

Subtidal and Intertidal Habitat Goals for Humboldt Bay and the Eel River Estuary

Advisory Team Meeting Notes

June 12, 2008, 1:30 to 4:30 pm, Eureka Sea Grant Office

- I. In Attendance:** Diane Ashton (NOAA Fisheries), Steve Cannata (DFG), Annie Eicher (California Sea Grant Extension), Vicki Frey (DFG), Andrea Pickart (USFWS), Bill Pinnix (USFWS), Kirsten Ramey (DFG), Susan Schlosser (California Sea Grant Extension). Joining via teleconference: Joel Gerwein (Coastal Conservancy).

- II. Project Administrative Updates—Susan Schlosser**
 - A. Approved 05/08/08 meeting notes
 - B. Mapping update: the weather was not suitable during our June window (days when tide was sufficiently low at a time of acceptable sun angle) for the aerial flight. The next window is July 3-6, 2008.
 - C. During the June low-low tides, Sea Grant staff collected quantitative field data to characterize eelgrass and macroalgae habitats. We visited the same sites that we sampled in June-July 2007. The 2008 data will provide information on annual variation in biomass of eelgrass and macroalgae on intertidal mudflats in Humboldt Bay.

- III. Lower Eel River Basin Assessment Presentation—Steve Cannata**
 - A. The Lower Eel River Basin Assessment Report is a project of the Coastal Watershed Planning and Assessment Program (CWPAP) that conducts fishery-based watershed assessments along the entire California coast. The Lower Eel River Basin was chosen as an area for assessment because of its high fishery value to anadromous salmonids.
 - B. The focus of the report is to assess current salmonid habitat conditions and salmonid population levels, identify impacts, and guide watershed management and habitat improvement activities in a timely, cost effective manner.
 - C. The assessment team used the California Watershed Map (CalWater version 2.2.1) to delineate the Lower Eel River Assessment Basin. The area was further partitioned into four subbasins for the purpose of analysis: the Estuary, Salt River, Middle and Upper subbasins.
 - D. Assessment products include:
 1. Collection of Lower Eel River Basin historical and sociological information
 2. Description of historic and current vegetation cover and change, land use, geology and fluvial geomorphology, water quality, and instream habitat conditions
 3. Evaluation of watershed conditions affecting salmonids
 4. An interdisciplinary analysis of the suitability of stream reaches and the watershed for salmonid production and refugia areas
 5. Tributary and watershed recommendations for management, refugia protection, and restoration activities to address limiting factors and improve conditions for salmonid productivity
 6. Monitoring recommendations to improve the adaptive management efforts
 7. Ecological Management Decision Support system (EMDS) models to help analyze data
 8. Databases of information used and collected
 9. A data catalogue and bibliography

10. Web based access to the Program's products:
<http://coastalwatersheds.ca.gov/Watersheds/Northcoast/EelRiverLowerBasin/EelRiverLowerAssesmentReport/tabid/669/Default.aspx>
<http://coastalwatersheds.ca.gov>
<http://www.calfish.org>
<http://imaps.dfg.ca.gov>
<http://bios.dfg.ca.gov>
<http://www.esri.com/software/arcgis/arcims/index.html>
- E. Major findings and recommendations:
 1. Reduction of wetlands and tidal prism: much of the historic connectivity between tidal flow and salt marsh is now blocked by levees and flood gates. The reduction in tidal connectivity and loss of area due to sedimentation has contributed to an overall loss in the estuary tidal prism. Recommendation: to increase tidal prism, use levee setbacks or remove levees and modify or remove tide gates to restore connectivity of slough channels with flood plain wetlands.
 2. Bank Erosion and Sediment Accumulations: excessive amounts of sediment are delivered to the estuary from upstream sources; estuarine channel banks continue to erode, especially near Fernbridge resulting in channel widening and increased bank to width ratio; pool habitats are reduced in area and depth. Recommendation: to protect banks and control erosion, establish adequate streamside protection zones to encourage growth of riparian vegetation to help stabilize stream banks; armour severely eroding banks with bioengineered techniques that secure large wood pieces into banks and integrate live trees into the stabilization project.
- F. Eel River Estuary Subbasin Conclusions
 1. The estuary provides important habitat for juvenile and adult salmonids. Juvenile salmonids use the estuary for extended rearing habitat and use an estuarine rearing strategy to increase in size before entering the sea.
 2. There has been a significant reduction in estuarine habitat quality resulting from land use practices within the estuary and excessive sediments delivered from upstream sources
 3. There are opportunities for improvements, but it is challenging to restore tidal wetlands on private lands
 4. Goal: promote community level relationships among biotic and abiotic components
- G. Field trip to Eel River Estuary: we will plan a field tour for the AC in the near future.

IV. Review of EndNote—Kirsten Ramey

- A. EndNote is a bibliographic software program we are using to collect and annotate documents pertaining to habitats in Humboldt Bay and the Eel River estuary, and other documents relevant to the process of habitat assessment and restoration
- B. Review of basic EndNote functions:
 1. Opening a reference
 2. Sorting references
 3. Searching references
 4. Editing references

5. Adding a new reference
 6. Importing a reference
 7. Editing/Creating Reference types
 8. Changing display fields
 9. Exporting reviewed references
- C. Kirsten will prepare and make available an EndNote reference sheet

V. Literature Review Process—Annie

- A. We will post the Habitat Goals EndNote library, *sans* pdfs, to the collaborative tools website. We will also post a bibliography with abstracts in Word.
- B. We will perform searches by topic area, and prioritize documents for review. We will make these lists available to AC members so they can select documents they wish to review.
- C. We will make selected pdfs available by request.

VI. Conservation Action Planning (CAP) Process (Review)—Susan

- A. Developed by The Nature conservancy, CAP is the process we will use to define focal conservation targets, assess current status and perceived threats, set objectives, and develop strategies for implementation
- B. Review of the 10 steps of the CAP process:
 1. Identify People Involved In Your Project
 2. **Define Project Scope & Focal Conservation Targets**
 3. Assess Viability of Focal Conservation Targets
 4. Identify Critical Threats
 5. Conduct Situation Analysis
 6. Develop Strategies: Objectives and Actions
 7. Establish Measures
 8. Develop Work Plans
 9. Implement
 10. Analyze, Learn, Adapt, & Share

VII. CAP Focal Target Identification—Susan

- A. We are currently focusing on Step 2 of the CAP process: defining targets. Focal Conservation Targets are ecological systems, communities, or species and that are chosen to represent and encompass the full array of biodiversity found in a project area. They are the basis for setting goals, carrying out conservation actions, and measuring conservation effectiveness. In theory, conservation of the focal targets will ensure the conservation of all native biodiversity within functional landscapes.
- B. There are three basic types of focal conservation targets:
 1. **Ecological Systems** (or “ecosystems”) are assemblages of ecological communities that occur together on the landscape and share common ecological processes (e.g., flooding), environmental features (e.g., soils and geology) or environmental gradients (e.g., precipitation).
 2. **Ecological Communities** are groupings of co-occurring species, including natural vegetation associations and alliances.
 3. **Species** – Specific types of species could include:

- a. Species of special concern - due to vulnerability, declining trends, disjunct distributions or endemism within the ecoregion
 - b. Globally imperiled and endangered native species - (e.g., IUCN Red List species, both global and national red lists, or species ranked G1 to G3 by Natural Heritage Programs)
 - c. Globally significant examples of species aggregations - such as a migratory shorebird stopover area aggregation
 - d. Major groupings of species - share common natural processes or have similar conservation requirements (e.g., freshwater mussels, forest-interior birds)
 - e. Other key species - including keystone species, wide-ranging regional species, umbrella species and flagship species
- C. The coarse filter/fine filter approach is a useful framework for selecting focal conservation targets.
- 1. Coarse filter targets are those ecological systems or community types or occasionally species that, when conserved, also conserve a larger suite of species within the project area. The species and natural communities that would be conserved by protecting a coarse filter target can be described as nested targets.
 - 2. The fine filter is composed of species and communities that are not well captured by coarse filter targets and require individual attention. These targets may be rare, face unique threats or require unique strategies.
- D. Guidelines for lumping or splitting targets
- 1. Group conservation targets that:
 - a. Co-occur on the landscape
 - b. Require similar ecological processes
 - c. Have similar viability scores, or one target can serve as an indicator for the other
 - d. Have similar threats
 - 2. Split out species, species assemblages, or communities that require special attention not captured by group targets
- E. The Big Idea: when the *focal* targets are all assembled you have in fact captured all the parts of your ecosystem and the critical processes that drive and sustain it.

VIII. NEXT MEETING: WEDNESDAY, JUNE 25 1:30-4:30, SEA GRANT OFFICE.

Please note that this is not our regularly scheduled time. Too many people will be out of town in July, and we did not want to wait until August to resume the process of selecting focal targets. We are currently working with CAP tutorials and we will have materials available at our next meeting to guide us through this process.

THANK YOU!!