

MEETING SUMMARY
WASHINGTON CLIMATE CHANGE
Coastal/Infrastructure Preparation/Adaptation Workgroup
Meeting #1 – July 10, 2007 9:00am – noon

Attendance:

1. Preparation/Adaptation Workgroup members:

Lara Whitely Binder, Climate Impacts Group
Nancy Boyd, Washington Department of Transportation
Randy Carmen, Washington Department of Fish & Wildlife
Dan Cheney, Pacific Shellfish Institute
Joe Cloud, EDAW
Cyrilla Cook, People for Puget Sound
Clare Fogelson, City of Bellingham
Patty Glick, National Wildlife Federation
Rich Hoey, City of Olympia
Richard Myers, Washington Public Ports Association
Carol Richmond (for Michal Rechner), Department of Natural Resources
Chris Regan, Washington State Parks and Recreation Commission
Ron Shultz, Puget Sound Partnership
Todd Zackey, Tulalip Natural Resources Department

2. Washington Department of Ecology staff: Tom Clingman, Spencer Reeder, Hedia Adelsman

Background Documents:

1. Meeting Agenda
2. PowerPoint Presentation – *PNW Climate Change, Coasts and Coastal Infrastructure*
3. Preparation/Adaptation Working Group work plan

Discussion items and key issues:

Tom Clingman opened the meeting.

1. Work group participant introductions and initial comments:

- **Nancy Boyd** (WA DOT) – Interested in integrating CC information into DOT facility policy development and design.
- **Patty Glick** (NWF) – Is just concluding a coastal habitat study to be released July 24. Interested in presenting to group.
- **Joe Cloud** – private consulting firm. Working with communities and fed agencies in identifying facility locations, improvements. Issue not really given level of attention needed.
- **Todd Zackey** (Tulalip Tribes) – Tribe has tracked this issue. Working with Snohomish, Island County MRCs on research on the nearshore. Also engaged

in watershed planning and Snohomish County Shoreline Master Program (SMP) update.

- **Randy Carmen** (WDFW) – Key interest is Puget Sound Shoreline issues. At present trying to convince people that there are better ways to protect shoreline than building concrete and rock bulkheads. Concerns about sea level rise (SLR) may trigger desire for greater armoring of shoreline. SLR implications for estuary restoration projects, salmon protection.
- **Dan Cheny** (Pacific Shellfish Institute) –Minor changes in sea level can have a big impact on shellfish beds. Slightly heightened water temp impacts on bacteria levels noted in AK.
- **Chris Regan** (WA Parks) – Parks has initiated “Sound Friendly” design for Puget Sound shoreline Parks facilities. Agency also responsible for Seashore Conservation Area on the coast. Need to update capital facilities programs to recognize CC.
- **Carol Richmond** (DNR Aquatic Res Div, filling in for Michael) – Agency manages 2.4 million acres of state-owned aquatic lands. Concern is legal and property issues when boundaries change due to change in sea level.
- **Richard Meyers** (WA Ports Association) – Interested in how CC might affect dozens of smaller ports along Puget Sound. They have very limited resources to respond.
- **Rich Hoey** (Olympia Water Resources Director) – Olympia may be most vulnerable city in the region most of downtown between 10 and 12 feet elevation. Council holding a climate change forum on October 2. Topic is high-level concern for council.
- **Spencer Reeder** (ECY/CTED lead climate change policy analyst) – Working with Hedia. His main focus is regional issues (multi-state/province).
- **Claire Fogelsong** (Bellingham) – Redevelopment of shoreline area in city and shoreline recreational access areas are key concerns. Working with Battelle on modeling changes in Bellingham Bay.
- **Cyrilla Cook** (People for Puget Sound) – Main concern is impacts on Puget Sound health, specifically potential for pressure to harden shore lines from real or perceived impacts.
- **Hedia Adelsman** (Ecology)

Hedia gave a brief introduction. The PAWGs are one part of the Climate Change Challenge response. Governor is looking for specific actions. If requiring legislation or money for 2008, need those recommendations by October.

2. Presentation from LWB on PNW Climate Change, Coasts and Coastal Infrastructure.
See PPT presentation on Web site.

3. Discussion of key vulnerability/adaptation issues: Summary of work group discussion.

Data - Supporting planning and tracking SLR changes on our coasts:

- A common problem that should be mentioned by all of the groups is the lack of data and the problems with observing systems globally and in Washington.

Monitoring systems for snow, streamflow, water quality in Puget Sound, etc. are suffering from budget cutbacks. There is also insufficient spatial coverage for some of these systems.

- **Elevation data** to accurately examine potential impacts of 1 -2 foot SLR is critical. We have LIDAR mapping but accuracy is dependent on elevation control points that are not all adequate to coastal SLR planning needs. NOAA has Height Modernization program that is inadequately funded. Could be a PAWG recommendation.
- **Support to agencies and local governments:** Concern about small ports and other local governments; each trying to make sense of the SLR scenarios. Is there a role for the state to set a benchmark (e.g., sea level rise estimates with subsidence, tidal factors, etc.) for planning? For example, when WSDOT designs a bridge they incorporate information from a state-wide contour map showing anticipated tectonic movement. Should there be something similar for SLR risk?
- How do you model Sound friendly development? Really hard to see what a change in sea level is without a picture. Need **visual images** showing what sea level rise may mean.
- **Flood hazard maps** have been “modernized” through digitizing but do not have improved elevation information.
- **Coastal zone hazard** maps are driven by landslide risks. This is a very limited view.

Shoreline hardening issues: Bulkheading and armoring have direct implications for resilience of both natural and built systems. There needs to be a hierarchy...armoring will need to happen to protect vital infrastructure and communities. But we need to continue the effort to avoid new armoring, to protect habitat and protect ability of the beach to adapt to change in sea level (beach-forming materials.) Issues include:

- Concerns about sea level rise (SLR) may trigger desire for greater armoring of shoreline.
- We need to avoid non-essential armoring to protect sensitive shoreline habitat and protect source material for beaches – balanced with property rights. This is a major issue regarding residential development along shorelines.
- There may be opportunities for reclamation of certain armored shorelines. Ideally, watershed plans or other pre-planning will guide off-site mitigation to the most important restoration/reclamation projects.
- To protect vital infrastructure and communities, we will need to accommodate additional armoring and diking in some locations. We need to examine land use policies and permitting processes, which currently hold public facilities with broad benefit to a more rigorous permit review than single-family shoreline alterations (ex. State Parks dock proposal required to get Shoreline Conditional Use Permit, while an individual dock may be exempt from Shoreline permits.)
- Agricultural diking is a huge factor as well in habitat. A problem the NWF ran into is that there are no consistent records across the counties on where dikes are.
- Response/role of railroad fills along the Sound is very important. Would be really helpful to know what the railroads are taking into account with respect to sea

level rise (BNSF is the major line). For example, in Bellingham the railroad is going to have a major influence on restoration plans (“railway belt”)

Community/infrastructure vulnerability. Olympia is perhaps the most broadly vulnerable community to sea level rise. They have examined impacts of 1 foot SLR. First anticipated impact will be inability to discharge stormwater to the bay, resulting in interior flooding even before there is marine water “overbank” flooding. Thus, they are looking at investments in tide gates and stormwater system. **Storm intensity** will be another factor: December ’06 storm event raised the tide in Olympia by 3 feet over predicted levels.

Potential land use planning tools to address coastal adaptation include:

- Shoreline Master Programs: All SMPs are being updated through state-funded comprehensive updates. SMP law intends that the act be implemented at the local level but what are the state minimums that they are looking for in regard to SLR and related topics? ECY does not have a clear statement on sea level rise to include in these minimum requirements.
- SEPA: CA just passed legislation requiring SLR information be included in their environmental review process. This has potential in WA as well.
- Could consider “rolling easements” like Titus (Maryland Law Review) proposed. (Bellingham looked into rolling easements but could not find any current examples.)
- Patty – State of Maryland is going through rigorous process of adapting to sea level rise. Patty will send that document out.
- There should be some proactive emphasis on planning our coasts wisely at the state legislature. For example, the Shoreline Management Act treats bulkheads as “customary” rather than a shoreline modification that should be avoided or minimized to maximum extent.

Education and outreach is an issue that is going to be addressed at the CAT level. What do we as a group want to communication? Also, the SEPA process will be addressed as a cross-cutting issue (what changes would the PAWG make, what questions would you add).

Future meeting schedule: It was agreed to pursue a meeting every three weeks for the next several weeks, with the October legislative deadline in mind.

Next meeting is July 31, 9-12am at Ecology. Topics to include:

- Patty presentation on NWP habitat study
 - Criteria for prioritizing from health group (should be the same for all groups)
 - What are we getting out of the end of this? (process)
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