

C J Klocow U.S. Army Corps of Engineers Seattle District, Environmental Resources Section P.O. Box 3755 Seattle, Washington 98124-9883

Re: LTMS Draft Letter Report/EA Via email: cj.klocow@usace.army.mil

Dear Mr. Klocow:

Thank you for the opportunity to participate in the Long-term Management Draft Letter Report/EA for the South Jetty of Grays Harbor. We appreciate that this is a very complex project and hope our input will be of assistance in making decisions that will benefit the environment, visitors and residents of the Central Coast of Washington.

Since the construction of the south jetty in 1898, the Corps has spent millions of dollars to stabilize and minimize the erosion in and around Half Moon Bay. Despite interventions, the natural processes continue to dominate the landscape. In 2005, countless hours were spent in public meetings to determine alternative "solutions" to the erosion. A soft solution of beach nourishment has successfully avoided a breach since that time and has allowed for the greatest chance to maintain diversity around the South Shore and Half Moon Bay.

Of the nine alternative actions presented (excluding the deferred) at the January 21, 2005 meeting - seven involved armoring. We were disappointed to learn that the current preferred alternative chosen by the Corps is one that includes a 500 foot armor rock extension inserted into the mouth of Half Moon Bay.

We believe that the Draft FONSI prepared for and/or by Colonel Bruce Estok is in error and simply tries to justify an action that is not supportable by sound science. As the Colonel points out in his letter, the last breach was approximately 20 years ago and while there is general agreement there may be one in the future, there is not agreement "as to the exact nature and degree of adverse impacts on the various features of the navigation project." (CENWS-PM-ER Draft FONSI). Yet the FONSI concludes that an armoring is a required solution. It appears that the conclusion of the FONSI relies on self-consultation and raises questions of its ability to objectively judge the merits of this project. Especially when we review the Engineering Analysis: "The questions that were raised by the numerical modeling study, and the review of that study by the ITR (Independent Technical Review), emphasize the complexity and uncertainty in estimating the consequences of a breach" (Appendix D Engineering, page. 7).

As we and the many respected coastal experts have stated before, empirical and scientific data show that when beaches are rocked, beaches are lost. Storm waves are no longer absorbed by the sand. Instead, they bounce off the armored structure, scouring the beach in front of it. The beach in front of the structure disappears, there is end cut erosion at its edges and eventually the structure will fail and/or require further armoring.

In 1998 a defraction mound was modelled and tested by WES (Waterways Experiment Station) and the recommendation was to lower the "remnant jetty" and create the new diffraction mound by recycling the rock. The modelling and testing assured the engineers and reviewers that wave-energy would be properly dissipated and there would be no unintended consequences. (CENWS September 1999 Design Analysis (Revised). The modeling outcome recommendations of past projects has met with a gap of reality when implemented.

1. What was the height of the "remnant jetty" before the mound was created?

2. What modeling errors would explain the situation that exists today?

3. What effect did the Corps' introduced 12" cobbles have on end cut erosion and loss of potential forage fish habitat (e.g., sand lance) who depend on sand and gravel areas < 7mm?

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## 4. What assurance can be given to the public and reviewers that this review has taken into consideration all aspects of the potentials inputs?

For example, erosional events over the past 7 - 20 years have changed the coastal shoreline and have eroded areas allowing an increased wave energy transport to be more concentrated in a northerly direction at certain times during the year.

## 5. How has the longshore energy flux been accommodated to the flat model study, including wave set-up, swash and runup?

## 6. What allowances have been made for surge, wind currents and white-capping?

The establishment of the 500 foot jetty extension will establish a more intense fixed-point scour and interruption of the tidal currents and wave energy. There doesn't appear to be any discussion of potential end cut erosion or where or how the redirected wave energy will finally dissipate. The Corps and its consultants have consistently advocated for a 2,500 extension of the jetty across the mouth of HMB for the study years and this has met with solid objections to this plan.

7. What will be the effect of the wave energy transfer to the eastern portion of shoreline on Half Moon Bay? 8. If end cut erosion is observed, what will be the response by the Corps to the issue?

9. Will the placement of the 500 foot extension of the jetty create further erosion within the Half Moon Bay and result in the need for further armoring?

10. What evidence from modeling gives assurances that this doesn't become a piecemealing of a greater project proposal?

The 500 foot jetty extension will require mitigation for construction impacts and it is proposed to remove 50 feet of riprap each from the west and east north shore jetty at and around Damon Point.

11. What modeling has been done to assure that end cut erosion will not exacerbate shoreline and habitat changes landward of the mitigation?

12. As wave and sediment regime is changed by the proposed mitigation, what evidence assures that the newly directed energy forces will not compromise the Oyhut Wildlife Refuge habitat areas and the remainder of the remanent jetty, thus causing upland and channel issues?

Sea level change is something that is required to be considered by the Corps in its deliberations of coastal projects. Toke Point was chosen by the Corps to give a trend for local sea level rise. This resulted in modeling that considered .3 - 1.9 foot rise for the 50 year life-cycle of the project. Review of other climate change sea level literature shows that the level of measurement has developed a steeper trend in the last 10 years.

## 13. Presuming the steeper trend, what would be the predicted outcomes that the extension would present over the present "natural" situation?

We strongly believe that if there is any armoring at Half Moon Bay the adjacent beaches will be lost and public access to the ocean will be impaired. We are also very concerned about possible alternatives that will cobble or gravel the beaches, which will also significantly restrict usage. This not only would impact surfers and beach walkers, but razor clamming as well. This will have a devastating economic impact on Westport as Westhaven Park is its major public access to the ocean and remains one of Washington State's most visited day parks.

We urge the Corps to rehabilitate the sand stockpile which is adjacent to the Coast Guard Tower, abandon the 500 foot jetty extension thereby eliminating the mitigation need on the North Shore and continue the soft solution of the Current Practice.

Sincerely,

Arthur (R.D.) Grunbaum President

Cc: Knoll Lowney



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