EcoAtlas and CRAM: Online Resource Management Support Tools

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SFEI, on behalf of the Wetland Monitoring Workgroup is releasing a series of technology tools to help with aquatic resource protection and management. “These new online tools will empower Californians to access information about the value and health of their wetlands,” said U.S. Environmental Protection Agency Regional Administrator Jared Blumenfeld. “The release of the Wetlands Portal and EcoAtlas represents a multi-agency collaborative effort to inform the public and support better aquatic resource management.”

These versatile, statewide tools will help a range of users: the public can learn about wetlands and wetlands protection, resource managers can find information needed to make key decisions, and scientists will have a new critical resource for studying wetland ecosystems. Furthermore, the new tools mutually enhance one another.

**EcoAtlas**

Lets users integrate data and information about aquatic resources and the factors that influence them. More below...

**Water Quality**

Information for the public about wetland health. More below...

**CRAM**

Revamped website for the California Rapid Assessment method for wetland health. Data entry, training information, and field books. More below...

**CARI**

A new base map of streams, rivers, and wetlands throughout the state. More below...
Visualize condition and extent of California’s aquatic resources

www.ecoatlas.org
Standard method for assessing wetland condition
California Aquatic Resources Inventory (CARI)

Standardized statewide map of wetlands, streams and riparian areas
Key Features of EcoAtlas

→ Interactive maps
→ Custom tools
→ Project tracking tools
Interactive Maps

→ Customize map views

→ Data layers:
  • Aquatic resources
  • Wetland restoration projects
  • Wetland condition
  • Water and sediment toxicity
At this location

Wetland Condition (CRAM)

Sindlich Pond
Wetland Type: perennial/seasonal
depressional
AA Category: study - project
Visit Date: 2012-07-10
CRAM Version: 6.1
Index Score: 81

Attribute & Metric Scores
Different lenses through which to see the data
California Natural Diversity Database (CNDDB)

Data are available at the 7.5’ Quadrangle and County level only.

The Landscape Profile tool uses publicly available California Natural Diversity Database data on the status and locations of rare plants and animals in California. All special status species from quadrangles that overlap with the defined landscape are reported, although the species reported may not necessarily inhabit the area of overlap. CNDDB data are updated monthly and data reported represent what was available at the last update.

CNDDB is a collection of positive sighting data that constitute the most complete set of information available on the State’s declining and/or vulnerable taxa. The data sources for CNDDB are comprised of one or more of the following: museum and herbarium specimens, published literature sources with location data, field survey data submitted to CNDDB, and data from unpublished "gray" literature such as contracted reports. CNDDB is not an exhaustive and comprehensive inventory of all rare species and natural communities statewide. CNDDB concentrates its work on areas with active Natural Community Conservation Plans or Habitat Conservation Plans, as well as high priority areas identified by the California Department of Fish and Wildlife and other biologists. No inference can be made regarding lands that have not been surveyed, and it is never appropriate to conclude that an area contains no rare taxa based on the CNDDB data.

For more information on CNDDB and to download the data: http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp.

Last update: Monthly
Custom Tools

→ Landscape Profile tool & report

→ Query/download data
  • Wetland restoration projects
  • Wetland condition (CRAM)
Landscape Profiles

Auto-delineated basin by StreamStats

Delineate Basins using USGS Streamstats Web Service?

- Yes
- No

How To

Clicking No will clear existing basins.

Draw your area of interest

Pre-defined areas
Landscape Profile

User Defined Area
Area: 249,972.2 acres / 390.58 sq mi

California Aquatic Resource Inventory

Estuarine and Marine Wetlands: 61,708 acres

- Pond: 34.1%
- Subtidal Water: 22%
- Tidal Flat and Marsh Panne: 30.3%
- Tidal Marsh: 2.2%
- Tidal Channel: 0.0%
Landscape Profile

Palustrine and Riverine Wetlands: 9,296 acres

- Playa: 45.5%
- Pond and associated vegetation: 32%
- Lake, Reservoir and...: 1.5%
- Fluvial Channel: 4.5%
- Vernal Pool: 1.5%
- Slope and Seep Wet...

Drainage Features / Streams: 1,657 miles
- Fluvial: 1,132 miles
- Tidal: 524 miles
Landscape Profile

- Wetland Restoration Projects (55)

1. Pond 3
2. Pond A4
3. Ravenswood Triangle
4. San Leandro Shoreline Marshlands Enhancement Project
5. Plummer Creek Wetlands Restoration Mitigation Project
6. Pond A18
7. South Bay Salt Pond Restoration Project
8. Tasman Corridor Light Rail Transit Mitigation Project
9. Triangle Marsh, Refuge Entry
10. Triangle Marsh at Hayward Shoreline
11. Stevens Creek Tidal Marsh
12. Sunnyvale Baylands Park
13. Bayside Business Park - Phase II
14. Bayside Business Park - Phase I
15. Wax Creek Basin
Landscape Profile

- Census 2010 Estimates
  - Population: 1,240,019 persons
  - Population Density: 3,240 persons per sq mile
  - Housing Units: 425,256 units
  - Housing Units Density: 1,111 units per sq mile

- CNDDB Species Information

  CNDDB Species Information:
  Your area of interest may contain the following state and federally listed species. This data summary is provided for informational purposes only and is based on coarse scale data (7.5 quad scale). You can refer to the CNDDB web site for more information.

  + Federally Listed Species
  + California Listed Species
This Landscape Profile is a compilation of data and information relevant to management of natural resources -- especially streams, wetlands, and open water features. The summary includes aquatic resource extent, wetland condition (based on the California Rapid Assessment Method), wetland restoration activity, and land use and census information. Data are provided from multiple sources as documented on the data page of EcoAtlas. The summary has been generated based on your chosen area of interest.

**Detailed location**

**Regional location**

Basemap data provided by 
© OpenStreetMap

**Area of Interest:**
- Generated by user-defined delineation
- Area: 249,972.2 acres / 390.58 sq miles
- Overlapping regions:
  - Ecoregion: Bay/Delta
California Aquatic Resource Inventory - Existing Aquatic Resources

The California Aquatic Resource Inventory (CARI) is a standardized statewide map of wetlands, streams, and riparian areas. CARI v0 is a compilation of multiple data sources to produce seamless coverage across the state. Datasets used in CARI v0 include the National Wetland Inventory (USFWS), National Hydrography Dataset (USGS), and regional intensified maps. The effort to stitch together a statewide dataset from multiple sources is largely a classification crosswalk exercise. Due to this there may be errors in classification of the features or boundaries of wetland extent in CARI v0. This is particularly an issue with depressional features or freshwater ponds and marshes. The CARI map is not intended for regulatory purposes and does not serve as a jurisdictional delineation. Efforts to correct both spatial accuracy and classification errors will be addressed in CARI v1. Please provide comments or corrections (including screen shot or lat/longs) to CARImapping@sfei.org.

CARI Summary Statistics

Total Area of Wetlands: 71,004 acres

- Estuarine and Marine: 61,708 acres
- Palustrine and Riverine: 9,296 acres

Total Length of Drainage Features: 1,657 miles

- Length of Fluvial Features: 1,132 miles
- Length of Tidal Features: 524 miles

Acres of Estuarine and Marine Wetlands

- Pond: 21,025 acres
- Subtidal Water: 18,703 acres
- Tidal Rat and Marsh Panne: 13,601 acres
- Tidal Marsh: 8,153 acres
- Tidal Channel: 231 acres
- Managed and Muted Tidal Habitats: No features
- Beach, Dune, and Rocky Shore: No features

Acres of Palustrine and Riverine Wetlands

- Playa: 4,231 acres
California Rapid Assessment Method for Wetlands

CRAM is a cost-effective and scientifically defensible rapid assessment method for monitoring the conditions of wetlands throughout California. It is designed for assessing ambient conditions within watersheds, regions, and throughout the State. It can also be used to assess the performance of compensatory mitigation projects and restoration projects. More information is available at cramwetlands.org.

**Number of CRAM assessments in the profiled region:** 80

**CRAM Scores by Wetland Type**

<table>
<thead>
<tr>
<th>Wetland Type</th>
<th>Score</th>
<th>Min</th>
<th>Avg</th>
<th>Max</th>
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</thead>
<tbody>
<tr>
<td>depressional (2)</td>
<td>Index</td>
<td>53</td>
<td>57</td>
<td>61</td>
</tr>
<tr>
<td>Buffer &amp; Landscape Context</td>
<td>42</td>
<td>46</td>
<td>50</td>
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<tr>
<td>Hydrology</td>
<td>50</td>
<td>58</td>
<td>66</td>
<td></td>
</tr>
<tr>
<td>Biotic Structure</td>
<td>69</td>
<td>74</td>
<td>77</td>
<td></td>
</tr>
<tr>
<td>Physical Structure</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>estuarine (24)</td>
<td>Index</td>
<td>62</td>
<td>74</td>
<td>86</td>
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<tr>
<td>Buffer &amp; Landscape Context</td>
<td>71</td>
<td>87</td>
<td>100</td>
<td></td>
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<tr>
<td>Hydrology</td>
<td>50</td>
<td>72</td>
<td>92</td>
<td></td>
</tr>
<tr>
<td>Biotic Structure</td>
<td>41</td>
<td>69</td>
<td>94</td>
<td></td>
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<tr>
<td>Physical Structure</td>
<td>38</td>
<td>67</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>riverine (54)</td>
<td>Index</td>
<td>36</td>
<td>65</td>
<td>85</td>
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<tr>
<td>Buffer &amp; Landscape Context</td>
<td>25</td>
<td>64</td>
<td>85</td>
<td></td>
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<tr>
<td>Hydrology</td>
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<td>Biotic Structure</td>
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<td>94</td>
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</tr>
<tr>
<td>Physical Structure</td>
<td>25</td>
<td>59</td>
<td>88</td>
<td></td>
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</tbody>
</table>

**Most Recent CRAM Assessments in Profiled Region**

*See Appendix A at end of report for the complete list*
Project Tracking Tools

→ Categorized by ecoregion and Water Board
→ Project information pages
→ Mapped project polygon
→ Files/links repository
## Wetland Projects

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Status</th>
<th>County</th>
<th>Total Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALBA wetland restoration</td>
<td>Construction completed</td>
<td>Monterey</td>
<td>39</td>
</tr>
<tr>
<td>Andrew Molera State Park Big Sur Riparian Restoration</td>
<td>Construction completed</td>
<td>Monterey</td>
<td>100</td>
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<tr>
<td>Ano Nuevo State Park</td>
<td>Construction completed</td>
<td>Santa Cruz</td>
<td>0.75</td>
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<td>Arana Creek Restoration Project</td>
<td>Construction completed</td>
<td>Santa Cruz</td>
<td>10</td>
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<tr>
<td>Arroyo Burro Estuary</td>
<td>Construction completed</td>
<td>Santa Barbara</td>
<td>2.5</td>
</tr>
<tr>
<td>Arroyo Hondo Culvert Modification Project</td>
<td>Construction completed</td>
<td>Santa Barbara</td>
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<tr>
<td>Bear Creek Canyon Road Association Storm-Proofing</td>
<td>Construction completed</td>
<td>Santa Cruz</td>
<td>5</td>
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<tr>
<td>Bear Gulch Watershed Upslope Erosion Management Plan</td>
<td>Construction completed</td>
<td>San Mateo</td>
<td>5</td>
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</tbody>
</table>
## Hoffman Marsh Wetland Mitigation Project

<table>
<thead>
<tr>
<th>Status</th>
<th>Construction completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Type</td>
<td>Compensatory mitigation</td>
</tr>
<tr>
<td>Project Area</td>
<td>6.0 acres</td>
</tr>
<tr>
<td>County</td>
<td>Contra Costa</td>
</tr>
<tr>
<td>Location</td>
<td>37.9013° N, -122.316° W</td>
</tr>
</tbody>
</table>

### Project Identification

<table>
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<tr>
<th>ID</th>
<th>Type</th>
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<tbody>
<tr>
<td>11-83</td>
<td>BCDC - Record Number</td>
</tr>
<tr>
<td>223280</td>
<td>USACE - File Number</td>
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</tbody>
</table>

### Habitat Plan

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<tr>
<th>Habitat</th>
<th>Activity</th>
<th>Acres</th>
<th>Source</th>
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</thead>
<tbody>
<tr>
<td>Estuarine wetlands</td>
<td>Enhanced</td>
<td>6.0</td>
<td>Map</td>
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</table>

### Related Habitat Impacts

<table>
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<tr>
<th>Habitat</th>
<th>Acres Lost</th>
<th>Source</th>
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<tbody>
<tr>
<td>No Data</td>
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### Historical Habitats

<table>
<thead>
<tr>
<th>Habitat</th>
<th>Acres</th>
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</thead>
<tbody>
<tr>
<td>Estuarine wetlands</td>
<td>6.0</td>
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</tbody>
</table>
### Sites

<table>
<thead>
<tr>
<th>Name</th>
<th>Status</th>
<th>Acres</th>
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</thead>
<tbody>
<tr>
<td>Highway 580 at Stege Creek mitigation</td>
<td>Construction completed</td>
<td>6.0</td>
</tr>
</tbody>
</table>

### Events

<table>
<thead>
<tr>
<th>Date</th>
<th>Type</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>2006-06</td>
<td>Project entered</td>
<td>Project entered into database</td>
</tr>
<tr>
<td>1996-08-21</td>
<td>Permit</td>
<td>USACE permit issued</td>
</tr>
<tr>
<td>1985</td>
<td>Groundwork end</td>
<td>On-the-ground work completed</td>
</tr>
<tr>
<td>1985</td>
<td>Report</td>
<td>Monitoring Report issued</td>
</tr>
<tr>
<td>1983-10-26</td>
<td>Permit</td>
<td>BCDC record number issued</td>
</tr>
<tr>
<td>1982</td>
<td>Report</td>
<td>Restoration Plan issued</td>
</tr>
</tbody>
</table>

### People

<table>
<thead>
<tr>
<th>Type</th>
<th>Name</th>
<th>Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact</td>
<td>Sid Shadle</td>
<td>California Department of Transportation</td>
</tr>
<tr>
<td>Contact</td>
<td></td>
<td>San Luis Obispo County College District</td>
</tr>
</tbody>
</table>

### Related CRAM Assessments

<table>
<thead>
<tr>
<th>Date</th>
<th>Site Name</th>
<th>Type</th>
<th>Score</th>
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</thead>
<tbody>
<tr>
<td>7/31/2008</td>
<td>Hoffman #3</td>
<td>Estuarine Saline</td>
<td>56</td>
</tr>
<tr>
<td>3/31/2008</td>
<td>Hoffman #1</td>
<td>Estuarine Saline</td>
<td>67</td>
</tr>
</tbody>
</table>
## Hoffman Marsh Wetland Mitigation Project

### Files & Links

<table>
<thead>
<tr>
<th>Name</th>
<th>File Type</th>
<th>Submitted On</th>
<th>Submitted By</th>
<th>Includes</th>
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</thead>
<tbody>
<tr>
<td>Project Maps from ACOE Permit #223820</td>
<td>Plan Or Permit</td>
<td>10/28/2005</td>
<td>Max Delaney, San Francisco Estuary Institute</td>
<td>Map</td>
</tr>
</tbody>
</table>

223280 maps.pdf
Hoffman Marsh Wetland Mitigation Project

Add Files or Links

Add one or more files to this project to make the information available to others in the wetland restoration community. The files can be of any type: reports, photos, spreadsheets, or others. Alternatively, submit a web link (URL) to information already available elsewhere on the web.

Note: To add files, you must have cookies enabled on your browser. Fields in **bold** are required.

**Step 1**

Give the item you are uploading or linking to a short, descriptive title; choose the information type; and if desired, provide a detailed description or comment. This information will appear with your submission.

**Title**

Examples: "Final project report"; "Aerial photo of Pond 16"; "Link to 2008 mercury data"

**Type**

- Monitoring Report
- Plan or Permit
- Dataset
- Photo
- Other

**Includes**

- Includes Map
- Includes Performance Criteria

**Description/Comment**
How can EcoAtlas support resource managers?

→ Evaluate new projects within landscape context

→ Compare historical and modern aquatic resources
How can EcoAtlas support resource managers?

→ Better coordinate restoration and monitoring efforts

→ Provides geospatial, tabular and graphical documentation
Future Improvements

→ Develop data entry tool for uploading new projects

→ Add additional data layers (e.g. species abundance, water quality)

→ Enhance Landscape Profile tool (e.g. upload polygons, share maps)

→ Advanced project reporting
Tour EcoAtlas

We highlight for you some of the benefits and features of this exciting new tool during a brief, five-minute walk-through.
We welcome feedback on your experience using this site. How will you use the information? How could the site be improved? What else would you like to see? Was the site easy to use? Do you have suggestions on future improvements to the tool? If you have questions or suggestions, please use the form below or email us at ecoatlas@sfei.org

Name

Email

Phone Number

Reason

   Question

Message

Send   Cancel
Questions?

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