

MONTHLY BIOLOGICAL MONITORING REPORT

FAIRVIEW PARK Mitigation Project Management and Inspection Costa Mesa, California

Prepared For:

City of Costa Mesa

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Executive Summary

This report has been prepared by Endemic Environmental Service, Inc. (EES) for the City

of Costa Mesa located in Costa Mesa, Orange County, California. This report details the Fairview Park riparian mitigation monitoring according to the contract between EES and City of Costa Mesa. It also includes an overview of any activities at the park including vandalism, trash, erosion, plants and wildlife surveys, nesting bird survey, vernal pools and other activities described below and monitored observations can be found on Table 1.

1. Wetlands Quarterly Biological Reports, grassland and oak woodland

Endemic staff currently remove invasive plants and water planted coast live oaks (*Quercus agrifolia*) located at the 3-acre grassland and oak tree restoration. Oaks are watered three times a week at this time and are showing excellent growth establishment. The grassland has slowly become more native shrubs over time, where California gnatcatchers (*Polioptila californica*) nested in Spring 2018; an indication that the mitigation site is successful in providing habitat for endangered species.

2. On site Project Manager, Implementation of Master Plan and consultation with staff

Part of this task includes participation in meetings with the City of Costa Mesa Staff and contractors that relate to Fairview Park. These inspections were conducted multiple times per week where the following were observed:

Landscape Maintenance

The goal is to detect broad-scale changes in aquatic and riparian ecological conditions by observing selected ecological drivers, stressors, and processes. Specific measurable objectives determine the status and long term trends in selected parameters such as removal of algae, cattail overgrowth and invasive plants from channels that connect ponds. Container plants are growing well and were strategically planted between channel 2 and 3 to avoid illegal trails. This area was impacted by homeless activity and trespassers' trails. These plants include Mexican elderberry (*Sambucus mexicana*), wild rose (*Rosa californica*), Gooseberry (*Ribes californicum*). These species were selected because they become thick understory that is appropriate for the riparian community, but also because they are difficult to get passed. This month has been the start of herbaceous weed germination. There are several areas that contain mustard (*Brassica ssp.*) patches that have been removed. Endemic is also removing invasive perennial plant species such as castor bean (*Ricinus communis*) and pampas grass (*Cortderia selloana*) within and around the surround area to buffer the restoration areas from further invasion.

Erosion and trespassing restoration areas

The objective is to report trail degradation and trespassing in habitat restoration areas and biologically sensitive areas. There are several mountain bike trails that have become an erosion concern within the canyon area. These trails are degrading habitat and could potentially disturb California gnatcatchers that were observed in the area this month.

Vernal pools activity

The objective is to monitor vernal pool conditions, rare plants, overall biodiversity



observations, and any activities that may cause any sort of disturbance to the habitat. This month there were several rain days that precipitated significant rain. However, these events did not provide sufficient water to fill any vernal pools. There is a fence post at Vernal Pool 1 that still remains damaged. However, no impacts have occurred to the vernal pools.

Vandalism

The objective is to report any act involving property damage, such as graffiti and/or property defacement. There are a few small signs of graffiti, which have been reported to City Staff.

Non-native plants removal

This section includes the daily removal of invasive plants in different areas of the park including 3 acres at grassland and oaks and 2 acres within the tarplant habitat. The tasks will be reported on in the daily activities table and quarterly report. Mustard ssp. have started to germinate. There are a few small patches that will be removed. However, the overall restoration has very low non-native plant cover. Our estimation is safely under 5% weed cover.

3. Four seasonal tours

No tours were done at this time.

4. As-need Environmental Studies

EES inspected and investigated concerns related to managing and protecting natural resources and public safety, as directed by the City of Costa Mesa Staff. EES created a map of invasive plants at the wetlands to efficiently plan and manage daily tasks at the wetlands (see **Map 2**), at the bluffs (see **Map 3**) and in the Canyon (see **Map 4**). Additionally, EES is surveying and monitoring avian nest activity throughout the park (see **Map 1**). All maps are updated monthly according to bird activity and weed removal. Endemic coordinates with the City Maintenance Department to monitor and schedule mowing activities, when necessary.

Bird Nest Surveys, Monitoring, and Mitigation Inspections

All avian nests at Fairview Park have been monitored and mapped within the wetlands area during nesting season March through October. The intention is to avoid interference on their reproduction and also maintain compliance with environmental laws and regulations. The last nests observed included one pied-billed grebe nest (*Podilymbus podiceps*) and several nests of the non-native scaly-breasted munia (*Lonchura punctulata*)

Plant and Wildlife Species Surveys

Rare plants and animals were documented during park inspections, which are included in this report. This information provides insight on the locations and general behavior of special status species that aids in the management of the species and overall planning of Fairview Park.



Water Quality

Twice a month EES staff conducts water quality tests at the wetlands to monitor water quality and prevent any future problems. Endemic met with City staff to determine the water quality locations and schedule. Generally, the water quality sampling will take place twice per month in the wetlands areas.

Biomonitoring for Trail Maintenance and Mowing

There was vegetation removed this month. The walking trails within the wetlands restoration project were overgrown with vegetation. There was also a Santa Ana Winds event that felled several willow trees. Some of these felled trees blocked channel maintenance trails (**Figure 10**). These areas were all inspected with the maintenance crew to determine any nesting activity, wildlife presence, and also to explain to not over cut the vegetation. All vegetation was removed within these parameters and no wildlife was harmed.

Daily Tasks at Fairview Park

EES daily tasks include monitoring and reporting on the function of the water pumps, flow of the channels from pond to pond, invasive plant removal, watering plants, clearing algae and report any unusual activities at Fairview Park. Additionally to the regular schedule, EES inspects and reports unusual activities that may occur at Fairview Park. Activities described in **Table 1**. will be updated weekly and reported to the City of Costa Mesa.

Table 1. Daily activities at Fairview Park

Date	Activities/Notes
10/1/2018	<ul style="list-style-type: none">● Algae removal at Pond E● Bird boxes stored and inspected at Pond D (see Appendix 1 - Figure 2)● Watered plants on channel 2● Cleared weirs at Ponds A, B and C● Checked water flow and water pressure on main pump
10/2/2018	<ul style="list-style-type: none">● Algae removal at Channel 2● Cleared weirs at Ponds D and E● Watered Oaks● Checked water flow and water pressure on main pump
10/3/2018	<ul style="list-style-type: none">● Watered oaks and mesa plants● Cleared weirs at Ponds A and B● Algae removal at Channel 3 (see Appendix 1 - Figures 3 and 4)● Cleared all debris on weirs at Pond A● Checked water flow and water pressure on main pump
10/4/2018	<ul style="list-style-type: none">● Removal of Tamarisk on Channel 1 and 2● Pampas grass removal on Channel 1● Watered oaks and mesa● Cattail removal on channel 1



	<ul style="list-style-type: none"> ● Checked water flow and water pressure on main pump
10/5/2018	<ul style="list-style-type: none"> ● Grass and Algae removal between Ponds D and E ● Removal of Mexican milkweed near the oaks ● Watered plants on channel 2 ● Checked water flow and water pressure on main pump
10/8/2018	<ul style="list-style-type: none"> ● Watered plants at mesa and oaks ● Hose repairs for irrigation at mesa ● Fence repair at mesa (see Appendix 1 - Figure 5) ● Checked water flow and water pressure on main pump
10/9/2018	<ul style="list-style-type: none"> ● Watered mesa and oaks ● Weirs clearance at Ponds A and B ● Irrigation repairs near the planted oaks ● Checked water flow and water pressure on main pump
10/10/2018	<ul style="list-style-type: none"> ● Clearing debris and black mustard removal at Mesa ● Black mustard removal near the planted oaks (see Appendix 1 - Figure 6) ● watered plants on channel 2 ● Checked water flow and water pressure on main pump
10/11/2018	<ul style="list-style-type: none"> ● Algae removal on channel connecting Ponds C-D ● Watered oaks and mesa ● Cattail removal on channel 1 (see Appendix 1- Figures 7 and 8) ● Checked water flow and water pressure on main pump
10/12/2018	<ul style="list-style-type: none"> ● Cattail removal on channel 1 ● Watered plants on channel 2 ● Checked water flow and water pressure on main pump
10/15/2018	<ul style="list-style-type: none"> ● Checked water flow and water pressure on main pump (Main pump is off - EES staff turned on the reclaim pump) ● Path/trail clearance due to fallen trees/branches (see Appendix 1 - Figure 9 and 10) ● No watering due to strong winds
10/16/2018	<ul style="list-style-type: none"> ● Spanish sunflower removal at Pond D ● Castor bean removal at Canyon ● Watered oaks and plants at Mesa ● Checked water flow and water pressure on main pump
10/17/2018	<ul style="list-style-type: none"> ● Soil added to the oaks ● Tree tobacco and castor bean removal at the canyon. ● Removal of fallen branches at Channel 1 ● Trail clearance at Channel 2 due to fallen tree ● Checked water flow and water pressure on main pump ● Watered plants at Channel 2
10/18/2018	<ul style="list-style-type: none"> ● Extension of irrigation pipes to oaks (see Appendix 1- Figure 11) ● Irrigation installed near oaks for new restoration area (see Appendix 1 - Figure 12) ● Checked water flow and water pressure on main pump ● Watered oaks and mesa



10/19/2018	<ul style="list-style-type: none"> ● Vegetation removed taken to city yard ● Watered plants on channel 2 ● Irrigation repairs at Mesa ● Checked water flow and water pressure on main pump
10/22/2018	<ul style="list-style-type: none"> ● Removal of fallen trees (see Appendix 1- Figure 13) ● Cleared weirs at Pond B (see Appendix 1- Figure 14) ● Watered oaks and plants at mesa ● Checked water flow and water pressure on main pump ● Tamarix removal between channel 1 and 2 (see Appendix 1- Figure 15)
10/23/2018	<ul style="list-style-type: none"> ● Tamarix removal between Pond B and channel 1 ● Pampas grass removal at Channel 2 ● Cattail removal at Pond A ● Checked water flow and water pressure on main pump ● Watered plants at Channel 2
10/24/2018	<ul style="list-style-type: none"> ● Removal of branches ● Watered oaks and plants at mesa ● Cattail removal at Pond E ● Checked water flow and Main pump is on
10/25/2018	<ul style="list-style-type: none"> ● Watered plants at Channel 2 ● Checked water flow and water pressure on main pump ● Dead Gopher snake at parking lot (see Appendix 1- Figure 16)
10/26/2018	<ul style="list-style-type: none"> ● Watered oaks and plants at mesa ● Checked water flow and water pressure on main pump. Reclaim pump is off ● Cattails removal from Pond E
10/29/2018	<ul style="list-style-type: none"> ● Watered oaks and plants at mesa ● Checked water flow and water pressure on main pump ● Removal of fallen branches from oak tree at mesa (see Appendix 1- Figure 17)
10/30/2018	<ul style="list-style-type: none"> ● Watered plants at Channel 2 ● Checked water flow and water pressure on main pump ● Removal of fallen willow tree at Pond F (see Appendix 1- Figure 18)
10/31/2018	<ul style="list-style-type: none"> ● Watered oaks and plants at mesa ● Checked water flow and water pressure on main pump ● Black mustard removal at mesa and canyon (see Appendix 1- Figures 19 and 20) ● Unsafe trail at the Canyon (due to intense erosion after the rain, the trail shown on Appendix 1- Figures 21 and 22 is dangerous to visitors and it is recommended to permanently close this illegal trail.



APPENDIX 1 – Photos



Figure 1. Container plants at Channel 2



Figure 2. Removal of bird boxes



Figure 3. Algae removal at channel 3(Before)



Figure 4. Algae removal at channel 3 (After)





Figure 5. Fence repair at Mesa



Figure 6. Removal of Black mustard



Figure 7. Cattail removal on channel 1 (Before)



Figure 8. Cattail removal on channel 1 (After)



Figure 9. Path clearance- Fallen trees



Figure 10. Path clearance- Fallen trees





Figure 11. Extension of irrigation to planted oaks



Figure 12. New restoration area - Irrigation



Figure 13. Removal of fallen trees



Figure 14. Clearing weirs at Pond B





Figure 15. Tamarix removal



Figure 16. Dead gopher snake at Parking lot



Figure 17. Removal of oak tree branches at Mesa



Figure 18. Fallen tree removal



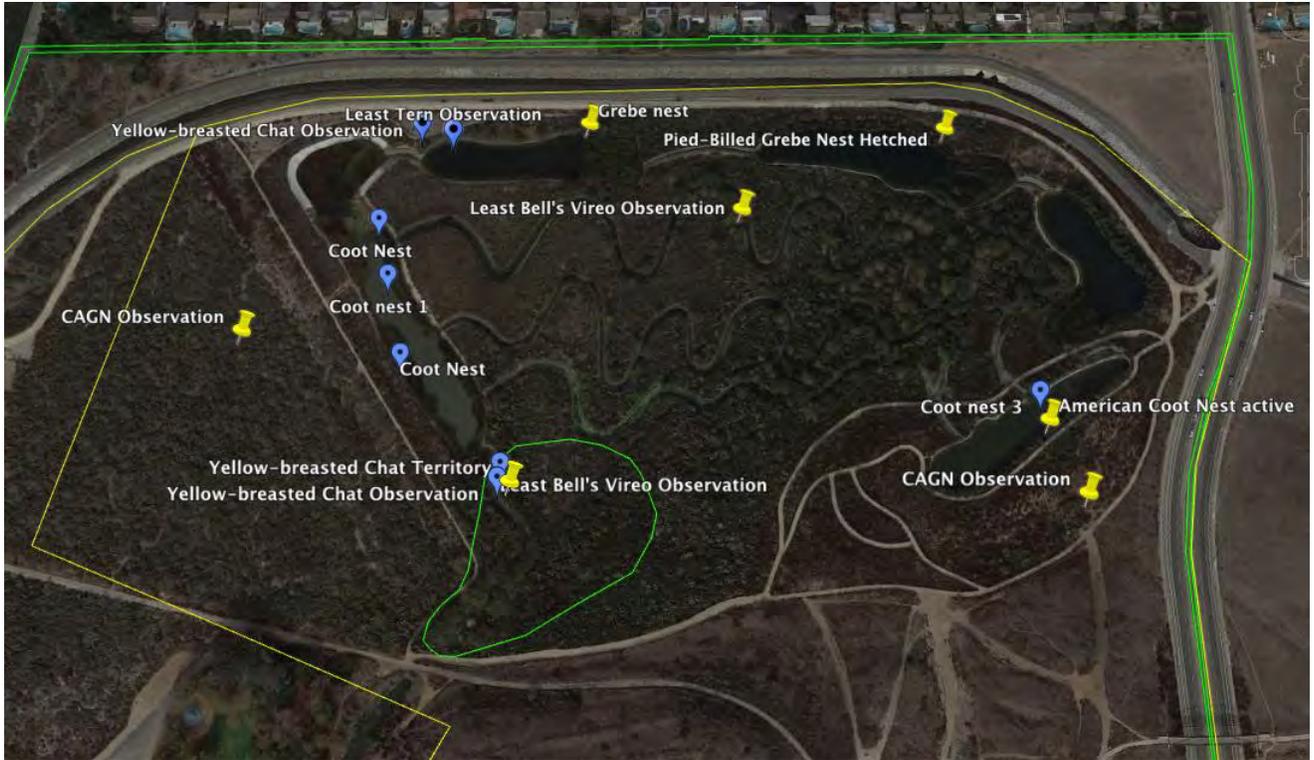


Figure 19 & 20. Black mustard removal at Mesa and Canyon (Before and After)



Figure 21 & 22. Unsafe trail at the Canyon - See Table 1 10/31/18 for recommendations.





Map 1. Avian nest activity at Fairview Park in October, 2018



Invasive Plant Map: Wetlands 10/29/18



Map 2. Invasive Plants at wetlands - Fairview Park



Invasive Plant Map: Bluffs 10/29/18

Species

- Castor Bean (48)
- Tree Tobacco (41)
- Arundo (5)
- Tree Tobacco Patch



Map 3. Invasive Plants at Bluffs - Fairview Park



Invasive Plants: Canyon 10/29/18

Tree Tobacco

● Removed Plants

Castor Bean

● Removed Plants



Map 4. Invasive Plants at Canyon - Fairview Park



Invasive Plant Summary: October 2018

Canyon

Species	Quantity	Removed
Castor Bean	27	27
Tree Tobacco	18	18

Wetlands

Species	Quantity	Removed
Tree Tobacco	11	N/A
Tamarisk	3	N/A
Mustard	0.5 acres	N/A
Spanish Sunflower	0.05 acres	N/A
Pampas Grass	2	N/A

Bluffs

Species	Quantity	Removed
Castor Bean	48	N/A
Tree Tobacco	41	N/A
Arundo	5 patches	N/A

