Columbia River Basin Toxics Reduction Workgroup

Strategic Initiatives

December 12, 2012

Hood River, OR

Purpose of Presentation

- Issue Papers: Provide overview of issue papers presented to Columbia River Executives on November 1

- Initiatives: Discuss 6 proposed initiatives as follow-up from November 1 meeting

- Implementation Teams: Discuss formation of implementation teams for initiatives.

2011 Executive Meeting

- Hosted by Upper Columbia River United Tribes; Executives from Tribal, Federal, State, and Non-profit organizations.
- Agreed to collaborate to reduce toxics in Basin.
- Formalized the Columbia River Toxics Working Group as the key group in the Basin to develop collaborative approach to reduce toxics.

June 2012/August CRTRWG

- June 2012 meeting to develop toxic reduction actions for consideration at November 1st meeting.
- Hosted by CRITFC; attended by 20 organizations including 8 tribes and inter-tribal organizations
- Identified many actions; agreed to focus on a few.
- Discussed at August CR Toxics Reduction WG.

June 2012: Assumptions

- **Shrinking budgets** require prioritizing actions.
- **Prevention** is cheapest, smartest, and healthiest approach to reduce toxics
- Given fiscal/political situation, **emphasize collaboration and voluntary actions.**
- Essential to have **enforcement as backstop**.

Five Action Areas

- Develop/expand sustainable purchasing.
- Enhance existing effective programs.
- Emphasize need for stormwater controls.
- Address chemicals of emerging concern.
- Advocate for resources and reform of Toxic Substances Control Act (TSCA).

#1: Sustainable Purchasing

- Why is government purchasing of low toxicity products a priority?
  - Need to “walk the talk” to have credibility with others
  - Create demand in marketplace for alternative products
  - Experiences can inform efforts of private retailers

- Opportunities to build on existing and new initiatives
  - Some agencies have already implemented programs, and….
  - Oregon Governor signed executive order in 2012 mandating low toxicity product purchasing by state

#1: Sustainable Purchasing

- What would purchasing guidelines and programs look like?
  - Prioritize product categories → where can greatest environmental benefits be realized?
  - Purchasing guidelines could include multiple steps:
    - Ensure complete information to avoid "regrettable substitutions"
    - Using toxic chemical priority lists as an initial screen
    - Preference for 3rd Party Certified Products (e.g., EPA Design for Environment Program)

Design for the Environment
U.S. EPA
Look for the label!

#1: Sustainable Purchasing

- What are the anticipated outcomes and how would they be measured?
  - Achieve measurable reductions in quantities of priority toxic chemicals in products purchased by governments in the region
  - Surrogate metrics may be needed, such as:
    - Expenditures on products
    - Numbers of products
  - Long-term outcome → Increased availability and affordability of safer alternatives in private marketplace

#1: Sustainable Purchasing

- How do we move forward with this regional action?
  - Columbia Toxics Working group assembles a team to:
    - Develop guidance for governments in Basin to establish and implement low toxicity purchasing programs
    - Facilitate assistance with implementation
    - Evaluate effectiveness of purchasing guidelines and programs

#2: Enhance Existing Programs

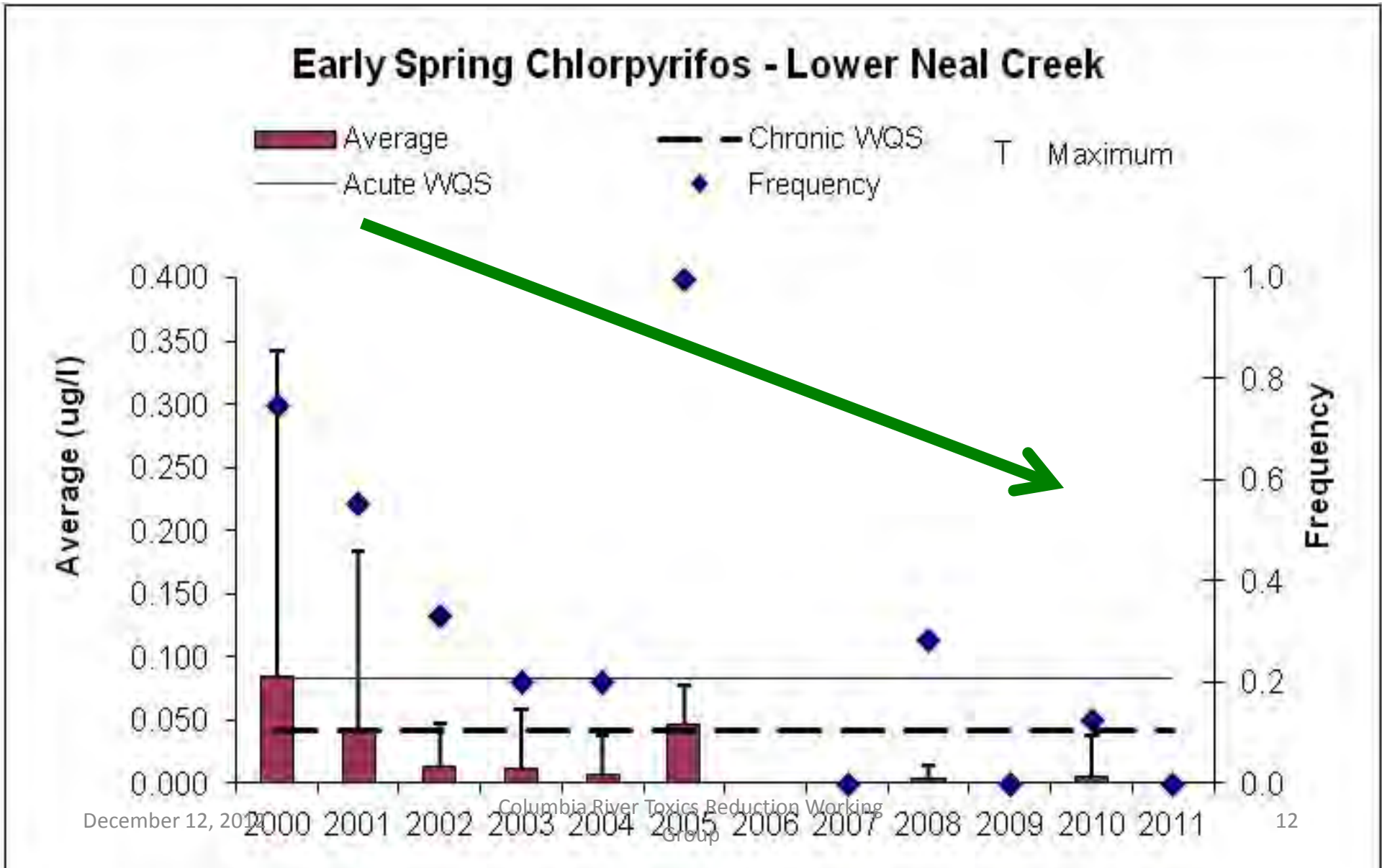
Good News! —currently there are Programs that work, that are effective at reducing or eliminating toxics from entering our waterways.

Agricultural Sector: ***Pesticide Stewardship Partnership*****-**like Programs

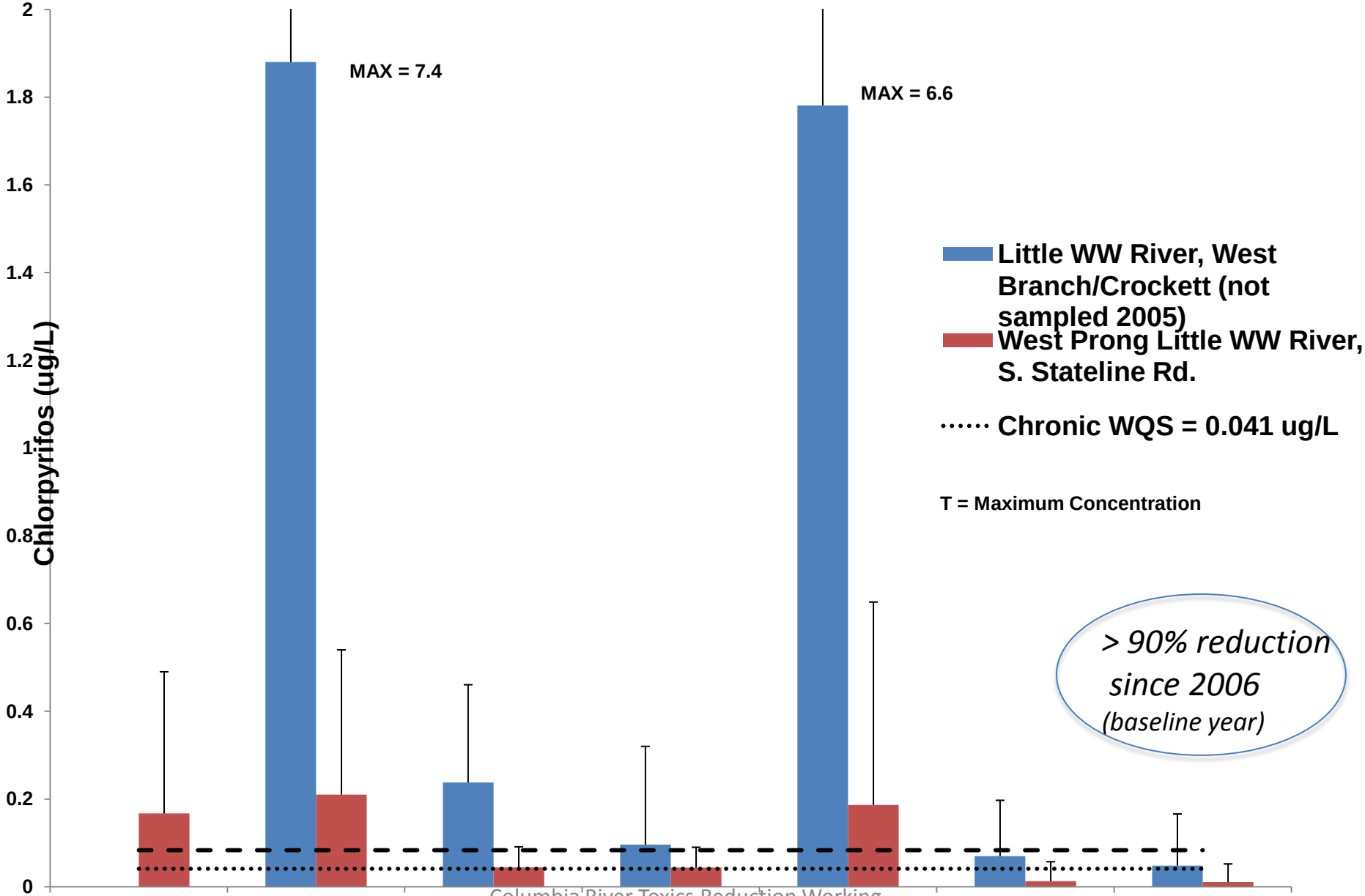
- Voluntary
- Collaborative
- Measureable Results

Hood River PSP: What Can Be Achieved?

Metric: Measurable reduction in concentrations and the frequency of detections over time



Walla Walla Basin: Average and Maximum Chlorpyrifos Detections 2005-2011



#2: Enhance Existing Programs

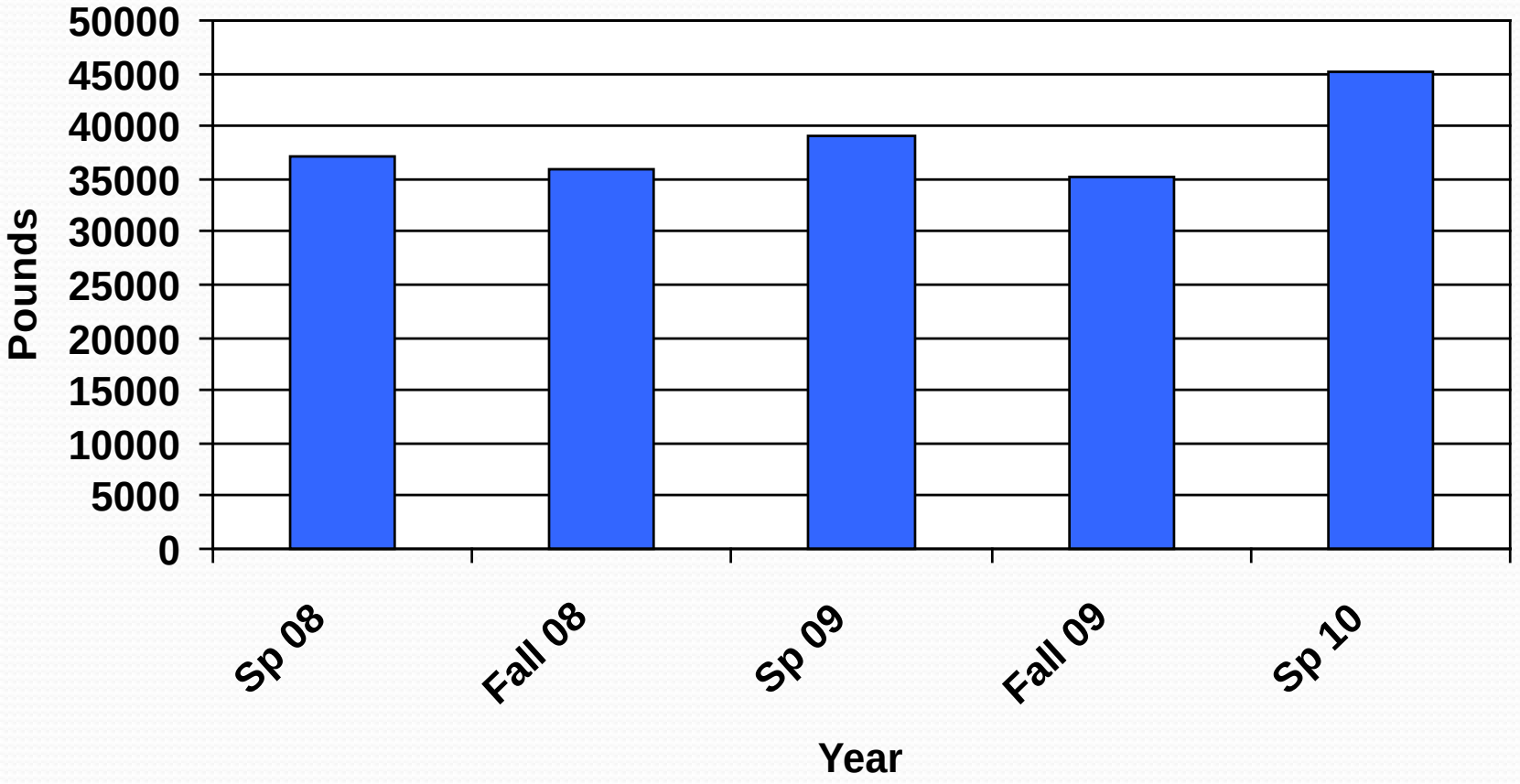
Pharmaceutical and Pesticide Take-Back Programs

- 50 communities around Basin have pharmaceutical take-back programs
- Each state has a pesticide take-back program

Prevention: build upon Sustainable Purchasing initiatives with EDUCATION

Regional Green Chemistry Center

Over 1,026,172 Pounds of Pesticides Collected in Idaho Since 1993



#2: Enhance Existing Programs

- **Partners**
  - Agricultural & Urban Stakeholders
  - Local, State & Federal Agencies
  - Tribal Governments
  - University Research & Extension Service
  - Conservation Districts
  - Watershed Councils
  - NGO's: eco-certification, environmental, community, farm
  - Health Care Providers

#2: Enhance Existing Programs

Results

- Improved Water Quality: measureable reduction in toxics use and waste
- Market access and value for certified products
- Contribution to salmon recovery
- Trust

#2: Enhance Existing Programs

Recommended Actions:

- Expand PSP-like programs
- Support funding research/stakeholder outreach
- Promote eco-certification programs
- Expand Take-Back programs
- Future: Regional Green Chemistry Center

#3: Stormwater

Problem Statement

Stormwater can become contaminated by industrial and commercial activities

- Materials stored outside, loading/unloading of materials
- Spills, leaks
- Airborne contaminants

Small businesses (small-quantity generators of hazardous waste) have less access to pollution prevention expertise

#3: Stormwater

Past and Current Activities

Local Source Control Program, Washington

- Employees of local jurisdictions
- Air, waste, water and spill prevention technical assistance
- 2,800 site visits per year in Puget Sound & Spokane
- 50% of businesses need corrective actions

Oregon

- Portland Bureau of Environmental Services
- “Eco-Biz” Program – automotive & landscaping

#3: Stormwater

Proposed Action

Expand small business source control efforts, support, and coordination to other Columbia Basin urban areas

Expand Local Source Control Program to increase networking and exchange of technical expertise

- *Washington:* Vancouver, Camas, Washougal, Longview/Kelso, Tri-Cities, and Yakima.
- *Oregon:* Portland, The Dalles, Hood River, and St. Helens.
- *Idaho:* Boise and Coeur d'Alene.

#3: Stormwater

Anticipated Outcomes

- Improvements in stormwater quality
  - Source tracing & effectiveness monitoring
- Assistance for municipalities in meeting stormwater permit conditions
- Data on Best Management Practices adoption & behavior change by businesses
  - WA LSC Program through February 2012:

    4,556 hazardous waste, industrial wastewater, stormwater, or spills issues identified, **85% resolved**

#3: Stormwater

Recommendations

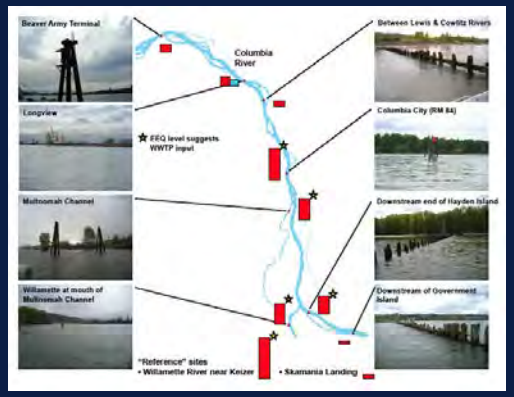
- 10-15 additional Local Source Control Specialists
- $110K per year per LSC Specialist
- Coordination and support staff increase at state environmental agencies – 1.5 FTE per agency

#4: Contaminants of Emerging Concern (CECs)

- CECs include a wide range of chemicals
  - Pharmaceuticals
  - Personal care products
  - Flame retardants (e.g. PBDEs)
- Techniques to measure these chemicals in the environmental have developed fairly recently
- Many (e.g., drugs) are designed to be biologically active
- Most not regulated and effects on aquatic life uncertain

CECs are present in the Columbia River

Sediments



Water column

Resident fish

Juvenile salmon

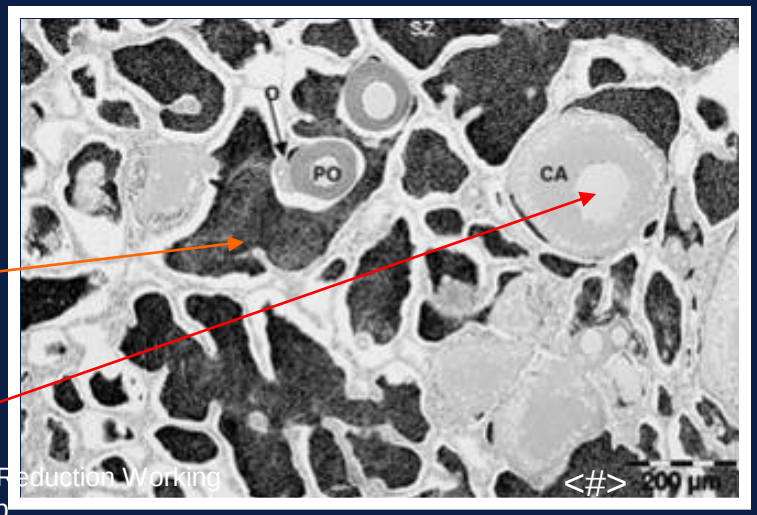
Osprey

CECs are linked to biological effects in fish and wildlife

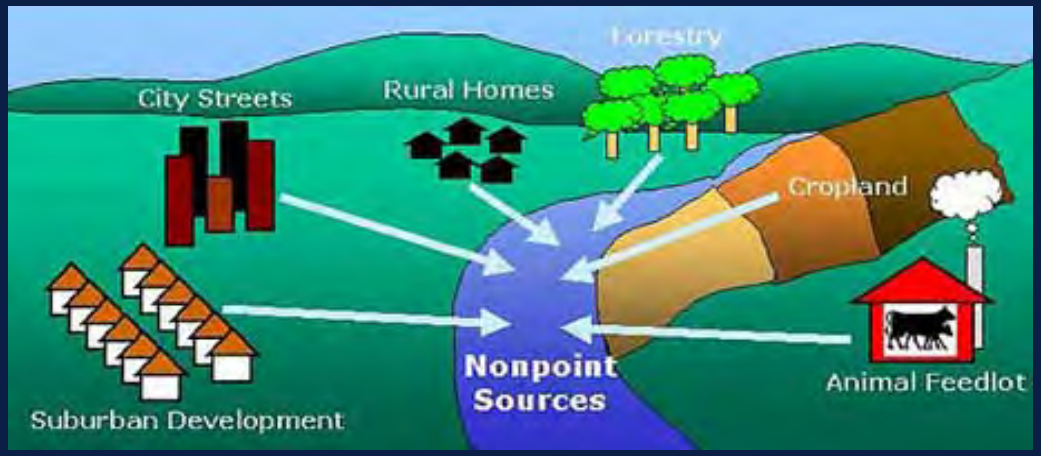
- Reduced disease resistance
- Reduced fertility
- Reduced aggression; poor mating success
- Abnormal growth and development
- Feminization of male fish

Sperm in male gonad = normal

Egg in male gonad = NOT normal!



Identification of sources and pathways helps to target reduction efforts



Many potential point and non-point source inputs

May be delivered to water bodies through stormwater runoff or wastewater treatment plant discharges

Columbia River Toxics Reduction Working Group

USGS science for a changing world

NOAA

Prevention plays a key role in reducing CECs

Take back programs

Retail regulation

Legislative action

USGS science for a changing world

NOAA

#4: CECs- Recommendations

- Support the Columbia River Restoration Act and related legislative efforts to provide sustained funding for:
  - Comprehensive monitoring
  - Development of effective tools to measure CECs in water, sediments and biota
- Collect toxics effects information and use it to develop regulatory standards
- Reduce inputs through prevention and education
  - Take-back programs
  - Green chemistry

#5: Resources and TSCA

Advocate for Resources

- Although toxic contamination poses a threat to the environment and human health there is no sustainable funding.
  - Columbia River Restoration Act
  - US Geological Survey Columbia River Initiative

Advocate for Reform

- Toxic Substances Control Act (TSCA) Reform
- Lead Organizations
  - Tribal governments and tribal consortia
  - Lower Columbia Estuary Partnership
  - NGOs

#5: Resources and TSCA

Columbia River Restoration Act 2010

- Congressman Blumenauer suggests seeking authorization & decides on basin request
- Senator Merkley & Congressman Blumenauer introduce the Act in February 2010; Hearings in both houses; Senate EPW passes unanimously; Great America Outdoors Initiative 2010, does not get to floor.

What it Does

- Raises Stature of Columbia Basin to that of other "Great Water Bodies"
- **Authorizes** Congress to Appropriate Funds
- Requires a Stakeholder Process managed by EPA
- Authorizes EPA to grant funds to address actions in the Estuary Partnership Management Plan and Toxics Reduction Plan

#5: Resources and TSCA

The Columbia River Restoration Act: Why?

- No sustained monitoring
- Demonstrated Contamination
- All uses impaired: agriculture, fishing, recreation
- Equity: $0 for Columbia
- Economic viability of ports
- Decimated fishing industry
- Immediate jobs, Long term economic stability

Benefactors, beside the river and environment

- Marinas – spill prevention plans
- Shipping – invasive species removal
- Agriculture – fencing, GIS targeted pesticide application
- Developers, municipalities – stormwater control

#5: Resources and TSCA

Where are we now?

- **Concerns in 2010**
  - Top down, too much EPA control
  - Funds may not get to partners
  - States roles
- **Redrafting in 2012**
  - Clarify grant program & potential uses of grant funds
  - Potential beneficiaries
  - Voluntary
  - Grant administration options
- **Waiting**
- **Need a Unified, Persistent Regional Voice**

#5: Resources and TSCA

US Geological Survey – Columbia River Initiative

- Requests $1.1 million to address issues including environmental contaminants
  - Provide information on forage fish, which are a critical part of the Columbia River food web and supports a suite of fish, bird and mammal species
  - Address chemical and physical habitat degradation

#5: Resources and TSCA

Toxic Substances Control Act Reform

- TSCA passed in 1976
  - Approved for use – 60,000 chemicals in 1976
  - 5 toxic substance have been restricted
  - Today there are 80,000 chemicals on the market
- Safe Chemicals Act of 2011 (Senate Bill 847)
  - Approved by the Senate Environment and Public Works Committee on July 25, 2012.
  - Would require manufacturers to prove the safety of chemicals before they can be put on the market.
  - All existing chemicals would be subject to safety determinations as a condition for remaining on the market

#5: Resources and TSCA

Anticipated Outcomes

- Funding would enable tribal, state and federal agencies, and NGOs to develop programs to keep legacy and emerging toxic chemicals from harming the Columbia River Basin ecosystem
- Federal reform of toxic chemical legislation would drive green chemistry innovation, create more predictable business environments, and make manufacturers responsible for proving safety

Recommendations

- The Lower Columbia Estuary Partnership and Tribes will work with Senate and Congressional staff to pass the Columbia River Restoration Act
- Tribes will work with Senate and Congressional staff to pass the Safe Chemicals Act and to support the Columbia River Initiative.

6 Initiatives from Exec Meeting

Area	Description	Chair
Sustainable Purchasing	Develop list of sustainable products/list of chemicals of concern	OR DEQ
Green Chemistry	Develop strategy for Regional Green Chemistry Center	USEPA
Chemicals of Emerging Concern	Develop research strategy to characterize biological impacts from chemicals of emerging concern	USGS

6 Initiatives from Exec Meeting

Area	Description	Chair
Pesticide Stewardship Partnership	Develop strategy to expand PSP type programs	Salmon Safe
Stormwater	Develop strategy to expand technical assistance programs to small/medium businesses	WA Ecology
Resource Needs and Policy Reforms	Develop plan to education stakeholders on need for sustainable funding and support EPA's chemical management reform	CRITFC and LCREP

Implementation teams

- Each initiative will have implementation team.
- Teams consist of volunteers.
- Teams will develop strategies over next 6 months.
- Present progress at next Executive meeting in Fall 2013.

Next Steps

- Modify initiatives per discussion at today's meeting.
- Send letter to Executives from EPA's Regional Administrator (Dennis McLerran) identifying 6 initiatives and requesting staff support.
- Teams start meeting in early 2013 and report back at next Workgroup meeting.