Project Development in the Lower Columbia River and Estuary

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Outline

• Increased Need for Project Development
• Lessons Learned from past projects
• Restoration Opportunities – Key Questions
• Estuary Partnership’s Prioritization Framework
• Fort Clatsop Restoration Project
Increased Need for Project Development

• Increased Focus on the Estuary
  – FCRPS Biological Opinion
  – NOAA Recovery Plans

• Increased Funding for Project Implementation

• Increased scrutiny of restoration efforts
Project Development

• Opportunistic vs. Strategic Approach
  – Proposals in response to funding opportunities
  – Developing projects regardless of available funding

• Importance in Identifying Sites
  – Where restoration **should** occur vs. where it **can** occur
Project Development

• Basic Steps
  – Planning
  – Implementation
  – Effectiveness Monitoring
  – Data Management/Dissemination
  – Adaptive Management

• An Ecosystem-Based Approach to Habitat Restoration Projects with Emphasis on Salmonids in the Columbia River Estuary (PNNL, CREST, EP, BPA, USACE – 2003)
Project Development . . . Lessons Learned

• Background work is vital
  – Community involvement and buy-in is necessary before requesting funding
  – Modeling, surveying, and technical investigations are extremely important in the planning phase
    • To ensure the project will be successful
    • To obtain community support
Lessons Learned Continued

• **Expect contingencies**
  – Delays in schedules (permitting)
  – Cost overruns

• **Projects may change due to any number of reasons**
Restoration Opportunities - Key Questions

• Are estuary restoration projects in short supply?
  – Have we exhausted the supply of “low hanging (projects) fruit”? Are “easy to achieve” restoration opportunities still available?
Restoration Opportunities – Key Questions

- How do we remedy the deficit in projects?
- What strategies/partnerships are necessary to develop projects?
Are estuary restoration opportunities limited?

- Some evidence that the “low hanging fruit” type of projects has been exhausted
- Limited number of responses to recent Requests for Proposals
- Lack of proposals located in the mainstem and estuary
- No shortage of tributary projects
  - Lack of projects that have been developed in the context of the larger estuarine ecosystem
How do we remedy the shortage of projects?

- Need to develop the capacity of the region to identify and implement projects
- Organizations Work
  - In specific geographic locations
  - With specific mandates
  - With specific management plans
- Increased funding for outreach efforts
New Types of Projects

- Sediment Management
  - Scrape-down
  - Build-up
  - Notching
- Pile structure removal
- Large scale levee setbacks
Reliance on Regional Plans

- Prioritizing projects / actions in response to ESA recovery plans
- Prioritizing projects / actions in areas that benefit multiple species
- Subbasin plans
Needs

- Ensuring a supply of projects are ready for implementation when funding is available
- Ensuring those projects have been developed in a broad ecosystem context
- Ensuring there is regional capacity to manage the projects
Needs

- Ensuring we can successfully show that past efforts have made a difference
  - Effectiveness monitoring
- Making sure the gains in focus/funding are maintained
- Being able to work in an already developed system that is continuing to undergo development pressures
Estuary Partnership’s Restoration Prioritization Framework

- Systematic approach to assessing current conditions of the landscape
- Multi-criteria analysis of several stressors acting on controlling factors
- Controlling factors determine ecosystem functions
- Considers disturbance levels at multiple spatial scales (SITE and LANDSCAPE)
- Relationship between SITE and LANDSCAPE scores guides restoration strategy within individual locations
• **Controlling Factors – 10**
  - Hydrology, sediment quality, water quality, light, physical disturbance

• **Stressors – 20**
  - Bonneville flow alteration, diking, industrial development, 303(d) listed waterways, flow restrictions, agriculture
Prioritization Framework

Site and Management Area Rankings
Prioritize Tier 1 and Tier 2 Sites

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<tr>
<th>Site</th>
<th>Site Disturbance</th>
<th>Landscape Disturbance</th>
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<tr>
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<tr>
<td>Tier 2b</td>
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<td>Low</td>
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Strategic Site Identification

Identified through outreach programs; favorable locations
Future Restoration Prioritization

• Use existing tools to identify projects with high restoration potential
• Improving existing tools and creating new data sets
• Incorporate effectiveness monitoring
  – Results from effectiveness monitoring can be used to develop a more rigorous prioritization framework
Effectiveness Monitoring

- Effectiveness monitoring currently being implemented
  - CREST and CLT
- Increased monitoring efforts planned
- Lack of data; many restoration projects are still relatively new and results may not be evident for years
Effectiveness Monitoring

- Restoration is experimental
- Future success is linked to the success of past projects
- Importance of selecting appropriate locations for restoration projects
  - Reference Sites study
- Monitoring should help guide future project development efforts
  - Determine what works and replicate it
Fort Clatsop Restoration Project

• **Project Goal**
  - Maximize tidal connectivity between 45 acres of diked pasture and the Lewis and Clark River

• **Approach**
  - Culvert/tidegate removal
  - Replaced with 46 ft. span bridge
Fort Clatsop – Pre-Restoration

Columbia River Estuary Study Taskforce
Fort Clatsop

- Contingency – price of construction materials increased
- Solution – remainder of funding needed was secured
- Result – project was successfully completed
Fort Clatsop – Post-Restoration

Columbia River Estuary Study Taskforce
Fort Clatsop Phase II

- Tidal connectivity was maximized
- Effectiveness monitoring is being implemented
- Potential for future restoration actions
  - Monitoring will help managers decide what additional restoration treatments may be beneficial at the site
Ending Thoughts

• Estuary is receiving more attention and more funding

• Need for strategic project development

• Local outreach/support will always be important in project development

• Effectiveness monitoring is vital for project development and implementation