

Restoration Action Effectiveness Monitoring and Research in the Lower Columbia River and Estuary: Programmatic Plan

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Process

- Collaborative effort of BPA, Corps, and LCEP.
- Authors = G Johnson, C Corbett, J Doumbia, J Sager, M Schwartz, R Scranton, and C Studebaker
- Draft elements for the AEMR plan in the 2012 CEERP Strategy Report
- Building a new AEMR plan this summer for inclusion in the draft 2013 SR

What is AEMR?

- Action effectiveness is a critical element of the CEERP adaptive management process.
- Funds for AEMR are limited and need to be spent wisely to obtain useful, cost-effective information for management.
- A programmatic approach to AEMR helps address this need.
- Regional stakeholders can implement this approach to support the Columbia Estuary Ecosystem Restoration Program (CEERP) and the broader estuary restoration effort.

Why is AEMR Important?

- To determine the success of restoration actions at site, landscape, and estuary-wide scales in terms of habitat access/opportunity, habitat capacity and realized function.
- At a project-level, stakeholders use AEMR to adaptively manage the restoration activity.

Goal

- Provide a plan for a programmatic approach to action effectiveness monitoring and research (AEMR) that regional stakeholders can implement to support the Columbia Estuary Ecosystem Restoration Program (CEERP) and the broader estuary restoration effort.

Objectives

- Summarize key previous work on AEMR planning
- Explain a technical approach
- Prioritize AEMR activities -- what, when, where, and how much to monitor or research
- Organize AEMR implementation -- projects, data management, reporting, and communications.

Restoration Actions

AEMR depends on the attendant restoration actions

- Restore riparian areas (CRE 1.4)
- Create habitat by applying dredged material to beneficial use, including notching and scrape-down (CRE 6.2 and 6.3)
- Remove or modify pilings (CRE 8.2)
- Restore degraded off-channel habitat (CRE 9.4)
- Breach dikes (CRE 10.1)
- Remove tide gates or culverts (CRE 10.2)
- Upgrade tide gates or culverts (CRE 10.3)
- Control invasive plant species and plant native species (CRE 15.3)

Indicators

An indicator is a measurable parameter that characterizes an important aspect of the ecosystem and is sensitive to changes in the system.

There are many potential indicators, depending on program needs and project-specific conditions, ranging over a spectrum from extensive monitoring to intensive research.

- *Action-effectiveness monitoring involves spatially extensive sampling of basic restoration indicators*
- *Action-effectiveness research involves locally intensive sampling at restoration and reference sites to characterize ecosystem structures, processes, and functions.*

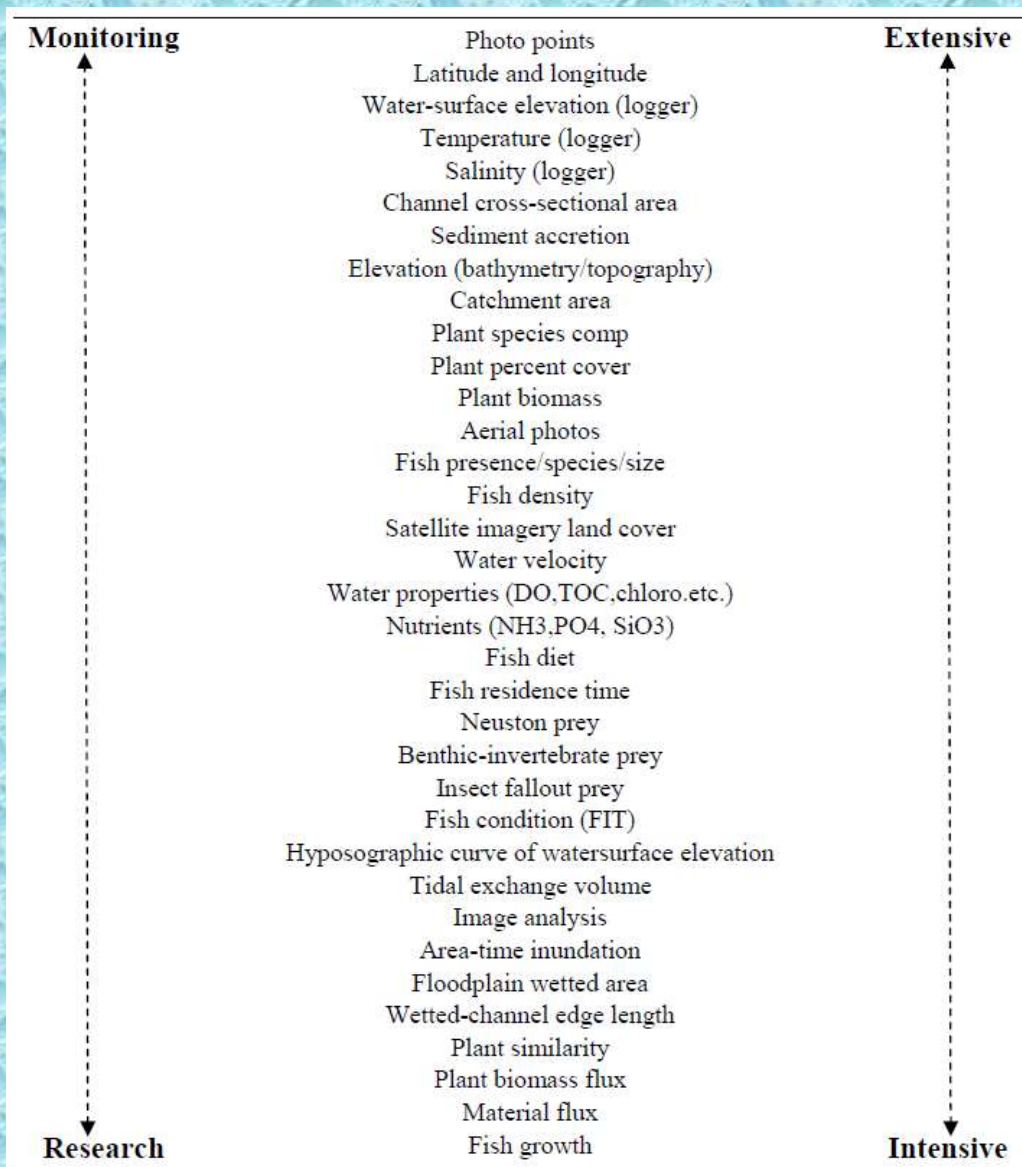


Figure 3. Monitored Indicators for Action Effectiveness Over the Monitoring/Research and Extensive/Intensive Spectrum (from Johnson et al. 2012)

Schedule for Next Steps

- Draft due to region July 23, 2012
- Comments due August 30, 2012
- Final due to be released October 1, 2012

Questions, Comments, Feedback?

