



WASHINGTON STATE DEPARTMENT OF  
**Natural Resources**  
Peter Goldmark - Commissioner of Public Lands

# Cherry Point Aquatic Reserve Implementation Committee Meeting Minutes

Prepared by: Jamie Kilgo

April 16, 2014, 10:00 a.m. – 1:00 p.m.  
Ecology Bellingham Field Office

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**PARTICIPANTS:** **Rebecca Schlotterback** (Whatcom PUD), **Elizabeth Kilanowski**, **Bert Rubash** (Whatcom County Marine Resources Committee), **Wendy Steffensen** (ReSources), **Steve Irving** (North Cascades Audubon Society), **Kathryn Mitchell** (Alcoa-Intalco), **Eric Carabba** (Whatcom Land Trust), **Michael Kyte** (Cherry Point Marine Biologist/Consultant), **Fred Felleman** (Friends of the Earth), **Alan Chapman** (Lummi Natural Resources), **Gaythia Weis**, **Kim Clarkin**, **Bill Beers**, **Marie Hitchman** (Cherry Point Citizen Stewardship Committee), **Al Jeroue** (SSA Marine), **Dan Eisses** (Birch Bay Water and Sewer District), **Chad Yunge** (Department of Ecology), **Pete Sim**, (BP), **Barry Wenger** (Citizen and Retired Dept. of Ecology), **Raina Clark** (Alcoa Intalco Works), **Brendan Brokes** (Washington State Department of Fisheries and Wildlife), **Birdie Davenport**, **Dennis Clark**, **David Palazzi**, **Corey Saxon**, **Betty Bookheim**, **Jamie Kilgo** (Washington State Department of Natural Resources [DNR]), **Emily Rhoades** (DNR/ Puget SoundCorps)

## INTRODUCTIONS:

1. The Department of Natural Resources (DNR) opened the meeting with introductions followed by the purpose and agenda for the meeting.

## AGENDA ITEMS:

2. Aquatic Reserve Puget SoundCorps Update, Emily Rhoades
  - *Forage fish beach spawn surveys* – ten samples are collected monthly from each reserve, with results submitted to WDFW. Surf smelt spawning has been documented in the summer months, but no sand lance eggs have so far been observed at Cherry Point.
  - *Marine debris removal* - an estimated 291 lbs of trash have been removed from Cherry Point Aquatic Reserve beaches during 14 clean-up events.
  - *SeagrassNet* – monitoring protocol used globally to assess the health of seagrass habitats. One transect is located in Birch Bay and is sampled quarterly.

## QUESTIONS/COMMENTS/DISCUSSION:

- Question: Has the PSC observed herring eggs on eelgrass during their surveys? They have not seen herring eggs during their surveys to date.

### 3. Management Action Implementation Work Plan Progress

#### a) *Herring* – Herring Science Panel, Dave Palazzi

- DNR organized the Cherry Point Herring Science Panel in response to the Committee's request for the formation of a technical working group focused developing a research plan to study Cherry Point herring stock declines. With the input of the Committee and the science panel, DNR compiled a list of completed and current studies relevant to Cherry Point herring and developed an overview of ecosystem level and local stressors. Several other work groups have focused on Pacific herring stock declines and there is a large amount of relevant information available.
- No one knows the exact cause of herring population declines at Cherry Point and all the causes of the decline may never be definitively identified. Focusing on potential local impacts where we can effect change is the best strategy.

#### QUESTIONS/COMMENTS/DISCUSSION:

- Discussion of status of permit-required herring bioassay studies.
- Discussion of evolution of herring work groups and progress.
- Need to develop testable hypothesis and move ahead with research plan before another herring spawning season passes. Focus on what makes Cherry Point herring stock different.
- Question: How will the list of stressors be used and who will determine what the study will be?
  - Answer: DNR hopes to get additional feedback from the Committee following the meeting. This feedback will be taken back to the Herring Science Panel to determine a direction forward and develop a study plan. There is a possibility to hire someone to execute the research plan.
- Discussion of where herring go after they spawn, skeletal anomalies in the Cherry Point stock, and role of contaminants, viruses and parasites in herring declines.

#### NEXT STEPS AND RECOMMENDATIONS:

- The presentation will be distributed with the meeting minutes. The Committee requested a list of references with links to the research posted to the website or a drop box Committee members can access
- Create a timeline or history of the groups involved in herring research
- Committee should send any additional research or ideas to Dave Palazzi
- Science panel will use committee feedback to make a recommendation for future direction or to develop a study plan

#### b) *Stormwater/outfalls* – Cherry Point Shoreline Assessment, Jamie Kilgo

- In January 2013, the committee prioritized management actions relating to stormwater and outfalls, and recognized the need to determine current status of stormwater management and identify opportunities to reduce impacts. An initial shoreline assessment and wet season assessment were both completed to address these priority actions.
- Initial Shoreline Assessment, August 2013 – comprehensive inventory of existing outfalls, tightlines, and other stormwater discharges within and adjacent to the Cherry Point Aquatic Reserve shoreline
- Wet Season Assessment and Stormwater Sampling, March 2014
  - 6 stormwater outfalls sampled for:
    - Metals (As,Cd,Cr,Cu,Pb,Hg,Mo,Ni,Se,Zn)
    - Fecal coliform
    - Gasoline, diesel, heavy hydrocarbons
  - 10 tightlines sampled for:
    - Fecal coliform

NEXT STEPS:

- Complete shoreline assessment analysis and report
- Possibility for a first flush sample event in October 2014 and continued sampling every 2 years

QUESTIONS/COMMENTS/DISCUSSION:

- Suggested monitoring outfall flow and discharge
  - First flush study October 2014 is a good idea
  - Concern about permitting for Unick Road outfall
- c) *Education and Outreach* – Citizen Stewardship Committee (CSC) work, Wendy Steffensen
- Overview of CSC outreach programs and citizen science projects
    - Outreach materials and events:
      - *Brochure* - distributed throughout the community
      - *Three-panel display* – branded similarly to other Aquatic Reserve CSC groups and shown at events
      - *Cherry Point Forum* – held in November 2013 and open to the community. Focused on intertidal habitats and bird populations, with presentations by Dr. Megan Detier and Dr. John Bower.
    - Citizen Science projects:
      - *Visitor use surveys* - completed at Gulf Road and Point Whitehorn access areas in August 2013. Volunteers asked visitors several questions that focused on visit frequency, use, and knowledge of the Aquatic Reserve.
      - *Bird surveys* – survey sites at South Cape, Neptune Beach, and Gulf Road. Volunteers go through rigorous training to participate as spotters or counters under Dr. John Bower’s direction. Surveys are generally

conducted monthly, and seven birds of interest are counted. Data is provided to DNR and Dr. John Bowers.

- *Intertidal surveys* – transects located at Sea Net, Point Whitehorn, Intalco Beach and Neptune beach are monitored annually. The protocol is adapted from a Beachwatchers manual and classes are held to train volunteers. Surveys include beach elevation and slope, substrate type, percent cover and biota identification.

#### NEXT STEPS:

- 2013 intertidal survey report currently being finalized.
- Ongoing education and outreach, bird surveys, intertidal surveys.
- Cherry Point Forum, fall 2014
- Looking for funding or grant opportunities to continue CSC work after September 2014

#### d) *Creosote Mapping and Removal*, Dennis Clark

- The Committee identified creosote mapping and removal as the top priority management action in the January 2013 meeting. In February 2013, 2 WCC crews removed 5 tons of creosote over 3 days. In addition, several catamaran hulls were removed from the beach and debris was removed from the backshore around Gulf Road. PSC continues to routinely remove marine debris from Cherry Point beaches.

#### QUESTIONS/COMMENTS/DISCUSSION:

- Opportunity to compile clean-up data available from multiple groups to track volume of debris and sources.

#### INCREASED DIALOGUE WITH ADJACENT INDUSTRIAL LAND MANAGERS

- In response to a request from the Committee for reports from industries, BP has offered to speak about the vessel traffic report at a future meeting
- DNR will invite industries and adjacent land managers to present on current and proposed projects at future meetings

#### QUESTIONS/COMMENTS/DISCUSSION:

- Interest in additional presentations at future meetings on the status of the resource and reports from user groups on what is going on in the area (citizen groups and industry)
- Increased dialogue with the industries and other stakeholders

#### 4. Washington Department of Fish and Wildlife (WDFW) Toxics in Biota Team - Project updates and results

##### a) *Toxic Contaminants with focus on Cherry Point*, Jim West

- The Puget Sound Ecosystem Monitoring Program (PSEMP) is a network of regional scientists who monitor key indicators of ecosystem health and bring

science to management. Jim West presented results from analyses of PCB and PBDE concentrations in Pacific herring and English sole; and analysis of PAHs in crabs and herring embryos.

- PCBs and PBDEs (polychlorinated biphenyls and polybrominated diphenyl ethers)
  - Herring (a pelagic feeder) tissue analysis – levels in Cherry Point herring stock are fairly low and similar to other herring populations spawning in the area
  - English sole (a benthic feeder) muscle tissue analysis – concentrations are low outside of central Puget Sound
- PAHs (polycyclic aromatic hydrocarbons)
  - Crab hepatopancreases - low concentrations at Cherry Point and Vendovi Island; higher concentrations in central and South Puget Sound
  - Herring eggs - higher concentrations in central Sound; low concentrations at Cherry Point
- Conclusions:
  - Contaminants are relatively low in fishes tested from Cherry Point
  - Though legacy contaminants and current exposure of herring to PAHs are relatively low at Cherry Point, the proximity of herring stocks to potential oil sources is of concern.

b) *MusselWatch Pilot Expansion Study*, Jennifer Lanksbury

- This study was a one-time expansion of the national MusselWatch monitoring program. Eighteen sites are monitored biannually in Puget Sound as part of the national program, and 73 sites were added for the pilot expansion study. Transplanted mussels were placed in anti-predator cages for 2 months (Nov. 2013 – Jan. 2013) at sites around Puget Sound to evaluate the extent and magnitude of nonpoint source contamination, and to establish status and trends of contamination in Puget Sound.
- Mussels are obligate filter feeders that concentrate chemicals from the water, retaining contaminants for two to four months.
- Sites were selected to avoid large point source inputs and were meant to represent different land uses within Puget Sound.
- The mussel composite from each site was analyzed for a suite of chemical contaminants:
  - Analysis of PCBs (polychlorinated biphenyls), PBDEs (polybrominated diphenyl ethers), DDT (dichlorodiphenyltrichloroethane) all exhibited the same basic pattern of higher concentrations in central and South Puget Sound associated with large urban centers and lower concentrations at Cherry Point
  - PAH (polycyclic aromatic hydrocarbon) analysis also fell into this basic pattern of higher concentrations associated with urban centers. Ratios of PAH analytes were used to identify the source of PAHs (petrogenic,

pyrogenic or mixed). Overall, PAH concentrations at Cherry Point are low and PAH sources were different depending on location.

– Metals – overview of metal analyses and reviewed relationship of each to impervious surface cover.

- Conclusions:

- Organic contaminants and some metal concentrations increase with impervious surface cover

- Ratios of PAH analytes can be used to infer sources of contamination

- The result of this study will be the subject of a future publication

## **CLOSING:**

The next meeting will be held in three-four months. An online survey will be sent out to everyone in the next month or so with possible meeting dates.

- Next actions for DNR:

1. Post presentations and list of herring references with links on the website

2. Share Committee feedback with the Herring Science Panel and develop research plan

3. Invite industries and other adjacent land managers to present at future meetings