

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.

1. Wetlands Quarterly Biological Reports, grassland and oak woodland

Oaks are watered daily at this time. A quarterly report will be submitted in September.

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. Fairview Park inspections are conducted multiple times per week where the following are observed:

Riparian mitigation monitoring

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 and invasive plants from channels that connect ponds.

Vandalism

Any act involving property damage, such as graffiti and/or property defacement. There is a homeless encampment within the wetland (See Appendix 1 **Map 4** for homeless encampment location)

Trash

Report illegally dumped trash or garbage at all areas of the park.

Erosion

Report of trail degradation in order to reduce aquatic system disturbance for vernal pools, excessive muddy trails, widening of trails and creation of undesired trails.



Vernal pools activity

Monitor vernal pools conditions, rare plants, overall biodiversity and any activities that may cause any sort of disturbance to the habitat. Endemic is coordinating with the City to clear invasive plants near Vernal Pool 4.

3. Maintenance Services for grassland and tarplant

This section includes the removal of invasive plants in different areas of the park that will be reported on in the daily activities table (see **Table 1**).

4. Quarterly Maintenance Services for wetland ponds and channels

Endemic staff currently remove algae almost daily in the wetlands to reduce mosquito habitat and maintain water flow.

5. Four seasonal tours

No tours were done at this time.

6. As-need Environmental Studies

EES inspects and investigates 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**) and at the bluffs (see **Map 3**). Additionally, EES is surveying and monitoring avian nest activity throughout the park (see **Map 1**). Map 1 and 2 are updated monthly according to bird activity and weed removal. Endemic is working with the City Maintenance Department to coordinate mowing activities.

Bird Nest Surveys, Monitoring, and Mitigation Inspections

All avian nests at Fairview Park have been monitored and mapped within the wetlands area. The intention is to avoid interference on their reproduction and also maintain compliance with environmental laws and regulations.

Plant and Wildlife Species Surveys

Rare plants and animals are documented during park inspections, which are included in this report. This information will provide insight on the locations and general behavior of special status species that will aid in the management of the species and overall planning of Fairview Park in context of the Fairview Park Master Plan.



Biomonitoring for Trail Maintenance and Mowing

Trail maintenance work was performed at Fairview Park during the period of 08/13 through 08/23. Notes were taken by EES staff and reported in **Table 2** of this monthly report. Before any trail maintenance or mowing services start at Fairview Park, a Biologist will provide a biomonitoring survey to inspect the area carefully before begin the operation. For path maintenance and clearance around Ponds at wetlands at Fairview Park, some rules will take place such as, trimming within a three foot buffer near the water edge; species of Cottonwood sapling will be avoided as well as more prominent willows; areas where willow was thick, an entrance corridor was cleared to allow access to the water; and large overhanging willow branches were left uncut to provide habitat.

For larger areas and sensitive habitats such as areas of native plants, dense brush, stream sides and stands of trees, a EES trained biologist will conduct a plant and bird survey before and during the operation. All work that has the potential to disturb or destroy the nest should cease in the immediate vicinity.

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 inspect and report unusual activities that may occur at Fairview Park. Activities described in **Table 1**, below, will be updated weekly and reported to the City of Costa Mesa.

Table 1. Daily activities at Fairview Park

Date	Activities/Notes
8/1/2018	<ul style="list-style-type: none">● Cleared algae Channel 1● Water Oaks and Mesa Plants
8/2/2018	<ul style="list-style-type: none">● Watered Oaks● Cleared algae weir Pond B to C
8/3/2018	<ul style="list-style-type: none">● Main pump turned on● Arroyo willow (<i>Salix lasiolepis</i>) branch broke and fell into channel 1 (see Appendix 1 - Photo 1)● Water Oaks● Watered plants on channel 2
8/6/2018	<ul style="list-style-type: none">● Cleared algae on channel 1● Watered Oaks and Mesa



8/7/2018	<ul style="list-style-type: none"> ● Dead Mullet (<i>Mugil cephalus</i>) found at Pond B (see Appendix 1 - Photo 2) ● Channel at pond D partially blocked to control water flow (see Appendix 1 - Photo 3) ● Water overflowing to Talbert (Pump turned down to reduce water flow) (see Appendix 1 - Photos 4 and 5) ● Reclaim water pump turned off
8/8/2018	<ul style="list-style-type: none"> ● Watered elderberries (<i>Sambucus nigra ssp. caerulea</i>) in Channel 1 ● Vandalism at the Willow saplings (<i>Salix lasiolepis</i>) (see Appendix 1 - Photo 6) ● Algae removed from Channel 3 (see Appendix 1 - Photos 7 and 8) ● Watered oaks
8/9/2018	<ul style="list-style-type: none"> ● Watered Oaks ● Cleared algae at weir A to B ● Cleared algae at Channel 3
8/10/2018	<ul style="list-style-type: none"> ● Watered Oaks ● Watered plants of channel 2 ● Flagged native plants at East side Fairview Park (see Appendix 1 - Photo 9)
8/13/2018	<ul style="list-style-type: none"> ● Boat used to clear 125 dead fish and on Pond A (see Appendix 1 - Photos 10 and 11) ● Water levels low at Pond E due to main pump low intensity (Reclaim pump turned on to increase water flow) ● Kids fishing at Pond B (They were asked to leave) ● Watered Oaks
8/14/2018	<ul style="list-style-type: none"> ● Watered Oaks ● Injured Mallard (<i>Anas platyrhynchos</i>) at Pond A (see Appendix 1 - Photo 12) ● Salinity test ranging from 8.97-9.54ppt in Pond A ● Flagged native plants at East side Fairview Park for avoidance when mowing
8/15/2018	<ul style="list-style-type: none"> ● Algae cleared from Channel 1 and 3 (see Appendix 1 - Photos 14 and 15) ● Watered oaks ● Water overflowing to Talbert (Reclaim pump was turned off) ● Leak at irrigation line at the oaks fixed
8/16/2018	<ul style="list-style-type: none"> ● Watered oaks ● Cleared Algae channel 2 and weir Pond C to D (see Appendix 1 - Photos 16 and 17)



8/17/2018	<ul style="list-style-type: none"> • Watered oaks • Boat used to clear 77 dead fish (see Appendix 1 - Photo 18) • Mallard found dead at Pond B (see Appendix 1 - Photo 19)
8/20/2018	<ul style="list-style-type: none"> • Turned on Reclaim pump • Cleared accumulation of algae on Pond E • Watered Oaks
8/21/2018	<ul style="list-style-type: none"> • Watered plants on Channel 2 • Watered Oaks • Checked pumps and water flow
8/22/2018	<ul style="list-style-type: none"> • Boat use to clear dead fish at Pond B • Watered oaks
8/23/2018	<ul style="list-style-type: none"> • Cleared channel 3 • Cleared weir at Pond B (see Appendix 1 - Photo 20)
8/24/2018	<ul style="list-style-type: none"> • Birds' nest clearance survey at East Side of Fairview Park • Watered oaks • Cleared channels 1 and 3
8/27/2018	<ul style="list-style-type: none"> • Watered Oaks • Cleared algae on Channel 2 • Mowing East side monitoring
8/28/2018	<ul style="list-style-type: none"> • Dead Crayfish in the weirs from Pond B to C and C to D • Watered Oaks • Cleared algae on channel 1 • Mowing east side monitoring
8/29/2018	<ul style="list-style-type: none"> • Cleared weir at pond E (see Appendix 1 - Photos 21 and 22) • Watered oaks • Mapping Bees colony at the wetlands (see Appendix 1 - Map 5) • Mowing east side monitoring
8/30/2018	<ul style="list-style-type: none"> • Watered oaks • Watered plants on channel 2 • Cleared weirs to improve water flow • Mapping illegal homeless encampment (see Appendix 1 - Map 4) • Mowing east side monitoring
8/31/2018	<ul style="list-style-type: none"> • Watered oaks • Cleared algae on Pond E and D



Table 2. Trail Maintenance Activity

During the period of 8/13/2018 to 8/23/2018 there was a trail maintenance operation at the wetlands where a trained EES Biologist conducted a plant and bird survey before and during the operation to avoid any wildlife disturbance.

8/13/2018	<ul style="list-style-type: none"> ● Clearing path at Pond D was halted due to western grebe nest (<i>Aechmophorus occidentalis</i>) ● Clearing path at Pond B and C only occurred on the trail side to avoid the least Bell's vireo (<i>Vireo bellii</i>) (LBVI) territory ● Clearing path at Pond A started and will continue on 8/15/18 ● Clearing path at Pond E limited due to the American coot nest (<i>Fulica americana</i>) and LBVI territory
8/15/2018	<ul style="list-style-type: none"> ● Biomonitoring of all ponds for nesting and roosting birds. ● Active coot's nest at Pond D ● Western grebe found sitting on the nest at Pond D
8/16/2018	<ul style="list-style-type: none"> ● Trail cutting along the trail around Pond A (see Appendix 1 - Photo 23) ● Biomonitoring conducted of all ponds for nesting and roosting birds.
8/17/2018	<ul style="list-style-type: none"> ● Biomonitoring conducted of all ponds for nesting and roosting birds. ● Trail cutting between Pond A and B
8/20/2018	<ul style="list-style-type: none"> ● Trail cutting along the bluffs and moved to bike trail (see Appendix 1 - Photo 24) ● Biomonitoring conducted of all ponds for nesting and roosting birds.
8/21/2018	<ul style="list-style-type: none"> ● Continued cutting along the bike trail and curved around the trail on the back of Pond E. ● Biomonitoring conducted of all ponds for nesting and roosting birds.
8/23/2018	<ul style="list-style-type: none"> ● Trimmed along bike path south of Pond A. ● Shrubs were inspected prior to trimming for active birds nest and coastal California gnatcatcher (<i>Polioptila californica californica</i>) (CAGN). ● No active birds nests were observed. ● CAGN were heard from the area but were not in areas where trimming activities occurred.



APPENDIX 1 – Photos



Photo 1. Willow branch on Channel 1



Photo 2. Dead Mullet found in Pond B



Photo 3. Weir partially blocked at Pond D



Photo 4. Water overflowing on trails at Talbert Park





Photo 5. Water overflowing on trails at Talbert Park



Photo 6. Vandalism at willow saplings



Photo 7. Algae removal Channel 3- Before

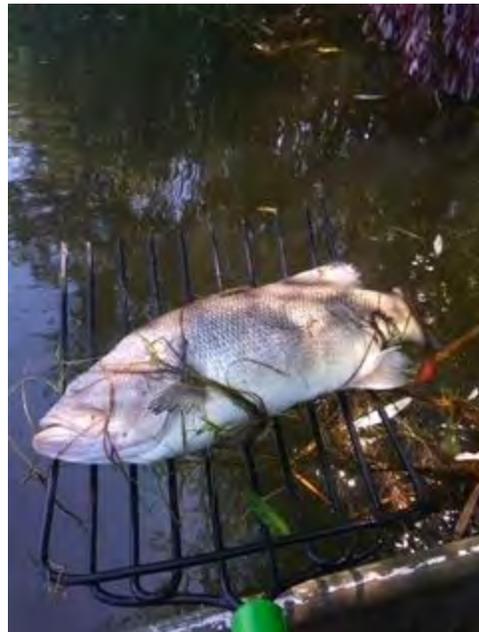


Photo 8. Algae removal Channel 3 - After



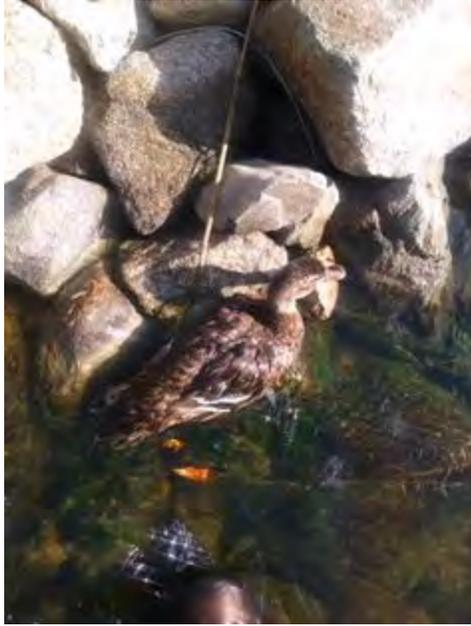


Photo 9. Native Plants flagged on East side of Fairview Park



Photos 10 and 11. Dead Fish removed from Pond A and B





Photos 12. Injured duck at Pond A



Photos 13. Algae removal Channel 1- Before



Photos 14. Algae removal Channel 1- After



Photos 15. Algae removal Channel 3- Before



Photos 16. Algae removal Channel 3- After





Photo 17. Dead fish found in Pond B.



Photo 18. Boat use to clear dead fish and algae



Photo 19. Dead Mallard (*Anas platyrhynchos*)



Photo 20. Cleared weir at Pond B





Photo 21. Before Clearing algae Pond E.



Photo 22. After Clearing algae Pond E.

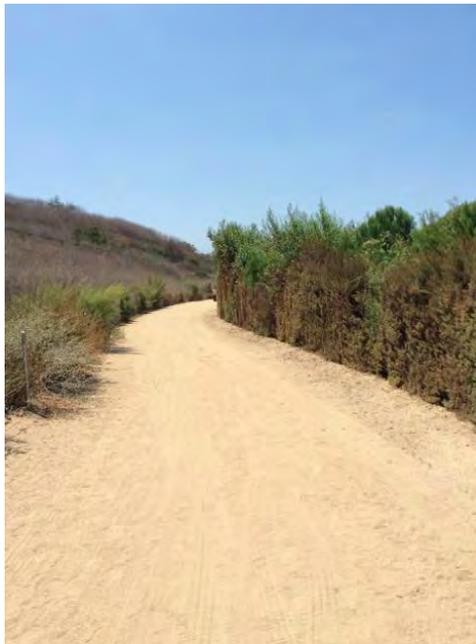


Photo 23. Trail clearing around Pond A.



Photo 24. Trail clearing at Bike path





Map 1. Birds' nests locations at Fairview Park. Blue pins indicating new nests mapped during the month of July and August; Yellow pins mapped since the beginning of nesting season.



Invasive Plant Map: Bluffs 8/30/18

Species

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

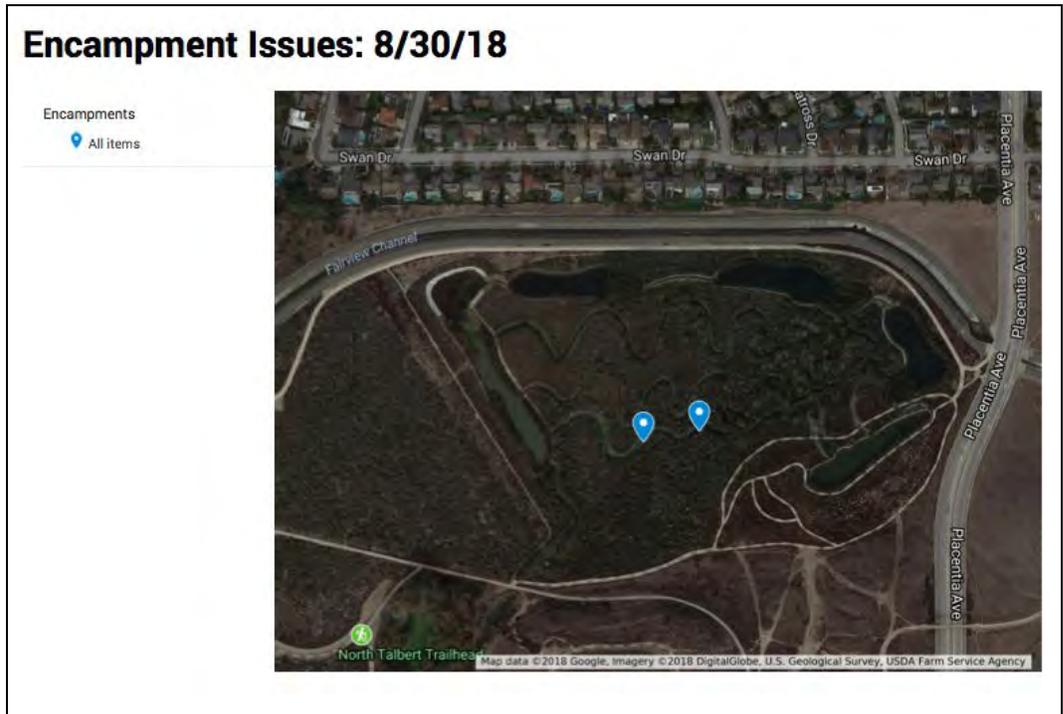


Map 2. Invasive Plants at the Bluffs - Fairview Park





Map 3. Invasive Plants at wetlands - Fairview Park



Map 4. Illegal homeless encampment - Wetlands Fairview Park





Map 5. Bee hive - Wetlands Fairview Park

