus globulus</i>	<80.00
AC013	<i>Carduus pycnocephalus</i>	<8.00
AC013	<i>Cynara cardunculus</i>	<1.0
AC013	<i>Conium maculatum</i>	<3.00
AC014	<i>Cortaderia selloana</i>	<1.0
WC003	<i>Rubus armeniacus</i>	5.00
WC003	<i>Pinus radiata</i>	<1.0
WC003	<i>Carduus pycnocephalus</i>	<1.0
WC003	<i>Conium maculatum</i>	<1.0

#### 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 a 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 4 for accounting of the status of these Performance Criteria. Although one year has not yet elapsed since treatment, all relevant Performance Criteria are met for the year 2018.

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*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.*

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Table 4. Performance Criteria Table for Fuel Management MMP

PERFORMANCE CRITERIA TABLE FOR EBRPD FUEL MANAGEMENT, MMP TABLE 7.				
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.	N/A	
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.	Met	See Appendix 3
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.	Met	See Appendix 3

For questions regarding this Status Report, contact Kristen Van Dam, Fuels Management Designated Representative, at [kvandam@ebparks.org](mailto:kvandam@ebparks.org).