

**From:** Bob Lynette  
**Sent:** Friday, February 27, 2015 10:34 AM  
**To:** zSMP  
**Subject:** Olympic Climate Action's SMP comments Part 2

Please include the attached document comments for the Planning Commission's review of Clallam County's Shoreline Master Program draft.

Please confirm that you received this email.

Thank you,

Bob Lynette  
220 Strawberry Field Drive  
Sequim, WA 98382  
Mobile: (360)  
Home phone: (360)

Clallam County Department of Community Development  
& Clallam County Planning Commission  
223 E. 4th St., Suite 5  
Port Angeles, WA 98362  
February 27, 2015



**RE:** Further climate-related comments on draft Clallam County Shoreline Master Program

OCA would like to add to our comments dated February 18, some further comments and recommendations related to the use of the best and most current scientific information.

1. **Use of most current information:** The Shoreline Master Program (SMP) Guidelines require local jurisdictions to take into account scientific and technical information pertinent to shoreline management issues and use “the most current, accurate and complete scientific and technical information available” (WAC 173- 26- 201(2)(a)). Although the basis of the sea level rise rate used in the draft SMP to estimate required buffers and other building criteria is not clearly stated, the source appears to be the following 2008 publication:

Mote, P., A. Petersen, S. Reeder, H. Shipman, and L. Whitely Binder, **2008**. *Sea Level Rise in the Coastal Waters of Washington State*, University of Washington Climate Impacts Group and the Washington Department of Ecology, University of Washington, Seattle, WA.

However, this 2008 publication almost certainly underestimates sea level rise for Clallam County shorelines. Upwardly-revised estimates of climate change impacts are clearly detailed in the following documents, incorporated herein as part of this testimony:

*IPCC, 2013: Summary for Policymakers. In: Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change.* T.F. Stocker, D. Qin, G.K. Plattner, M. Tignor, S.K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex and P.M. Midgley, eds. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.  
[http://www.ipcc.ch/pdf/assessment-report/ar5/wg1/WG1AR5\\_SPM\\_FINAL.pdf](http://www.ipcc.ch/pdf/assessment-report/ar5/wg1/WG1AR5_SPM_FINAL.pdf)

**Our mission:** We seek a safe, prosperous, sustainable future for residents of the Olympic Peninsula by addressing the threat of climate change. [www.olyclimate.org](http://www.olyclimate.org)



Melillo, Jerry M., Terese (T.C.) Richmond, and Gary W. Yohe, eds., 2014. *Climate Change Impacts in the United States: The Third National Climate Assessment*. U.S. Global Change Research Program, 841 pp.  
doi:10.7930/J0Z31WJ2. <http://nca2014.globalchange.gov/downloads>

Dalton, M.M., P.W. Mote, and A.K. Snover, eds., 2013. *Climate Change in the Northwest: Implications for Our Landscapes, Waters, and Communities*. Washington, DC: Island Press. <http://cses.washington.edu/db/pdf/daltonetal678.pdf>

FEMA P-55, *Coastal Construction Manual: Principles and Practices of Planning, Siting, Designing, Constructing, and Maintaining Residential Buildings in Coastal Areas (4th ed.)*. <https://www.fema.gov/media-library/assets/documents/3293>

Based on all of the latest scientific evidence and the very serious potential financial liability to Clallam County and its citizens (see 2. below), we urge the Planning Commission to schedule its recommendations to the County Commissioners so that it can incorporate best, most recent, and most relevant scientific findings.

Fortunately, these are expected to arrive soon in the form of a professionally-produced, scientifically rigorous, and locally-focused report, *Projected Climate Change and Impacts for the North Olympic Peninsula*, part of the “Planning for Climate Change on the North Olympic Peninsula” grant funded through the North Olympic Peninsula Resource Conservation & Development Council, of which Clallam County is a member. The findings, already in draft form and due for publication within the next few months, are very likely to influence setbacks and buffer requirements in the SMP draft.

- 2. Need for improved guidance and avoidance of liability:** The current draft SMP should be modified to recognize and provide more specific guidance regarding how developers and the public can address the projected impacts of climate change. Without more specific reference to projected climate change impacts, inappropriate shoreline development will be permitted that will likely lead to serious financial and ecological function losses. **If the County does not use and report the best available scientific information, it is unlikely that the County’s disclaimer contained in SMP section 1.12 will immunize the County from expensive climate-related litigation, the costs of which will be passed on to the taxpayers.** Likewise, the County would be wise to anticipate that insurers will sue municipalities for negligence if they are found to have ignored currently available climate change information. These very serious exposures can be avoided or

minimized by incorporating the best current climate change projections and appropriate regulations into the SMP. Such regulations should utilize these projections in applications for new subdivisions and construction, including flood protection and renovations. Note the following warning, for example, in the FEMA publication cited above:

“Flood Insurance Rate Map (FIRM) Warning: FIRMs do not account for future effects of sea level rise and long term erosion. All mapped flood hazard zones (V, A, and X) in areas subject to sea level rise and/or long term erosion likely underestimate the extent and magnitude of actual flood hazards that a coastal building will experience over its lifetime. FIRMs also do not account for storm-induced erosion that has occurred after the FIRM effective date. . . . Coastal FIRMs (even recently published coastal FIRMs) do not incorporate the effects of long term erosion. Users are cautioned that mapped Zone V and Zone A areas subject to long-term erosion underestimate the extent and magnitude of actual flood hazards that a coastal building may experience over its lifetime.”

Recent scientific reports indicate that earlier projections have underestimated the accelerating rate of sea level rise. The current sea level rise rate — which started in 1990 — is 2.5 times faster than it was from 1900 to 1990, according to a study published recently in the journal

*Nature*: <http://www.nature.com/nature/journal/v517/n7535/full/nature14093.html>.

In the SMP, wherever regulations require that “climate change impacts be considered,” the Planning Commission should provide more specificity, based on the most recent peer-reviewed locally-based climate change impact projections.

Rising sea levels and increasing storms will almost certainly impact new construction on our shorelines. Therefore, cautionary statements should be required in all applicable property title reports stating that the property is subject to climate change impacts. (SMP language might say, “Clallam County shall notify all prospective developers and buyers of shoreline property that the property may be impacted by sea-level rise and/or increased storm damage.”)

3. **Shoreline armoring:** The SMP indicates a preference for bioengineered installations to protect homes from flooding. This preference should be changed to a requirement because the construction of conventional sea walls, dikes, and barriers will accelerate the progressive loss of beach, floodplain and wetland habitat and likely cause problems for other nearby homes.
4. **Adaptive management:** Adaptive management is an essential element of planning, especially in view of our rapidly changing climate. Monitoring of critical elements

associated with climate change should be provided for in the SMP. We know that climate change is going to have a serious impact on our society and ecosystems, but we have already experienced surprises and are likely to see more. The SMP should include provisions for monitoring local sea level rise and changes in storm patterns. It should include the flexibility to modify setbacks and buffers based on the most recent data. The subsequent SMP changes can be made at the 7-year review points, but the public should be put on notice in the SMP now that such changes could impact future development/use of properties.

As before, we appreciate the opportunity to comment and look forward to your further work.

Sincerely, on behalf of Olympic Climate Action,

Bob Lynette, 220 Strawberry Field Drive, Sequim, WA 98382