

Coastal PAWG Prioritization Tasks

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(Adapted from material prepared by Lara Whitely Binder, Climate Impacts Group)

1. Finalizing the List of Impacts and First-Order Prioritization: Focusing on Sea Level Rise

It is important for the PAWG to agree on a list of coastal impacts that are driving the State's needs to prepare for climate change. The exercise is valuable since the list will be an *important part of the message* that accompanies any recommendations (not to mention guiding selection of adaptation options).

Lara has prepared a slightly modified version of the list from her presentation at the first PAWG meeting below. These impacts are primarily related to sea level rise, warmer air temperatures, and changes in freshwater inputs into coastal estuaries. **This is, in effect, the PAWG's first order prioritization and something that 1) the PAWG should agree on, and 2) will need to be communicated back to the State.**

Included is the "key driver" for each impact. In nearly all of the cases, the key driver is sea level rise, which is itself driven by other factors so sea level rise is both a climate change impact and a climate change driver. There are also a few impacts that are primarily attributable to changes in freshwater inputs into estuaries and rising temperature (based on the table from Lara's first PAWG presentation).

Following the list are general areas/interests that will be affected by climate change impacts on the coastal environment.

PAWG members should review the list and suggest edits and/or additions to both lists.

Lists for PAWG review:

Global and regional sea level rise increases the risk of the following in Washington State:

- **Permanent inundation in low-lying areas** (*key driver: sea level rise*)
- **Episodic lowland flooding** (*key driver: sea level rise and/or increased winter streamflows*)
- **Erosion** (*key driver: sea level rise*)
- **Habitat loss, particularly where there are natural or human-caused barriers to inland migration** (*key driver: sea level rise*)
- **Displacement from flooding, erosion, and/or permanent inundation** (*key driver: sea level rise*)
- **Contamination from inundated coastal hazardous waste sites** (*key driver: sea level rise*)
- **Salt water intrusion into coastal aquifers** (*key driver: sea level rise*)
- **Corrosion of (and therefore contamination from) underground storage tanks and piping** (*key driver: sea level rise*)
- **Infiltration and hydraulic surcharge of sewer systems discharging to coastal waters** (*key driver: sea level rise*)
- **Reduced water quality in estuaries via changes in winter/summer streamflow and warmer**

temperatures (*key driver: changes in freshwater inputs from freshwater rivers and streams; warmer air temperatures*)

- **Others?** (Note that this list is getting at the fundamental impacts...increased risk of damage to coastal infrastructure, for example, would be covered by the fundamental changes in the risk of erosion, inundation, and flooding.)

These impacts will affect the following areas/activities:

- Public and private coastal property
- Transportation infrastructure
- Tribal lands and culture
- Commercial shellfish production
- Coastal recreation and tourism
- Others?

2. Second Order Prioritization: Meeting One or More of the Three “Prongs”

With respect to listing potential adaptation strategies, Lara suggests that the group continue brainstorming actions along three fronts (again, with the emphasis on sea level rise and its related impacts):

- 1. Strategies that enhance the institutional capacity of state and local governments to prepare for and adapt to the impacts of sea level rise,**
- 2. Strategies that increase the capacity of natural ecosystems to adapt to the impacts of sea level rise, and**
- 3. Strategies that increase the capacity of coastal infrastructure to handle the impacts of sea level rise.**

Most strategies will fall under one category; some strategies may fall under two. Developing a list of potential adaptation strategies that covers these three areas will help ensure that the range of strategies considered encompass the key general categories of concern that have evolved so far in conversation, namely institutional capacity, habitat impacts (more broadly defined above as natural ecosystems), and impacts to coastal infrastructure.

See “Revised list of key vulnerability/adaptation issues” for actions identified in the previous two meetings.

In the end, we should strive toward 1 or 2 “actionable” recommendations to the Governor in each of these three general categories. This is also, in effect, the PAWGs second order of prioritization because a strategy that does not meet one of these three “prongs” would not be on the list of candidate strategies (unless another category needs to be added...).

3. Third Order Ranking: Prioritizing Strategies within the “Three Prongs”

The tight timeline that the group is working under does not necessarily lend itself to some of the more traditional ways of prioritizing, e.g., cost/benefit analysis and/or evaluating the effectiveness of options to

a range of sea level rise scenarios. Some simple metrics that should be considered at this point include the following:

- Is the strategy “actionable”? One consideration for this question is in what time frame? Optimally, implementation of PAWG recommended actions can be initiated in the next year (in the sense of “getting the ball rolling” and not necessarily implementing and completing in the next year). Suggested timeframes: Near-term = couple yrs; Medium = 5 years; Long-term > 5 + years). Components of “actionable” items include the following:
 - Does the action require additional funding? It will be helpful to identify the basic scale of required funding: Is it \$100Ks, \$1 Ms, or \$10 Ms?
 - Does the action require additional legislation and who needs to pass that legislation (e.g., local, state, or federal government?)?

The need for additional funding and/or legislation do not mean that a strategy should be ruled out but these needs will obviously affect how an option is ranked.

- Does the strategy increase the flexibility in how systems are managed and/or flexibility in how the system responds to climate change?
- Does the strategy fit with other governmental priorities in a way that gives the strategy a bigger “bang for the buck” and/or political cache?
- How important is this relative to other actions on the list? (Low, Medium, High)

There will be other criteria that PAWG members may identify. The list here is not meant to be exclusive of those considerations but simply additional considerations to add to theirs.

See Excel table intended to be used in identifying strategies and examining the criteria.