



Quarterly Report to Environmental Enhancement Committee: 4th Quarter, 2019 (October-December)

Active Projects:

1. Morro Dunes Natural Preserve Restoration, Los Osos, CA
2. Restoration of Priority Freshwater Wetlands for Endangered Species, Consumnes River Preserve
3. Año Nuevo Island Seabird Habitat Enhancement Project
4. Baker Creek Streamflow and Habitat Enhancement Project, Inyo County
5. Restoration of ecosystem functions to benefit threatened and endangered amphibians at Elkhorn Slough, Elkhorn Slough Preserve.
6. Restoring Coastal Dune Ecosystem Health and Resilience at Salinas River State Beach, Monterey, CA

Completed Projects

1. Point Arena II Resource Lands Conservation, by The Trust for Public Land (September 2013)
2. McDaniel Slough, Arcata (June 2014)
3. Pioneering and Innovative Oyster Restoration at Elkhorn Slough (August 2014)
4. Sears Point Tidal Restoration Project (October 2015)
5. Sonoma Creek Tidal Marsh Enhancement Project (June 2016)
6. Dune Restoration at Morro Strand State Beach (June 2016)
7. Community Based Restoration on the Fort Ord Dunes State Park (September 2016)
8. Complete Restoration of Point Reyes North Great Beach Critical Dune Habitat (January 2017)
9. Restoration of Salt Marsh-Upland Transition, Tijuana Slough National Wildlife Refuge (January 2017)
10. Restoration of Coastal Native Plant Communities & Seabird Habitat, Santa Cruz CA (2018)
11. Habitat Restoration of Coastal Strand, Dune, and Lagoon Ecosystems; Manchester SP (February 2020)

Active Projects

The following grants are currently being funded from the EEF, with a brief update for each:

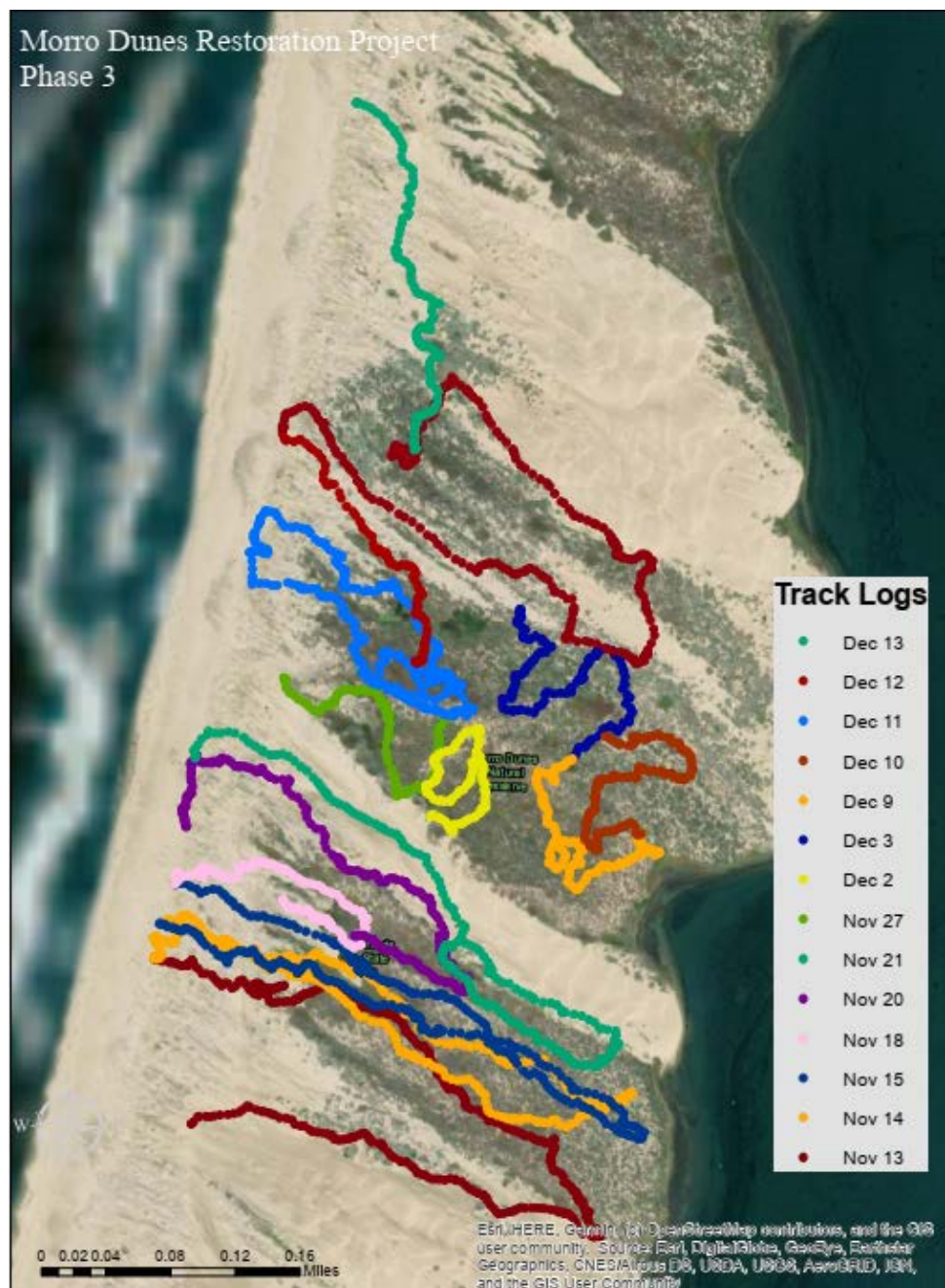
1. Morro Dunes Natural Preserve Restoration, Los Osos, CA.

- **Grantee:** California Department of Parks and Restoration
- **Term:** 07/21/2017 – 06/30/2020
- **Dollar amount authorized by EEC:** \$180,000.00
- **Invoiced to date:** \$0
- **Work completed:** Determination of monitoring plots, mapping of treatment areas, dune stabilization, contracting, initial and follow up herbicide treatments.
- **More information available at:** Request treatment maps and contracts from Daniel Orr

4th Quarter Update:

Since the last report the third and final phase of herbicide treatments occurred. Active work is now complete, and the project proponent expects to invoice for all work and provide a final report by June 2020.

Map to Right: Track Lines from November and December 2019 Phase 3 herbicide treatments



2. Restoration of Priority Freshwater Wetlands for Endangered Species, Cosumnes River Preserve

- **Grantee:** California Department of Parks and Restoration
- **Term:** 09/20/2017 – 06/30/2020
- **Dollar amount authorized by EEC:** \$89,900.00
- **Invoiced to date:** \$87,622.81
- **Work completed:** Project design, baseline monitoring, permit applications, contracting, tree planting, construction, and invasive species control.
- **More information available at:** Request full quarterly update and baseline reports from Daniel Orr

4th Quarter Update: The construction phase is complete, invasive species treatments are ongoing, and the project is on schedule. During this quarter post-project surveys were conducted. The wetland restoration site remains largely devoid of vegetation except for small amounts of cocklebur, watergrass and smartweed. Revegetation is expected to continue gradually. Increased post summer depths at the site have increased perennial habitat areas as demonstrated by November fyke net captures that included eight species of fish. Additional weed treatments are planned for August to September 2020 to include 15 to 30 acres of lakebed and South fork of Badger Creek. Native tree plantings are planned for Spring 2020 with irrigation in summer to follow.



Photo above: The Horseshoe Lake restoration site on November 6, 2019. This photo was taken just two weeks before the 10-acre pond (on the right) reached its lowest depth for 2019 at 1.15 feet.

Photo below: BLM Wildlife Biologist, Mark Ackerman, holding a crappie caught during the November 2019 quarterly survey.



3. **Baker Creek Streamflow and Habitat Enhancement Project,**

- **Grantee:** Sanctuary Forest Inc.
- **Term:** 09/01/2019-06/30/2022
- **Dollar amount authorized by EEC:** \$203,683.10
- **Invoiced to date:** \$0.00
- **Work Completed:** Hydrological studies and final plan modifications. Because native clay was not present in some anticipated pond locations project deliverables were modified to include installation of an underground restrictive layer down stream of installed ponds. This will reduce the number of created ponds by one but expand the amount of seasonal wetland and native plants. Project implementation will begin starting in July 2020
- **Further Information:** None available at this time.

4. Año Nuevo Island Seabird Habitat Enhancement Project, Santa Cruz

- **Grantee:** Oikonos Ecosystem Knowledge
- **Term:** 09/01/2019-06/30/2022
- **Dollar amount authorized by EEC:** \$69,796.00
- **Invoiced to date:** \$27,722.62
- **Work Completed:** Project planning, transportation of materials to island, construction.
- **Further information:** Visit Oikonos website for illustrated stories and updates on past Año Nuevo Island work
<http://oikonos.org/ano-nuevo-island/>

4th Quarter Update: Work this quarter focused on installation of habitat enhancement and protection platforms (HEAPs), installation of erosion control mats, and construction of a rainwater catchment system for watering of native plantings. 25 HEAPs were constructed, and camera traps were installed for monitoring their use.

Photo to right: Brown Pelican roosting on a HEAP. **Photo below:** UC Santa Cruz volunteers installing erosion control material.



5. **Restoration of Ecosystem Functions to Benefit Threatened and Endangered Amphibians at Elkhorn Slough, Moss Landing**

- **Grantee:** Elkhorn Slough Foundation
- **Term:** 09/01/2019-06/30/2022
- **Dollar amount authorized by EEC:** \$166,524.05
- **Invoiced to date:** \$20,760.75
- **Work Completed:** Contracting, tide gate repair, brush clearance and initial eucalyptus removal.
- **Further information:** Request full reports from Daniel Orr

4th Quarter Update: Tide gate repairs were completed in December 2019 allowing gradual restoration of freshwater salinities to lower cattail pond to begin. **Picture to right:** Lower Cattail water control structure after successful repairs.

California Conservation Corps felled approximately 10 eucalyptus trees in the uplands above cattail ponds and cleared weedy understory brush in preparation for larger scale woodland restoration to be to occur in 2021.



Photo above: Elkhorn Slough staff and California Conservation Corps begin preliminary removal of eucalyptus trees from woodland adjacent to Cattail ponds.

6. **Restoring Coastal Dune Ecosystem Health and Resilience at Salina River State Beach, Moss Landing**

- **Grantee:** Coastal Conservation and Research, Inc.

- **Term:** 09/27/2019-06/30/2022
- **Dollar amount authorized by EEC:** \$104,892.85+
- **Invoiced to date:** \$10,404.92
- **Work Completed:** Subcontracting, pre-project monitoring, native plant propagation, and invasive species treatments
- **Further information:**

4th Quarter Update: Work is underway, staff established transects and conducted pre-restoration vegetation surveys within the 20-acre project site. Propagation of 2,000-4,000 native plants for this project year is underway. State parks is preparing their greenhouse to propagate approximately 5,000 additional plants for the dune restoration project. In the 4th quarter subcontractors conducted the first herbicide applications.



Photo above left: Vegetation transect with high percent cover of invasive ice plant. **Photo above right:** staff conducting pre-restoration surveys in November 2019.

Completed Projects

- 1) Point Arena II Resource Lands Conservation
- 2) McDaniel Slough Tidal Restoration
- 3) Pioneering and Innovative Oyster Restoration at Elkhorn Slough
- 4) Sears Point Tidal Restoration Project
- 5) Sonoma Creek Tidal Marsh Enhancement Project
- 6) Dune Restoration at Morro Strand State Beach
- 7) Community Based Restoration on the Fort Ord Dunes State Park
- 8) Restoration of Point Reyes North Great Beach Critical Dune Habitat
- 9) Restoration of Salt-Marsh-Upland Transition, Tijuana Slough National Wildlife Refuge
- 10) Restoration of Coastal Native Plant Communities & Seabird Habitat, Santa Cruz CA