

## Workplan for: Phytoplankton Monitoring Element of EMP

**Time frame:** 1 year

**Team:** Tiffany Brown and sci aids (Melanie LeGro and TBD)

Lead(s): Tiffany Brown

**Fiscal Resources Identified for Use (include contract dollars and PYs):**

This work will be done as part of the regular workload of the EMP staff listed above.

**Brief description:** The creation of interactive phytoplankton and chlorophyll-a graphs and images for the Living Resources – Phytoplankton element of the Estuary Portal. The interactive elements will need to be completed by IT staff once the elements below are complete.

1. Regional line graphs depicting trends in chlorophyll-a for the period of record.
2. Regional pie charts showing phytoplankton composition (organisms per mL) on an annual basis.
3. Seasonal bar graphs showing phytoplankton composition on a regional and annual scale.
4. Description of biomass vs. organism composition (why measuring both chlorophyll-a and phytoplankton community composition is important, and how the two relate to each other and the larger foodweb).
5. Images and brief information about common and important phytoplankton in the Estuary.

**Intermediate milestones:**

Summer 2014: creation of line graphs for chlorophyll-a

Fall 2014: creation of pie charts and bar graphs

Winter 2014: completed descriptions and images as described in #4 and #5 above and completion of interactive elements for website.

**Deliverables:** Interactive graphs for the water quality portal, a description of the importance of phytoplankton and chlorophyll-a in the estuary, and information on important phytoplankton in the Estuary coupled with images.

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## Workplan for: Zooplankton Study

Time frame: August 2014

Team: *(Name all individuals who will be contributing. These should also be the people in the Asana group entitled with a description similar to the workplan title. Asana tasks within the project can be detailed there-like who's doing which pages of the Water Quality section.)*

Lead(s): April Hennessy (CDFW)

Fiscal Resources Identified for Use (include contract dollars and PYs):

Brief description: *(This should be as clear as possible, but still remain brief. Detail if the task includes IT needs outside of the project, if it's dependent on other things happening, if it includes loading pages or just mocking them up, etc.)*

Create seasonal or monthly regional indices for zooplankton to be featured in annual Status and Trends IEP Newsletter article as well as on the Estuaries Portal.

Intermediate milestones: *(Brief description and date of completion)*

March 2014- 2013 zooplankton data completed, QC'd, and appended to database

April 2014- 2013 data released, regional indices developed for 2013 and other annual graphs updated

May 2014- annual status and trends article written and graphs completed

June 2014- update graphs and summaries for Estuaries Portal

July 2014- post updated graphs and summaries on Estuaries Portal

Deliverables: Zooplankton data matrices, annual zooplankton status and trends newsletter article, and zooplankton pages of estuary portal updated.

## Workplan for: Habitat Portal Pages

Time frame:

New pages completed by end of 2014

Team:

Lead: Kristal Davis Fadtko

Individuals to reach out to for participation: Judy Kelly, Cliff Harvey, Kristen Cayce, Hildie Spautz, San Francisco Estuary Partnership (Adrien Baudrimont?)

Fiscal Resources Identified for Use:

Kristal Davis Fadtko – 10% time

Brief description:

Develop additional pages for the Habitat section of the portal. This will include pages that answer the following questions: “How healthy are SF Estuary habitats?”, “Why are habitats a key attribute?” and “How do we determine the health of habitats?” In the development of these pages the focal categories will be identified and health indicators will be described. Content will be pulled from existing information and will rely heavily on the 2011 State of the Bay report. The proposed 2015 State of the Bay-Delta report may provide detailed analyses to further enhance these pages in the future. Another component in the development of these pages will be to explore obtaining additional data for CARI to classify habitats in the Delta.

Intermediate milestones:

- Modify existing pages to be more consistent with Living Resources section – May 2014
- Identify and describe focal categories – August 2014
- Identify and describe health indicators – October 2014
- Mock up pages for review – November 2014
- Upload new pages to portal – December 2014

Deliverables:

New pages for the Habitat section of the portal that answer the following questions: “How healthy are SF Estuary habitats?”, “Why are habitats a key attribute?” and “How do we determine the health of habitats?”

## ***Workplan for: Development of Fish Monitoring Data Access and Visualization for Living Resources Portion of the Estuaries Portal.***

**Time frame:** 1 Year

**Team:** Kris Jones and Matt Dekar

Lead(s): Kris Jones and Matt Dekar

### **Fiscal Resources Identified for Use (include contract dollars and PYs):**

This work will be done as part of the regular workload of the staff listed above. Additional funding may be needed to develop the graphical interface for these data (e.g., to develop interactive maps and figures).

**Brief description:** This work will incorporate data from the U.S. Fish and Wildlife Service's Delta Juvenile Fish Monitoring Program (DJFMP) into the Living Resources portion of the Estuaries Portal. The DJFMP samples fish year-round approximately weekly at three long-term trawl locations and at 58 beach seine sites throughout the San Francisco Estuary. We also aim to incorporate additional survey data from the Department of Fish and Wildlife (DFW); however, further outreach is needed with key DFW staff before any specific plans can be made relating to these datasets (a separate workplan will be developed for deliverables relating to DFW datasets).

In addition to having the aforementioned datasets accessible via the Estuaries Portal, this projects aims to develop interactive elements for visualization of these data (e.g., interactive maps and graphs). Crosswalks will also be developed, which will allow users to explore relationships between fisheries data and other biological and environmental datasets accessible through the portal.

1. Develop portal content, which provides the background and details regarding the methods for the fish surveys, including metadata.
2. Develop portal content, which provides any relevant species specific background. Also develop content which relates to the visualization of the data (as described in #3, below).
3. Develop an interactive graphical interface which allows for the visualization of inter- and Intra-annual trends in fisheries and environmental data (e.g., using bar and/or line charts); our team will work with the Monitoring Council's Data Management Workgroup to develop these visualization tools.
4. Develop GIS layers for fish survey data, which show the relative abundance of species in the Delta (time frames TBD). Develop similar layers for other biological and environmental data (e.g., phytoplankton, zooplankton, water quality etc.); our team will work with the Monitoring Council's Data Management Workgroup to develop these visualization tools.

**Intermediate milestones:**

Summer 2014: numbers 1 and 2 (above)

Winter 2014: number 3 (above)

Spring 2015: number 4 (above)

**Deliverables:** Interactive maps and graphs for the Estuaries Portal, as well as the associated supporting portal content pages (as described above; numbers 1-4).

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## Workplan for Water Element of SF Estuary Portal

Time frame: Completed introductory and detail water quality pages by the end of 2014 calendar year.

Team: Lead(s): Erin Foresman

Team: Jon Rosenfield, William Templin, Jason Lofton, Stephanie Fong, Meghan Sullivan, Valentina Cabrera-Stagno

Fiscal Resources: ~ \$100K of EPA support for TMDL Assessments and salinity gradient visualization plus staff time.

To meet Strategic Plan item(s):

Brief description: The Water Quality element will be divided initially into water quantity and quality. The water quality element will describe existing water quality status in the SF Estuary using the CWA 303(d) list as the primary, though not the only resource for indicating level of water quality. We will also discuss other water quality issues that are not yet listed on 303(d). The water quantity section will address issues of hydromodification in the SF Estuary. There are some IT services that will be provided by Tetrattech through an EPA contract.

Intermediate milestones: *(Brief description and date of completion)*

- Spring 2014 – narrative content developed for the introductory water quality and quantity pages, circulate for review and revision.
- Summer 2014 – narrative content developed for detailed water quality and quantity pages; circulate for review and revision.
- Fall 2014 – TMDL progress assessments and salinity visualization materials added to draft pages; circulate for review and revision.
- End 2014 upload to CEMW site.

Deliverables: Introductory and detailed pages describing water quality and quantity impairments and issues in the SF Estuary. Introductory material will focus on basic concepts and policy requirements while detailed pages will provide access to water quality data for specific contaminants and stressors. Other deliverables include 15 TMDL progress assessments and salinity gradient maps.

## Workplan for: Expansion of Bird pages

**Time frame:** through Dec 2015 (?) or identified deadline for production of State of the Estuary report

**Team:** To be determined. May include Delta Bird Restoration Network participants; PRBO staff; Danika Tsao and other DWR staff.

Lead(s): Hildie Spautz, CDFW

**Fiscal Resources Identified for Use (include contract dollars and PYs):**

Hildie Spautz – 0.10 PY

No additional resources yet identified.

**Brief description:**

- 1) Update current content with new data for selected species if it becomes available. Obtain data from PRBO and other sources of bird data. Create GIS layers and interactive content.
- 2) Add content describing drivers, conceptual models, links to other pages including habitat and ecological processes.
- 3) Develop bird indicators for State of the Estuary report, and concentrate efforts on those species for Portal. Exception
- 4) If additional volunteers become available, develop content for other species that are not directly part of the SOE report

**Intermediate milestones:** *(Brief description and date of completion)*

- |   |          |
|---|----------|
| 1) Outline for updates to existing content, data needs, and detailed plan for getting there.          | May 2014 |
| 2) Proposed list of bird indicators for State of the Estuary report and outline for their development | Dec 2014 |

**Deliverables:**

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|--|--------------|
| 1) Updated data on current bird species pages. New content may be integrated with existing pages, or may require configuration and additional pages will be created. | Sept 2014    |
| 2) GIS layers and associated survey data.  |              |
| 3) Develop bird indicators for State of the Estuary report   | Dec 2015 (?) |

## Workplan for: Expansion of Ecological Processes pages

**Time frame:** Update 1 – September 2014, and State of the Estuary report updates – September 2015

**Team:** Hildie Spautz, Stephanie Fong, Kris Jones, Matt Dekar.

Lead(s): Hildie Spautz, CDFW

### Fiscal Resources Identified for Use (include contract dollars and PYs):

Hildie Spautz – 0.10 PY

No additional resources yet identified.

### Brief description:

- 1) Update food web diagrams with interactive content & links to other pages.
- 2) Develop ecological process indicators for State of the Estuary report, and concentrate efforts on those for Portal.
- 3) If additional volunteers become available, develop content for other ecological processes that are not directly part of the SOE report, e.g.:
  - a. Floodplain processes
  - b. Climate and climate change

### Intermediate milestones: *(Brief description and date of completion)*

- |   |          |
|---|----------|
| 1) Outline for updates to existing content, data needs, and detailed plan for getting there.                        | May 2014 |
| 2) Proposed list of ecological process indicators for State of the Estuary report and outline for their development | Dec 2014 |

### Deliverables:

- |   |              |
|---|--------------|
| 1) Updated interactive food web diagrams. New content will replace existing pages, or may require configuration and additional pages will be created. | Sept 2014    |
| 2) Fully developed ecological processes indicators for State of the Estuary report  | October 2015 |