

**HUMBOLDT BAY EELGRASS MANAGEMENT PLAN
PUBLIC WORKSHOP
MEETING MINUTES
Wharfinger Building, 1 Marina Way, Eureka
October 20, 2016 5:00 – 6:30**

WELCOME – Jack Crider (*HB Harbor District*)

- 2014 2-day workshop comprised of a group of eelgrass experts was beginning point of this process
- Humboldt Bay eelgrass is a challenge as water quality is so high that eelgrass grows everywhere, resulting in 35% of California's eelgrass being in Humboldt Bay
- Other eelgrass in California has seen a major decline
- Introduction of project team and round group introductions

CONTEXT OF PLAN/PAST WORK – Sarah West (*Planwest*)

- **Overview of plan agenda**
 - 2014 Workshop was beginning point of this process
 - September 2015 Grant Funding Received from EPA
- **Introduction of project teams and collaborators**
 - Planwest
 - Merkel & Associates
 - Humboldt Bay Harbor, Recreation, and Conservation District
 - Humboldt Baykeeper
 - California Coastal Conservancy
 - City of Eureka
 - City of Arcata
 - Humboldt County
 - Wiyot Tribe
 - Hog Island Oyster Company
 - NOAA
 - California Coastal Commission
- **Plan Goals**
 - 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 Sea Level Rise adaptation, dredging, and economic development in Humboldt Bay
 - Understanding of baseline conditions of eelgrass in Humboldt Bay, identify gaps in data, and determine research priorities for eelgrass management in B
 - Develop process that achieves conservation of eelgrass and the ecosystem and wetland functions that eelgrass provides; facilitates predictable and coordinated processing of regulatory approvals by all agencies with regulatory authority over eelgrass in HB; provides a baywide approach for avoiding, minimizing, and mitigating impacts to eelgrass from different activities in the bay

PLAN DEVELOPMENT PROCESS – Whelan Gilkerson (*Merkel & Associates*)

- **Project Background**
 - Already presented by Jack and Sarah
- **Humboldt Bay's eelgrass in a broader context**
 - Humboldt Bay contains 30-35% of California eelgrass habitat
 - Only one of the five main systems in California presently projected to support expansion of eelgrass habitat with Sea Level Rise
 - Believed to be close to carrying capacity, making mitigation more challenging
 - With Sea Level Rise predication to fully garner expansion potential, increasing the tidal prism by flooding into low-lying areas around the Bay would be required
 - With Sea Level Rise, model predications call for a 15% increase in eelgrass by 2063 and 74% by 2113
- **EMP Development Process Overview**
 - 5 collaborative partner meetings Fall 2016-Spring 2017 (Harbor District, Merkel & Associates, Partners)
 - 2 Public workshops (Harbor District, Merkel & Associates, Partners)
 - Develop eelgrass restoration/protection goals (Harbor District, Merkel & Associates, Partners)
 - Conduct bay tours to evaluate restoration/mitigation opportunities (Harbor District, Merkel & Associates, Partners)
 - Baseline data/directed research (Merkel & Associates)
 - Evaluate regulatory context, cost recovery, and monitoring (Harbor District, Merkel & Associates, Partners)
 - Develop 2 drafts and final plan incorporating partner input (Harbor District, Merkel & Associates, Partners)
 - Develop project webpage- supports plan, communication and project tracking (Harbor District)

Plan Development Components

- Policy and Values Elements
 - Determine plan priority/focus areas
 - Develop up front criteria for eelgrass surveying and/or mitigation planning requirements
 - Identify eelgrass conservation/protection priorities/locations
 - Establish restoration/mitigation priorities
 - Address temporary (recurring) vs. permanents impacts to eelgrass relative to mitigation requirements
 - Consider current vs future eelgrass distribution relative to climate change and Sea Level Rise
- Technical Components
 - Appropriate mapping and impact assessment methodologies
 - Anticipating and evaluating direct and indirect impact from projects
 - Addressing bathymetry, circulation, and other project-specific data needs
 - Evaluate active (e.g. transplant) vs passive (e.g. piling removal, Salt marsh restoration) mitigation approach and potential mitigation opportunities)
 - Mitigation site development, transplanting consideration, onsite vs offsite mitigation, potential for banking credits
- Regulatory Context, Cost Recovery and Monitoring
 - Understanding and aligning state and federal permitting requirements and options

- Exploring Regional General Permit and/or other programmatic permitting tools
- Evaluating mitigation bank development, in lieu fee program, or hybrid approach
- Develop framework for long-term eelgrass monitoring in Humboldt Bay

Opportunities for Plan Expansion

- Recent stat legislation SB 2363 supports actions to combat ocean acidification. It promotes protection and restoration of eelgrass habitat and provides for funding to support adaptive management, planning, coordination, monitoring, research, and other necessary activities to minimize the adverse impacts of climate change.

EMP Plan Coverage and Focus

- Humboldt Bay - Importance of understanding eelgrass resources in a system context, populations variability, conservation mitigation opportunities, climate change/Sea Level Rise
- Plan Emphasis – address developed ‘core’ use area of the bay, small incremental/recurring impacts w/focus on maintenance activities (e.g. dredging channels and public launch facilities), guidance for redevelopment & new construction activities along working waterfront.
- Regulatory subcomponent – improve efficiency and consistency in application of eelgrass regulatory policy – mechanism for coordination

Preliminary Focus Areas

- Samoa, Fairhaven, and Eureka’s working waterfront
- Entrance Bay/North Bay Channel
- King Salmon and Fields Landing
- High priority maintenance projects within Focus area of Plan (case studies). Advance policy, technical, and regulatory sub-components of the Plan.
- Permitting these projects is beyond the initial scope of this Plan

Baseline Eelgrass Assessment

- Eelgrass habitat distribution and baseline conditions within the Plan focus area
- Planning level assessment of potential impacts to eelgrass within the Plan focus area
- Preliminary understanding of eelgrass mitigation needs and opportunities
- Use existing aerial imagery and bathymetry, as well as collect new data.

Surveying Considerations

- Scale of Project
- Depth of distribution of eelgrass
- Mapping accuracy relative to accepted standards
- Importance of detailed habitat maps (Getting the impact assessment right the first time, setting the appropriate mitigation targets, evaluating the outcome of mitigation/restoration actions, identifying opportunities for mitigation)

Current & Emerging Approaches to Eelgrass Habitat Assessment

- Intertidal (Current) - Differential GPS or Electronic Total Station – manual bed delineation suitable for small shoreline projects
- Intertidal (Emerging) - Low altitude aerial imagery/photogrammetry. Unprecedented level of accuracy, deal for small-large scale projects. Ground based (pole camera), balloon, or UAV platforms. Archivable ‘snapshot’ of habitat conditions and project context.
- Subtidal – Diver transects and bed delineation with surface support GPS/Total Station. Suitable for very small areas, confirmation of max depth distribution.
- Subtidal – Sidescan/Interferometric Sidescan Sonar. Suitable for small-large scale project, cost-effective, accurate, and repeatable, preferred technique for any project likely to impact subtidal eelgrass

Habitat Assessment – Long Term Monitoring

- Understanding system dynamics
- Context for impacts relative to eelgrass habitat variability at the Bay scale
- Critical for long-term conservation of eelgrass in Humboldt Bay
- Tracking the effects of climate change, sea level rise, and other drivers of habitat distribution
- Majority of Humboldt Bay eelgrass is intertidal-Use of emerging imagery tools with traditional transect-based habitat characterization = powerful and cost effective means of establishing robust long-term monitoring program

Eelgrass Restoration and Mitigation Opportunities

- History of past mitigation in Humboldt Bay – site suitability is critical to successful mitigation
- Poor historic performance – high up-front mitigation transplanting ratios compounds the challenges and costs of mitigation
- Need to think outside the box to find creative solutions for eelgrass mitigation
- Opportunities exist at the site level, but need to be careful that mitigation and conservation efforts within the focus area of the plan don't conflict with other bay uses
- Argues for a system approach to plan development. Promote eelgrass restoration/mitigation outside the focal area of the plan
- Piling/decking removal for very small project impacts in the Plan Focus area
- For larger scale impacts, need to identify opportunities at the system scale to restore/mitigate eelgrass habitat
- Salt Marsh restoration in former tidelands increases tidal prism, facilitates eelgrass expansion in tidal channel network
- Substrate remediation – shell hash/cobble legacy of historic bottom culture practices, continues to displace eelgrass from historic habitat

Substrate Remediation to Restore Historic Eelgrass Habitat

- North Bay Legacy Bottom Hardening Site
- Outside current mariculture operations
- Approximately 1/3 to 1/2 acre of eelgrass restoration capacity
- Landowner receptive to conservation easement
- Other similar opportunities exist. Challenges include: ownership and existing management
- **Progress to Date**
 - Background research of past eelgrass mitigation effort in Humboldt Bay (successes, failures, lesson learned)
 - Eelgrass mitigation status, future maintenance dredging needs
 - Preliminary project focus area/plan scoping
 - QA plan development underway with EPA
 - Preliminary research on eelgrass restoration/mitigation opportunities
- **Project Timeline and Meeting Schedule**
 - Partner meetings will be held at approximately 6-week intervals
 - Doodle poll will be sent out regarding availability for the next meeting (late November/early December)
 - Goal to hold final public workshop in May 2017

PUBLIC FEEDBACK AND COMMENTS (*Audience participation*)

- Questions/Comments/Suggestions
 - Are there other options for mitigation - saltmarsh restoration?

- What baseline will be used?
- Is the 2009 reference point you refer to the Lidar study? How will it be used?
- Eelgrass was one of the base issues for the headwater study was eelgrass
- Uplands effect – what kind of project/partners/research are you using to assess water quality in the bay?
- Potential for economic incentives to using HB eelgrass to offset eelgrass impacts in other systems in the state?
- Things to consider - ocean acidification, shell fish hatcheries
- Humboldt Bay wetland/marshes have been the topic for the past 20 years. Eelgrass not as important to some, it's unknown. Need to educate public regarding eelgrass appreciation.
- Does plan look at geometry of eelgrass (production at different locations/levels of bed)?
- Will agencies recognize this Plan over the CEMP?
- If the Plan identifies certain factors that encourage the growth of eelgrass, can lower ratios be justified?
- Will completion of more successful projects reduce ratio?
- Current ratio based on current success rates in the region
- Mechanism that allows you go to agency and ask for a reduced ratio if you have a plan that has really high probability of success
- Do we have a good handle on what is important for a site - substrates, WQ, etc?
- Is elevation a big issue for success?
- Was Newport Beach Plan mitigation requirement based on biannual surveys?
- Will this EMP be equal to CMP?
- CEMP is a policy document to steer the actions and consideration and activities of NOAA in evaluating impacts to eelgrass. It was vetted with the other agencies. That plan is an agency structure for looking at eelgrass, but it also lays out what is expected from an applicant
- Would you vote for local acceptance on a formal agreement?
- Long term looking for an MOU or RGP, mitigation banks
- Read in the CEMP, discourages conversion of habitats like mudflats into eelgrass beds.
- Other aquaculture opportunities?
- Uncomfortable with dynamics between competing interests
- Environmentalists not communicating well
- Will there be a tally or aggregate of potential project with impacts and tally of restoration opportunities?
- What does final plan look like?
- Plan needs to carry an understanding of resource, regional context of resource, what you anticipate going forward for that resource, some characterization of the type, scale, and nature of the impacts that may occur under that plan and how they will be addressed in terms of the context of restoration opportunities to ensure that the scaling is there and that the impacts are going to be addressed under the plan. The plan is then adopted by the Harbor District and the agencies. It will spell out the expectations of all the parties.
- Broad guidance document
- Avenue for broader scale, longer-term solutions
- Plan can be amended as needed moving forward

CLOSING (Sarah West - Planwest)