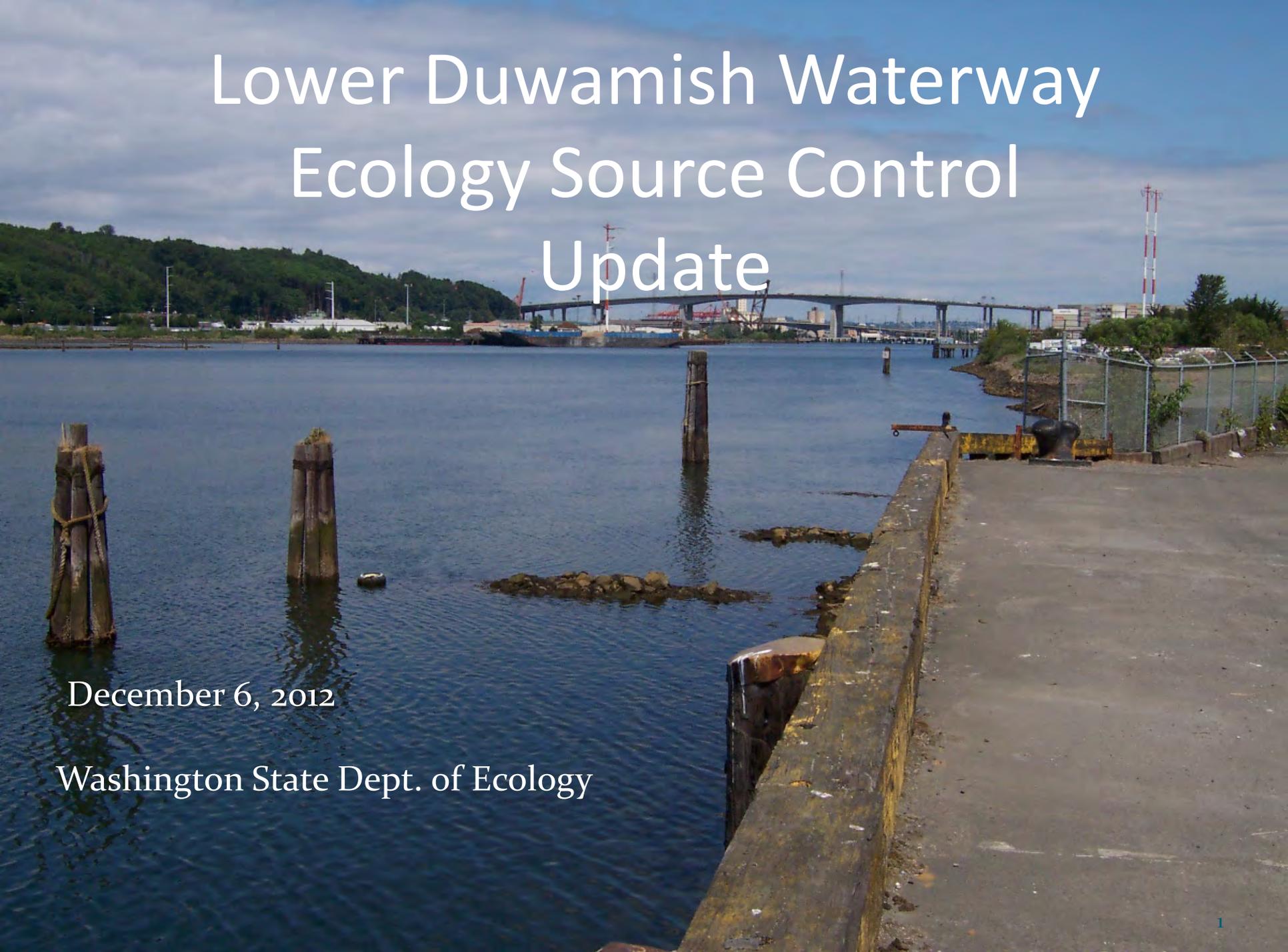


# Lower Duwamish Waterway Ecology Source Control Update



December 6, 2012

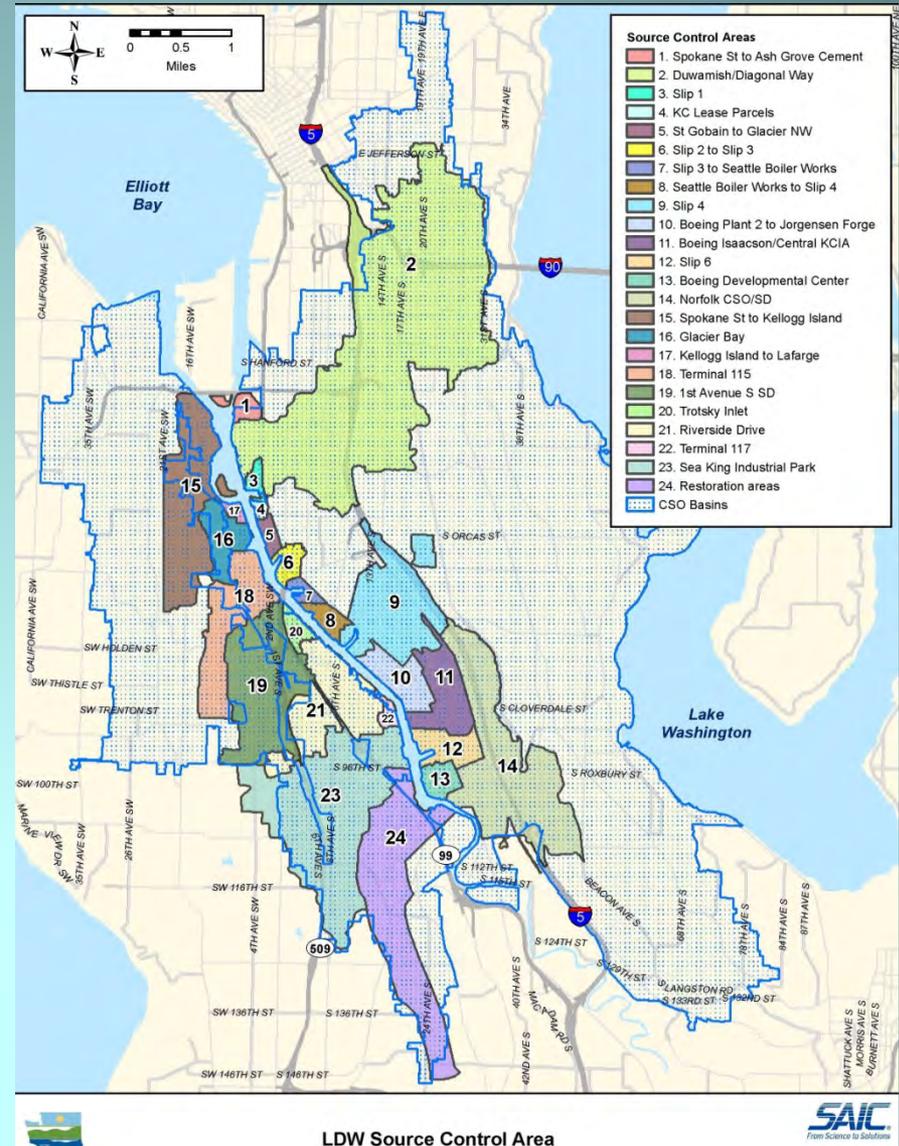
Washington State Dept. of Ecology

# Overview of Ecology Activities

- **Source Control Action Plans Update**
- **Source Control studies**
- **Ecology Cleanup sites update**

# Source Control Action Plans

- Completed – 20
- In progress – 4
  - 1st Avenue S
  - Spokane to Kellogg
  - Sea-King Industrial Park
  - Restoration Areas
- **Finish by June 2013**



# Source Control Studies

- **Cement Kiln Dust (CKD) Mapping Project**
- **Air Deposition Scoping Study**
- **Stormwater Pollution Prevention Plans & Outfalls Project**
- **Green-Duwamish River Scoping Study**

# Cement Kiln Dust (CKD) Mapping Project

## Why map cement kiln dust?

- Waste material from manufacture of Portland Cement
- Used as fill on many properties in Lower Duwamish area in the 1970's
- High concentrations of lead, arsenic, cadmium & caustic leachate (pH 13)
- Is it a threat to the LDW or people?



# Cement Kiln Dust (CKD) Mapping Project

## Concerns:

- Is it a source of metals to the LDW?
- Is the high pH mobilizing other metals or chemicals?
- Is it causing releases from underground fuel systems?
- Is it degrading metal sewer or water lines?
  - Pathways to the LDW
  - Release of water could affect movement of subsurface contamination
  - Human Exposure



# Cement Kiln Dust (CKD) Mapping Project

## What will it give us?

- Footprint, depth, groundwater plumes, leachate seeps
- Identify potential pathways to waterway
- Record of arsenic or other metals in surface water, storm drains, groundwater?
- Other potential hazards?
- Summary of studies: What is known about CKD in the subsurface

# Air Deposition Scoping Study

**Goal:** Identify potential air sources affecting the LDW and review efforts in other areas on air deposition of contaminants



# Air Deposition Scoping Study

## Scope

- No sampling – research only
- Catalogue stationary air sources
  - Puget Sound Clean Air (PSCAA) files
- Literature review of local studies and air deposition studies in other areas with more advanced programs

# Air Deposition Scoping Study

## **Deliverables:**

Report due June 2013

- For each stationary facility:
  - Why did they have to register with Puget Sound Clean Air Agency (PSCAA)
  - Parameters monitored
  - Parameters that are also COCs for LDW sediments.
  - Reporting thresholds to PSCAA?
  - Compliance history for last two years

# Air Deposition Scoping Study

## **Deliverables:**

- Summary of relevant studies – local and national
- Relative contributions from stationary sources and mobile sources.
- Deposition-resuspension-redeposition-sequestration process of COCs
- Roles, responsibilities, and limitations of EPA, Ecology and PSCAA for regulation of LDW COCs

# Stormwater Pollution Prevention Plans (SWPPP) & Outfalls

**Goal:** Match NPDES discharges to specific outfalls

- Update outfall information for permitted facilities
- SWPPPs submitted to Ecology as requested
- SWPPPS on file – limited number, out of date
- Discharge locations in databases: incomplete, inaccurate, only part of the discharge pathway shown

# SWPPPs & Outfalls

## Process

Joint effort - Toxics Cleanup & Water Quality Programs

- WQ Required submission of SWPPPs
- Identify discharge locations – past and present
- Checklist of required elements
- TCP contractor reviewed 100+ SWPPPs & compared to checklist

# SWPPPs & Outfalls

## Results

- All discharge points can be linked to a specific outfall
- Previously undocumented outfalls identified
- 100 SWPPPs updated or created
- Snapshot of the state of SWPPPs
- PDFs of all SWPPPS submitted

# SWPPPs & Outfalls

## Next steps:

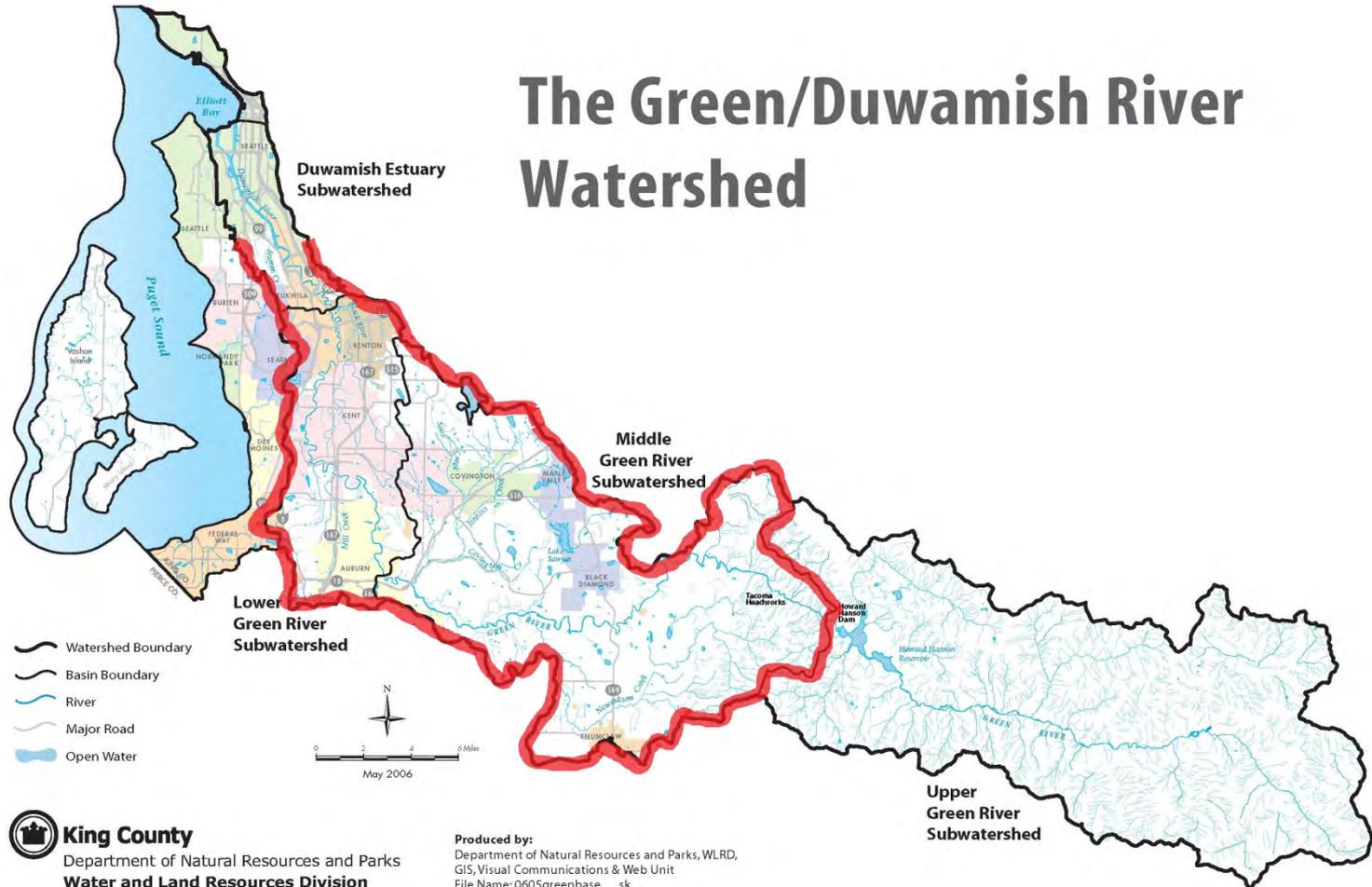
- Add weighting factors to checklist to assist with prioritizing follow-up
- Get Permittees to address deficiencies
- Review existing sediment data at permitted outfalls or outfalls with multiple permitted facilities

# Green-Duwamish River Scoping Study

**Question:** Are upstream sources affecting the LDW?

- Approximately 99% of the sediment load to the LDW comes from the upstream Green-Duwamish River.
- Sediment loading is a possible source of recontamination to the LDW sediments
- Incoming sediment from the Green-Duwamish River will influence the LDW surface sediment quality after cleanup

# Green-Duwamish River Scoping Study



# Green-Duwamish River Scoping Study

## Summary of Existing Information Report

Basis for developing strategy for future source control to protect the LDW

- Identify and map potential sources
- Map municipal storm drain systems and pathways
- Plot existing sediment data
- Publish June 2013

# Green-Duwamish River Loading Study

**Goal:** Develop better understanding of contaminant loading from the Green River

- Expands on earlier Ecology Green River work
- Focus on particulate matter and water quality
  - Metals, PCBs, pesticides, dioxins, SMS chemicals
  - Suspended Particulates, water, in-stream sediments
- Investigating sediment movement during storm events
- Begin January 2013

# Questions

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