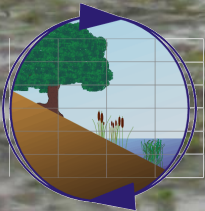


Humboldt Bay Eelgrass Management Plan:

Project Partner Meeting #5
Humboldt Bay Harbor, Recreation
and Conservation District



Merkel & Associates, Inc.






Outline

- 1) **Review Plan Draft : Section 1 & 2 comments and revisions, section 3 updates**
- 2) Evaluate preliminary HBECMP webpage content, functionality
- 3) **Regulatory Tools & Programs:**
 - a) Regional/programmatic approach to permitting (RGP)
 - b) Define & Scope Core Focus Activities
 - c) Framework for capture, retention, accounting of mitigation credit, and potential for credit sale/exchange

**HUMBOLDT BAY
EELGRASS COMPREHENSIVE MANAGEMENT PLAN**

Prepared for :
Humboldt Bay Harbor, Recreation, and Conservation District
601 Startare Dr.
Eureka, CA 95501

Prepared by:
Merkel & Associates, Inc.
1670 Chester Ave
Arcata, CA 95521
Whelan A. Gilkerson, Senior Biologist
(707) 407-7469
Keith W. Merkel, Principal Consultant
(858) 560-5465

Humboldt Bay Eelgrass Comprehensive Management Plan (CMP) Comments & Revisions

Preface (comments received)

- The CEMP “placed significant burden on areas of the state that have previously not been subject to the same rigorous standards that have been in place where greater anthropogenic pressures on eelgrass have existed for a longer period of time.”

Comment-With or without CEMP, recommend avoidance, minimization and mitigation (SCEMP) as part of EFH consultations (as do some other agencies).

The approach will be about addressing the burden

Focus on CEMP support for CMPs

- “Recommendation of a process to avoid late hits from eelgrass issues within the environmental review and regulatory process”

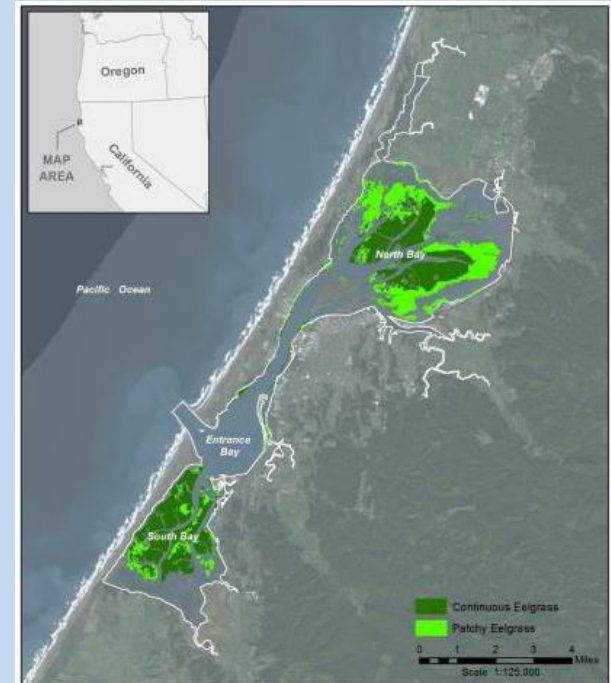
Recommendation- “Common issues that can be avoided early”

Humboldt Bay Eelgrass Comprehensive Management Plan (CMP) Comments & Revisions

Section 1 (Comments received)

The acreage in Table 1 for Humboldt Bay (~4,700 ac.) doesn't appear to match the habitat acreages given on Page 9 (3,644 ac. continuous plus 2,043 ac. patchy)

System	Acreage	% Total
Humboldt Bay	~4,700	31%
San Francisco Bay	~3,000	20%
San Diego Bay	~2,100	14%
Tomales Bay	~1,300	9%
Mission Bay	~1,100	7%
All Other Systems	~3,000	19%
Total	~14,900	100%



3,644 acres continuous eelgrass, 2,043 acres patchy eelgrass (15-84% cover; NOAA 2009)

In our quantification, patchy eelgrass assumed equal to 50% coverage for bay-wide total eelgrass estimate. More explanation will be added.

Humboldt Bay Eelgrass Comprehensive Management Plan (CMP) Comments & Revisions

Section 1 (Comments received)

- Is it possible to be more specific on what would constitute a “more expansive project”?
1 or more acres of impact to eelgrass?
- Recommend noting when pictures are not from Humboldt Bay to avoid any confusion; it's natural to assume pictures are from Humboldt Bay unless noted otherwise

OK

Humboldt Bay Eelgrass Comprehensive Management Plan (CMP) Comments & Revisions

Section 3.0 Framework (comments received)

- Can project scale also be shown in square feet?

Depth Range	Project Scale	Recommended Survey Method
Intertidal (-1 to +4 ft):	0-1,000 m ² (0-10,764 ft ²)	Total station/sub-meter GPS/ low-altitude UAV
	0-3,000 m ² (0-32,292 ft ²)	Total station/sub-meter GPS/low-altitude UAV
	3,000 m ² -100 ha (0.74-250 ac)	Low-altitude UAV
	50 ha+ (125 ac+)	Low-altitude UAV/Manned aircraft
Subtidal (-10 to -1 ft):	0-1,000 m ² (0-10,764 ft ²)	Total station/sub-meter GPS w/ diver transects/single-beam or SS sonar
	1,000-2,000 m ² (10,764-21,528 ft ²)	Sub-meter GPS/single-beam or SS sonar
	2,000 m ² + (21,528 ft ²)	SS sonar

Humboldt Bay Eelgrass Comprehensive Management Plan (CMP) Comments & Revisions

Section 3.0 Framework (comments received)

- The CMP is essentially proposing to set up an eelgrass mitigation bank with "surplus eelgrass mitigation credits" that can be used as impacts to eelgrass occur. More information could be provided regarding whether the CMP will be a formal bank as per the Corps/EPA IRT process (someone should talk to the Corps about this and evaluate pros and cons of a formal bank).

Currently a formal mitigation bank is not being contemplated due to complexity and cost. The goal is to establish a mitigation banking structure as an insurance policy against mitigation shortfalls that can be attached to a programmatic permit and used to address projects that can fit within that programmatic structure (e.g. RGP). An in lieu fee program may be explored as a means of addressing credit exchange with other parties in the future.

- Does the Harbor District have the time/resources/willingness to maintain the website and keep it current? Future success hinges on frequent updating and function of the website- if the District will be the gatekeeper of a banking system.

The District's ability to maintain the website and 'implement' an eelgrass mitigation program ultimately hinges on the successful development of surplus eelgrass mitigation credit and the ability to facilitate retention, commodification, and potential exchange of that credit to ultimately 'fund' the program.

Humboldt Bay Eelgrass Comprehensive Management Plan (CMP) Comments & Revisions

Section 3.0 Framework (comments received)

- The CMP should be clear about the definition of eelgrass habitat as it relates to surveys and mitigation (rather than suggesting reliance on CEMP for information not provided).

We will migrate appropriate guidance details from the CEMP.

- Perhaps someone should do a real trial run to make sure nothing's been missed. And, again, we should be clear about eelgrass habitat definition specifically with regards to unvegetated eelgrass habitat.

The trial run will be the Fisherman's Channel project

It appears more detail is needed regarding implementation/use of the CMP.

Correct

Humboldt Bay Eelgrass Comprehensive Management Plan (CMP) Comments & Revisions

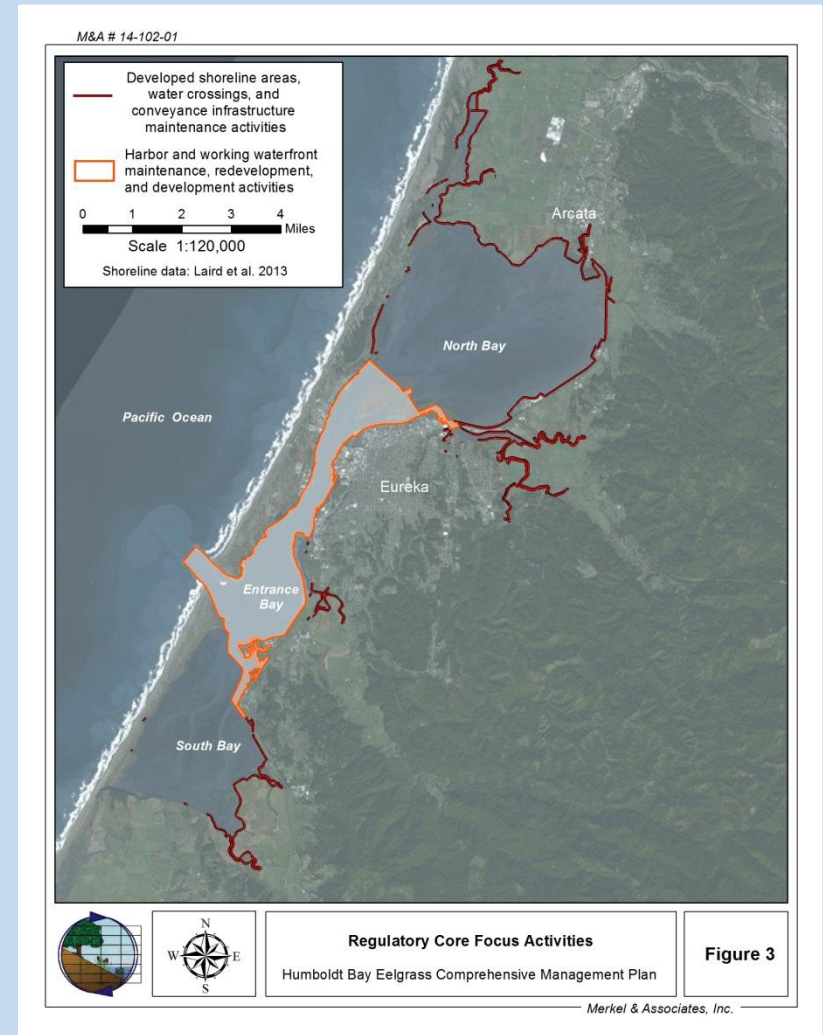
General Comments:

- Include document section number in footer to help readers navigate Plan
- Review/evaluate eelgrass mitigation history in Humboldt Bay, map locations
- The key to success for the Management Plan is if it leads to regulatory certainty and affordable mitigation costs. Regulatory certainty is not 100% certainty, but it means that applicants can be reasonably confident that following the plan (and subsequent programmatic permits) is likely to lead to streamlined approvals from all regulatory agencies. It would be very helpful to get endorsement letters from the regulatory agencies on the final plan.
- The plan should present recommendations for next steps
- Consider scoping plan based on a suite of similar 'Regulatory Core activities' as opposed to a Core Plan Focus Area
- Include information regarding Tribal Consultation requirement

Humboldt Bay Eelgrass Comprehensive Management Plan (CMP) Section 3 Updates

Regulatory Core Focus Activities

- Harbor and working waterfront maintenance, redevelopment and development activities
- Developed shoreline area, water crossing and conveyance infrastructure maintenance activities



Humboldt Bay Eelgrass Comprehensive Management Plan (CMP) Section 3 Updates

Regulatory Programs, Agency Roles and Permitting

- ***Army Corps of Engineers – Clean Water Act and Rivers & Harbors Act***
 - Clean Water Act 1972 (Section 404)** Regulates discharge of dredged or fill material into Waters of the U.S. (including wetlands)
 - Examples-water resource or wastewater treatment projects, infrastructure improvement projects, development, and mining operations.
 - Rivers & Harbors Act 1899 (Section 10)** Regulates development or maintenance activities below OHW level of Navigable Waters
 - Examples-construction, placement, or removal of structures, dredging and disposal of dredged material; any placement of fill, excavation, or disturbance of soil; or any other modification of a navigable waterway.
- Guidance for impacts to aquatic resources-Avoid>minimize>mitigate
- **Individual permits-** Project may have potential significant impacts
- **Programmatic permits** (NWP or RGP)-Activities do not individually or collectively have more than minimal impact on the aquatic environment

* *San Francisco District administers USACE permits in Humboldt Bay*

Humboldt Bay Eelgrass Comprehensive Management Plan (CMP) Section 3 Updates

Regulatory Programs, Agency Roles and Permitting

- ***California Coastal Commission – California Coastal Act (1976)***
 - Coastal Commission established as a quasi-judicial body , tasked with broad regulatory oversight and permit authority relating to:
land-use regulations, public access, recreation, marine and terrestrial habitat protection, water quality, energy development and resource extraction, visual resources, agricultural lands, transportation, public works and port activities occurring in the Coastal Zone.

California's lead land-use authority within the Coastal Zone, responsible for issuing **Coastal Development Permits (CDPs) in Humboldt Bay*

Humboldt Bay Eelgrass Comprehensive Management Plan (CMP) Section 3 Updates

Regulatory Programs, Agency Roles and Permitting

- ***Regional Water Quality Control Board – Clean Water Act and Porter-Cologne Act***

State Water Resources Control Board (SWRCB) established by the California State Legislature in 1967.

- Dual Authority over water quality protection and water allocation (Beneficial Uses)
- 9 Regional boards operate under SWRCB

Regulate discharge of fill and dredged material (401 Water Quality Certification and Wetlands Program) established under joint authority of Federal CWA Section 401 and State Porter-Cologne Water Quality Control Act of 1969 (California Water Code, Section 7)

**The NCRWQCB is responsible for water quality regulations and issuance of 401 water quality certifications in Humboldt Bay.*

Humboldt Bay Eelgrass Comprehensive Management Plan (CMP) Section 3 Updates

Regulatory Programs, Agency Roles and Permitting

- ***California Department of Fish and Wildlife***
 - CDFW is the trustee agency for fish and wildlife resources in the State of California under CEQA
 - Has jurisdiction over fish and wildlife resources, including native plant communities and habitat required to support sustainable populations
 - Responsible for issuing Scientific Collecting Permits (Required for harvest of donor eelgrass material)
 - A Letter of Authorization (LOA) is also required from CDFW to support and justify the location and source of eelgrass donor material to be used for transplanting activities.

Humboldt Bay Eelgrass Comprehensive Management Plan (CMP) Section 3 Updates

Regulatory Programs, Agency Roles and Permitting

- **NOAA Fisheries (*National Marine Fisheries Service*)**

Magnuson-Stevens Fishery Conservation and Management Act (1996)

- Designation of eelgrass as Essential Fish Habitat (EFH) and a Habitat of Particular Concern

Endangered Species Act (ESA) Section 7 Consultations

- federal agencies are required to consult with NMFS (NOAA Fisheries) regarding measures that can be taken to avoid or minimize adverse effects to eelgrass resulting from project activities
- Ensure federal actions do not threaten the survival of particular species or result in degradation of critical habitat
- As authoring agency of the CEMP-NOAA Fisheries promulgates eelgrass mitigation policy with the goal of providing a consistent approach to achieving ‘no net loss’ of eelgrass habitat function throughout California.

Humboldt Bay Eelgrass Comprehensive Management Plan (CMP) Section 3 Updates

Regulatory Programs, Agency Roles and Permitting

- ***Cultural Resources Consultations***

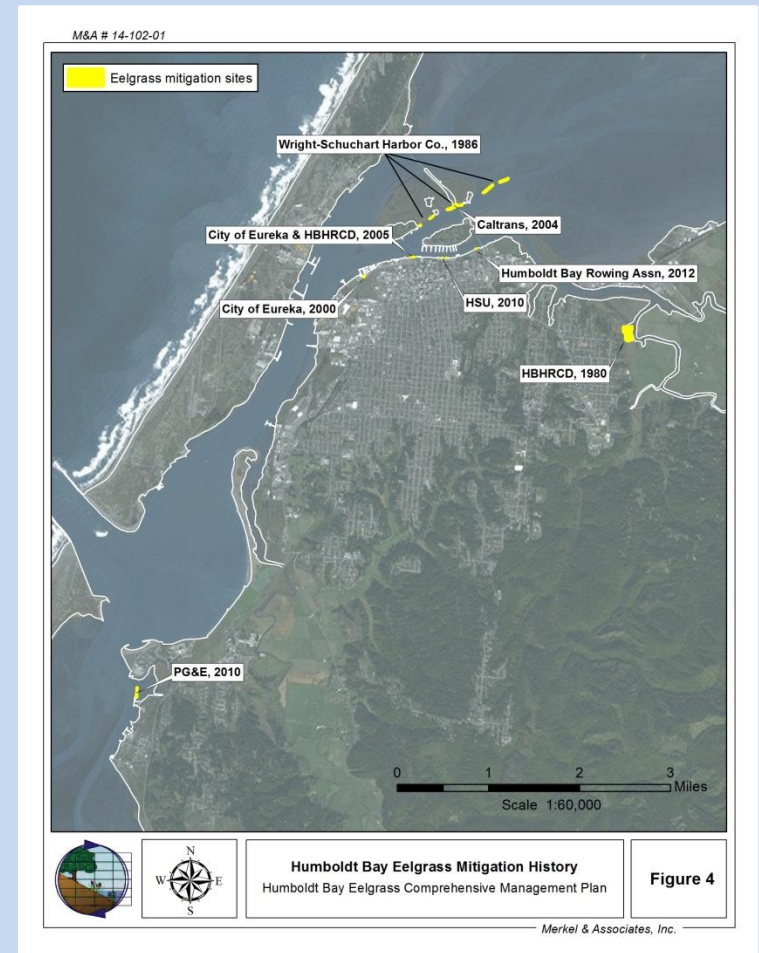
- As of July 1, 2015 lead agencies under CEQA now formally required to provide Native American Tribes opportunity to weigh in on CEQA documents
- Consultation required in advance of submitting either a Mitigated Negative Declaration or Environmental Impact Report, or releasing these documents for public review
- Tribal entities shall be given written notice (Project description, location, notification of the Tribe's 30-day response period for consultations)
- Tribes may request confidentiality (Cultural Resources at risk, not required to be disclosed in public CEQA documents)
- Efforts must be made to identify mutually acceptable actions to minimize or mitigate significant impacts to cultural resources
- Failure to achieve consensus between a lead agency and a Tribe may still ultimately satisfy the requirement for consultation
- NHPA Section 106 Consultation

**In Humboldt Bay, the Wiyot Tribe has expressed interest in being involved in cultural resources consultations and are additionally playing an active role as a partnering organization in development of the HBECMP.*

Humboldt Bay Eelgrass Comprehensive Management Plan (CMP) Section 3 Updates

History of Eelgrass Mitigation

- 8 projects identified as completed (mitigation and monitoring)
- Methods included bare-root transplanting, plug transplanting, debris removal, and out-of-kind wetland enhancement
- Failures driven by poor site selection, lack of site development, potentially unsuitable anchoring material for transplant units, and lack of follow through on permit conditions
- Successes achieved by appropriate site selection and site development in conjunction with active bare-root and plug-based transplanting; passive debris removal and successful out-of-kind mitigation under earlier regulatory framework



Humboldt Bay Eelgrass Comprehensive Management Plan (CMP) Section 3 Updates

History of Eelgrass Mitigation (cont.)

- Important to understand causes of past failures-lessons learned
- HBECMP focused on informing future project implementation, consistent project/permit evaluation framework moving forward
- Adoption of HBECMP under the CEMP intended to improve the outcome of future mitigation (better guidance and support of regional/combined mitigation)
- Goal- greater assurance of success and accountability with respect to no-net-loss policy



Substrate remediation to remove non-functional revetment and restoration planting of eelgrass into areas where debris and rubble had been removed. This 2012 project is the first in Humboldt Bay subject to full standards of the SCEMP as a precursor to adoption of the CEMP. In 2017, the project met established 5-year success milestones.

Humboldt Bay Eelgrass Comprehensive Management Plan (CMP) Section 3 Updates

Recommendations

- Establish a baywide cooperative monitoring program
- Develop RGP to permit projects identified as 'Core Focus Activities' within the Plan
- Follow up on King Salmon/Clam Island mitigation implementation



Eelgrass habitat in this area of North Bay, experienced dramatic declines in bed continuity and overall abundance between 2009 and 2016. Similar observations have been made in other locations of the bay, however; very little is known about the spatial extent and overall magnitude of the decline, or how this may have affected organisms dependent upon intertidal eelgrass. Image credits: NOAA (left) and Merkel & Associates (right).

Humboldt Bay Eelgrass Comprehensive Management Plan (CMP) Section 3 Updates

Recommendations

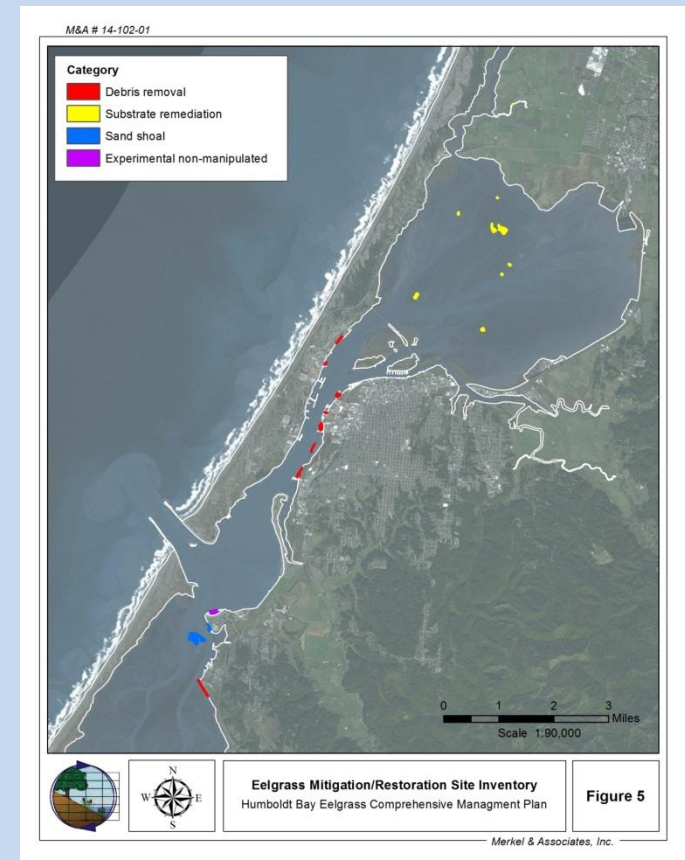
- Seek to implement pilot studies to investigate
 - a) remediation of legacy substrate impacts through dredging/excavation of a shell hash site
 - b) lower-order channel excavation to alleviate historic/anthropogenic sedimentation as a means of eelgrass restoration
 - c) Review/reconstruct eelgrass gains following tideland/saltmarsh restoration projects (if possible) or look to integrate a monitoring component into a tideland restoration project to develop a better understanding of tidal prism/eelgrass expansion relations in Humboldt Bay



Humboldt Bay Eelgrass Comprehensive Management Plan (CMP) Section 3 Updates

Conservation Recommendations

- Investigate potential for developing a multivariate, hydrodynamic model of Eelgrass habitat in Humboldt Bay
 - Predictive capacity for eelgrass occurrence given the right combination of physical conditions that can be monitored/modeled
 - <>How can eelgrass serve as a biosonde to further inform water quality monitoring efforts currently underway?
- Develop living shoreline projects (native oyster reef to facilitate patchy eelgrass microhabitat development near the upper limits of distribution)






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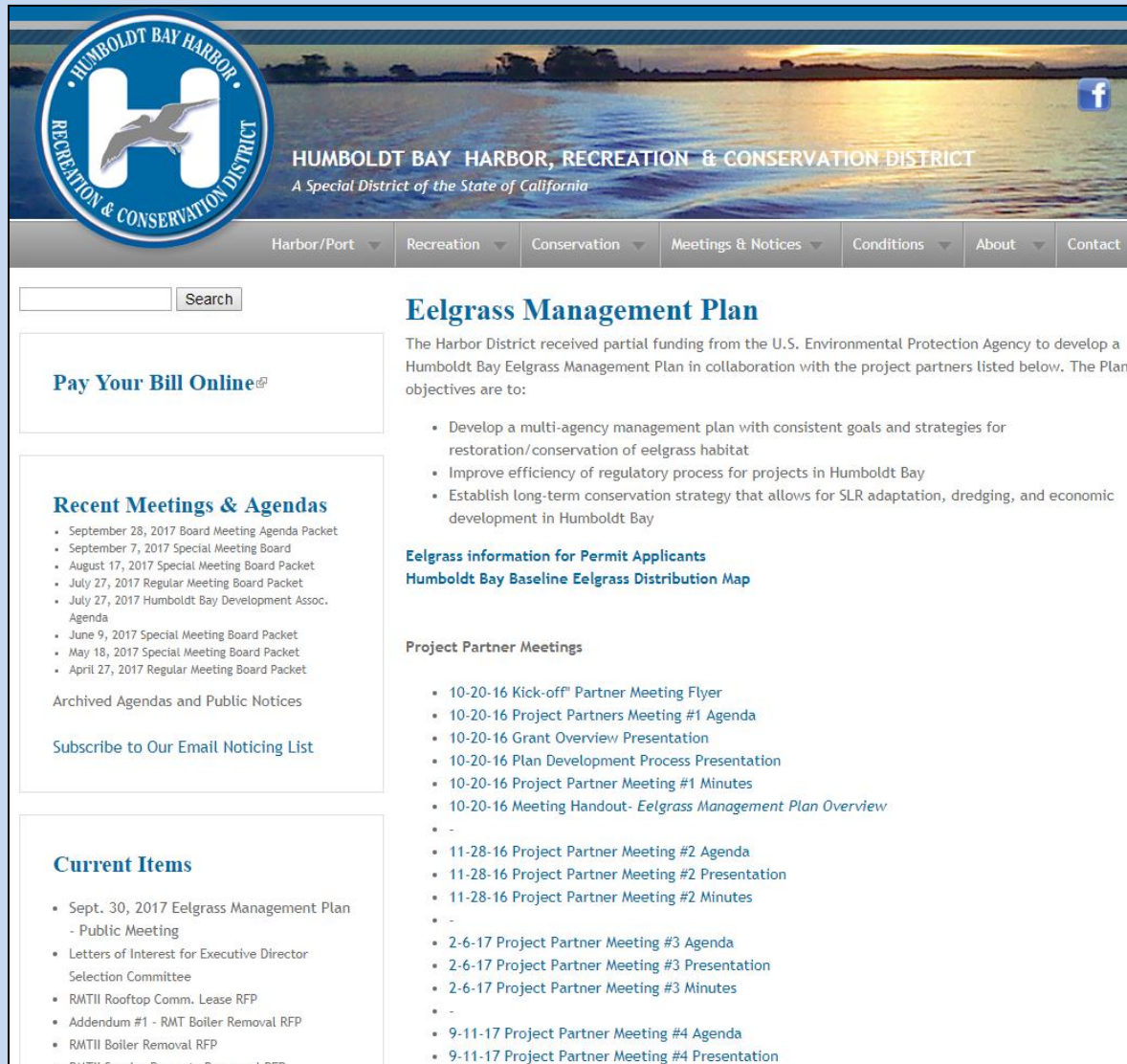
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Humboldt Bay Eelgrass Comprehensive Management Plan (CMP) Webpage



The screenshot shows the website for the Humboldt Bay Harbor, Recreation & Conservation District. The header features the district's logo on the left, which includes a stylized 'H' and a bird. To the right of the logo is a banner image of a sunset over water with a Facebook icon. Below the banner is a navigation menu with links for Harbor/Port, Recreation, Conservation, Meetings & Notices, Conditions, About, and Contact. A search bar is located below the navigation menu. The main content area is titled "Eelgrass Management Plan" and includes a paragraph about the district's funding and objectives, followed by a bulleted list of objectives. Below this are sections for "Eelgrass information for Permit Applicants" and "Project Partner Meetings", each with a bulleted list of links. On the left side of the page, there are three vertical boxes: "Pay Your Bill Online", "Recent Meetings & Agendas" (with a list of meeting dates and packets), and "Current Items" (with a list of recent events and RFPs).

HUMBOLDT BAY HARBOR RECREATION & CONSERVATION DISTRICT
A Special District of the State of California

Harbor/Port ▼ Recreation ▼ Conservation ▼ Meetings & Notices ▼ Conditions ▼ About ▼ Contact

Search

Pay Your Bill Online

Recent Meetings & Agendas

- September 28, 2017 Board Meeting Agenda Packet
- September 7, 2017 Special Meeting Board
- August 17, 2017 Special Meeting Board Packet
- July 27, 2017 Regular Meeting Board Packet
- July 27, 2017 Humboldt Bay Development Assoc. Agenda
- June 9, 2017 Special Meeting Board Packet
- May 18, 2017 Special Meeting Board Packet
- April 27, 2017 Regular Meeting Board Packet

Archived Agendas and Public Notices

Subscribe to Our Email Noticing List

Current Items

- Sept. 30, 2017 Eelgrass Management Plan - Public Meeting
- Letters of Interest for Executive Director Selection Committee
- RMTII Rooftop Comm. Lease RFP
- Addendum #1 - RMT Boiler Removal RFP
- RMTII Boiler Removal RFP
- RMTII Sulfur Property Removal RFP

Eelgrass Management Plan

The Harbor District received partial funding from the U.S. Environmental Protection Agency to develop a Humboldt Bay Eelgrass Management Plan in collaboration with the project partners listed below. The Plan objectives are to:

- Develop a multi-agency management plan with consistent goals and strategies for restoration/conservation of eelgrass habitat
- Improve efficiency of regulatory process for projects in Humboldt Bay
- Establish long-term conservation strategy that allows for SLR adaptation, dredging, and economic development in Humboldt Bay

Eelgrass information for Permit Applicants

[Humboldt Bay Baseline Eelgrass Distribution Map](#)

Project Partner Meetings

- 10-20-16 Kick-off[®] Partner Meeting Flyer
- 10-20-16 Project Partners Meeting #1 Agenda
- 10-20-16 Grant Overview Presentation
- 10-20-16 Plan Development Process Presentation
- 10-20-16 Project Partner Meeting #1 Minutes
- 10-20-16 Meeting Handout- *Eelgrass Management Plan Overview*
-
- 11-28-16 Project Partner Meeting #2 Agenda
- 11-28-16 Project Partner Meeting #2 Presentation
- 11-28-16 Project Partner Meeting #2 Minutes
-
- 2-6-17 Project Partner Meeting #3 Agenda
- 2-6-17 Project Partner Meeting #3 Presentation
- 2-6-17 Project Partner Meeting #3 Minutes
-
- 9-11-17 Project Partner Meeting #4 Agenda
- 9-11-17 Project Partner Meeting #4 Presentation

Humboldt Bay Eelgrass Comprehensive Management Plan (CMP) Webpage

Remaining needs...

Eelgrass information for Permit Applicants


Humboldt Bay Baseline Eelgrass Distribution Map

Additional Eelgrass Resources

Local Agency Contacts


Harbor District Permit Application

- Integrate Eelgrass Pre-Project Checklist into Permit Application Process



HUMBOLDT BAY HARBOR, RECREATION AND CONSERVATION DISTRICT

P.O. BOX 1030
Eureka, California 95502
phone (707) 443-0801
fax (707) 443-0800



PERMIT APPLICATION

Date Filed _____




General Information	For Commission Use
1.) Name, Address, phone # and email of Developer, Project Sponsor and Legal Owner	A. Application No. _____ Application Type: Franchise <input type="checkbox"/> Permit <input type="checkbox"/> Lease <input type="checkbox"/>
2.) Address of Project and Assessor's block, lot and Parcel Number	B. Date Received by Harbor District C. Date Accepted for filing by Commission
3.) Contact person Name, Address, phone #	D. Date of Public Notice E. Date of Environmental Compliance F. Date of Public Notice G. Date of Public Hearings
4.) Attach list of names and addresses of all adjoining property owners	H. Date of Commission Action Approval: _____ Conditional _____ Disapproval _____
5.) List and describe any other related Project Permits & Other Public Approvals required, including those required by City, Regional, State & Federal Agencies.	I. Expiration Date
6.) Existing City/County Zoning	Comments
7.) Proposed Site Use (Project Title)	

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Humboldt Bay Eelgrass Comprehensive Management Plan (CMP) Regulatory Tools and Programs

- Discuss potential RGP programmatic framework (precursor to RGP)
- Scope Core Focus Activities
- Describe potential monitoring, accounting, and mitigation credit exchange structure



Questions?

