Contributing to the Recovery of an Inland Sea: The Remediation and Restoration of Urban Rivers

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Special thanks to:
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Duwamish River
Seattle, WA
High Profile

JOIN US Saturday, April 16th from 9:30 - 2:00
Restoring the Health of our River and its Watershed!

High Profile is a great opportunity for our community to learn about their local environment. Volunteer opportunities vary widely from working on the river in boats, removing debris; planting native plants and removing invasive species in a variety of habitats which include a natural bog, site along the river or in our urban forests.

There are still opportunities to help restore the Duwamish this Saturday with our coalition partners at the following sites:

- Pigeon Point Park (West Seattle)
- Ross Island Bridge (West Seattle)
- Oswego North Park (Georgetown) (includes Carlton Block Party)
- Duwamish Substation (South Park)
- Herrington House Park (Seattle/ Duwamish)
- Cedar Moore Park (Tukwila/South Park)
- Find your site and sign up here!

EARTH MONTH EVENT KICKS OFF IN WEST SEATTLE
Join us at 9:30 AM on April 16th, for our official Kick Off with 34th District Representative Joe Fitzgibbon at Greg Davis Park in West Seattle, Representative Fitzgibbon, named Legislator of the Year for his leadership in environmental issues in 2015, will speak on the importance of our urban natural areas and environmental stewardship. Come learn about Longfellow Creek and the efforts to restore it. Coffee and refreshments will be served.

This year DuwamishAlive! will focus watershed restoration efforts along Longfellow Creek in West Seattle from its headwaters at Ross Island Bridge to the Brandon River Natural Area through to Pigeon Point Park. Longfellow Creek is Seattle’s second largest salmon-bearing stream flowing directly into the Duwamish River. Each year 60-100% of salmon in Longfellow Creek die before they get the chance to spawn due to pollution from heavy stormwater runoff and threatened habitat. Our goal is to improve the water quality within the Longfellow Creek watershed by establishing natural stream systems throughout critical areas and improving the native habitat.

About the Campaign

Help LONGFELLOW Return the River. Join the historic initiative to restore the Longfellow River. A few years hence the river once more will be self-sustaining. Each locomotive car is a reminder to KEW WALK -- to fight the forces that are destroying our river.

For more information, call 206.813.2374 or email info@Sierraclub.org.

Contact us with a question, provide feedback, or report a problem.

The Duwamish River is one of America’s most endangered rivers. The river’s pollution and destruction have harmed our local environment, as well as our health and well-being. The River Coalition is working to restore the Duwamish River and promote a healthier, more sustainable future for the region.

The Coalition is seeking to improve water quality and restore habitat along the river’s length. We are working with partners to implement innovative solutions that address the root causes of pollution and promote ecological health.

Support the Coalition’s efforts to protect and restore the Duwamish River. Your donation will help us continue our work to improve water quality, restore habitat, and promote a healthier, more sustainable future for the region.

Donate now to support the Coalition’s work.

Donate Now
Active Public

Public Involvement

The Duwamish River Cleanup Coalition (DRCC) works with EPA and other agencies to develop multimedia, culturally competent public meetings that provide necessary services for effective public participation, including test, child care, and language interpretation.

Community Workshops

DRCC/TAG hosts community workshops with technical experts to help residents understand and formulate their opinions about cleanup proposals. DRCC/TAG offers workshops to interested community organizations on all major cleanup proposals and plans – contact us at contact@duwamishriver.org (206) 904-0241 to request a workshop or presentation for your group.

Environmental Justice Impacts

Over a century of industrial and urban activity left the Duwamish Riverine with industrial, heavy, and marine life in the Lower Duwamish Waterway. The Duwamish River, a deep harbor, and a key part of Seattle’s history, has been a part of the city’s identity for over 150 years. However, the river’s current condition has made it unsuitable for human habitation.

The U.S. Environmental Protection Agency and the Washington State Department of Ecology are responsible for cleaning up the riverine sediments in the Lower Duwamish Waterway. They have recently published their recommendations for cleaning up the Duwamish Riverine. The EPA is working with the Duwamish Riverine Community to conduct an environmental justice analysis of the cleanup options and their potential impacts on the nearby community.

The Environmental Justice Analysis for the Lower Duwamish Waterway is critical for understanding the potential impacts of the cleanup plan on the community. It is designed to ensure that the community is informed and engaged in the decision-making process.

Public Comment Period Ends June 13, 2013

Find the Proposed Plan, Source Control Strategy, and Environmental Justice Analysis on our website.
Active Industrial History

- One of the first NRDA settlements in USA (1991)
- Multiple ongoing State and Federal Cleanups
  - Multiple contaminants and responsible parties (200+)
- Multiple trust resources:
  - 8 Salmon and Trout Species
- Multiple Trustees
- 20+ Restoration Actions
Cleanup Actions

• 3 Superfund Sites with 7 Early Action Areas
  - 3 EAA’s completed, 4 underway

• Proposed Plan 2015
  - $305 Million, 156 acres active remediation
  - 7 yr Remedial Actions plus 10 yr to reduce contaminant concentrations to lowest predicted levels through natural recovery.
  - Contaminant concentrations in the rest of the waterway will be reduced through cleanup of the EAAs (29 acres) or MNR (256 acres).
Cleanup Actions
Restoration Action Objectives

- Implement restoration with a strong nexus to the injuries caused by releases of hazardous substances in the Lower Duwamish River.

- Provide a net gain of habitat function beyond existing conditions for injured fish and wildlife by restoring important habitat types and the physical processes that sustain them.

- Integrate restoration strategies to increase ecosystem structure and function. Preserve existing threatened functioning habitats while enhancing or creating new high-value habitats.

- Coordinate restoration efforts with other planning and regulatory activities to maximize restoration potential. Ensure that restoration sites and associated habitat functions are preserved in perpetuity.

- Involve the public in restoration planning and implementation through education and outreach.
Lessons Learned

- Establish Clear Project Goals and Decision Making Process
- Involve experts early
- Be flexible and open to solutions that achieve function
- Collaborate and use partners strengths
- Create solid contract specifications and INSPECT
- Identify and Plan to address risks
- Be explicit about areas of uncertainty
- May need to adjust standards or criteria
  - Criteria not of equal value
  - Reference site usefulness
  - Methodology- allow for change
- What is ‘stable’
- Statistical relevance
- Reference site usefulness
Lessons Learned

**Construction**
- Hydrology and in-water work window
  - Dewatering
- Security
- On-site historic resources
  - Community reuse interest
- Earthwork - what’s under there?
  - Contaminated soils
  - Cultural resources
  - Utilities
  - Adjacent buildings

**Criteria Success**
- Riparian planting survival
  - Overplanting necessary
  - Protection of Emergents
- Nuisance species
- Irrigation
  - Site maintenance
- Protection of Emergent vegetation
So What?

- Overall improvement at restoration sites, but how does this contribute to overall PS Recovery?
  - Projects measure short-term impact of actions
    - Habitat created and its use
  - Large-scale and long-term indicators of overall recovery of the large estuary respond to collective impacts
  - Long-term indicators respond slowly and affected by multiple pressures not addressed in remediation or restoration

- 37 Vital Sign Indicators
  Mixed results and few indicators on trajectory to meet 2020 goals.
  -10 indicators improving
  -6 indicators no change
  -4 indicators mixed results
  -5 indicators worse
  -12 indicators no data
  4 indicators meet 2020 goals
Vital Sign Indicators con’t.

• Pressures continue
  – Land conversion
  – Shoreline armoring
• Species indicators signal trouble
• Habitat indicators most progress
• Local improvements in water quality likely short-lived - do not match regional trends

• Looking Forward
  – Climate change
  – Ocean acidification
  – Much work still to be done!