



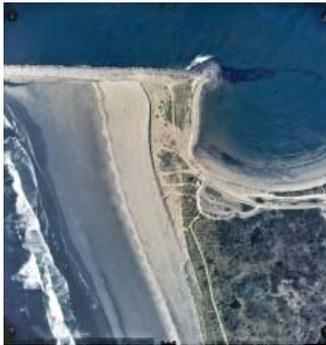
LTMS Grays Harbor Navigation

Summer 2011

LTMS Study Update

The Grays Harbor Long Term Maintenance Strategy study team is nearing completion of a draft document that will be made available for public review and comment.

After extensive consideration of alternatives, engineering and scientific analysis and environmental assessment, the Army Corps of Engineers expects to produce a draft "Letter Report" by this summer. A Letter Report is a Corps document that includes a details of the existing conditions at an operating project, potential measures to address the agency's objectives, a recommended alternative and an environmental assessment.



The team is nearing completion of the draft environmental assessment and looking

forward to a public meeting and public comment period on the draft EA and the entire letter report this fall. Background on the process of getting to a draft letter report is found below.

LTMS Background

The Corps initiated the Long-Term Management Strategy study because of the recognition that shoreline erosion in the vicinity of the South Jetty could again result in the breaching of the landmass adjacent to the jetty and adversely impact the federal navigation project. The objective of the Long-Term Management Strategy study is to assess the risk that such a breach may occur, to evaluate the threat of adverse impact to the Grays Harbor Navigation Project resulting from any breach, and – if action is determined to be warranted – assess and recommend the most appropriate long-term strategy for continued maintenance of the authorized Grays Harbor navigation project features.

This LTMS study is being conducted under the Corps' authority to operate and maintain the completed federal navigation project in the most efficient and effective manner. The current investigation is being completed at 100 percent federal cost. The study area under consideration includes those project features and adjacent environment affected by the erosion. The area includes the south jetty, revetment, navigation channel, South Beach, Half Moon Bay, and east to Whitcomb Flats.

LTMS Alternatives Analysis

In 2009 the Corps' Grays Harbor Long Term Management Strategy team assessed the 15 alternatives presented in January's public meeting. The alternatives fell within five categories:

1. Current Practice
2. Beach Nourishment
3. Revised Jetty Extension
4. Deferred Action
5. No Response (jetty maintenance only)

Using the engineering, cost, environmental and social evaluation criteria the team narrowed the list to nine alternatives:

1. No Action
- 2A. Sand on South Beach and Half Moon Bay shoreline (5-year intervals)
- 2B. Sand on South Beach shoreline (5-year intervals) and Half Moon Bay shoreline (10-year intervals) with modified diffraction structure
- 3A. Jetty extension, sand on Half Moon Bay shoreline (10-year intervals), modified diffraction structure
- 3B. Jetty extension with gravel on Half Moon Bay shoreline (25-year intervals) and modified diffraction structure
- 4A. Deferred Action - Trestle over Half Moon Bay
- 4B-1. Deferred Action - Close breach 6 months after trigger
- 4B-3. Deferred Action - Close breach at next major rehabilitation
- 4C. Deferred Action - Emergency closure of breach

Next the Corps team met with experts from the Engineer Research and Development Center-Environmental Laboratory, who assisted the team with implementing a decision-making method (multi-criteria decision analysis - called MCDA) as part of the process to further narrow the list of nine alternatives.

The purpose of the ERDC meeting was to obtain a full spectrum of interdisciplinary views and to determine the relative value to be ascribed to each of the four categories of evaluation criteria (environmental, engineering, social

Upcoming Study milestone

A draft Environmental Assessment will be posted for review and comment as part of the draft letter report this fall.

and cost) in light of the circumstances and objectives of the Grays Harbor Long Term Management Study.

The relative importance between criteria was measured by using a series of pair-wise comparisons. Pair-wise comparisons are consistent comparisons of a criterion against all other criteria by pairings.

The participants included both the project team and objective technical experts, unaffiliated with the project, from both within and outside Seattle District. Each evaluated the four criteria by selecting the criteria-relative importance via six pair-wise comparisons. This established the relative weights. The rankings were confirmed by the participants, and a final weight assigned to each criterion. Weighted from highest to lowest, the final rank order was engineering, environmental, cost and social.

Assessing the nine alternatives using the weighted criteria, the team narrowed the list to seven for additional review and assessment: 1, 2A, 2B, 3A, 3B, 4B-1 and 4C. The LTMS team then conducted an iterative decision analysis in April 2010. This process involved a more rigorous review of the nine alternatives carried forward from the initial MCDA process conducted in May 2009.

An Alternative 1B was added after internal discussion and review of the individual benefits of each alternative by the LTMS team determined that the diffraction structure feature from Alternatives 2 and 3 could be implemented in conjunction with Alternative 1 to more fully maximize the benefits of Alternative 1. Notably the structure would increase the length between nourishment cycles and

decrease the required sand quantities for each nourishment event. The resulting Alternative 1B was a modification of Alternative 1 (or subsequently named Alternative 1A - Current Practice). Alternative 1B would modify the existing diffraction structure by extending it 500 feet to the east along the footprint of a remnant jetty.

Through the iterative decision analysis process, the LTMS team identified four final alternatives to carry forward for detailed analysis:

- Alternative 1A – No Action Alternative (Current Practice)
- Alternative 1B – Modified Current Practice (with modified diffraction structure)
- Alternative 3A– Jetty Extension (with beach nourishment and modified diffraction structure)
- Alternative 4C – Breach Closure (immediate closure after breach)

The LTMS technical team recently finished assessing the practicability of Alternative 1B. They evaluated this alternative using the MCDA process, and evaluated mitigation strategies associated with the proposed diffraction structure.

All four final alternatives were analyzed in the draft environmental assessment that will be part of the letter report presented for public review and comment this fall.

Until a preferred LTMS alternative is implemented, the Corps plans to maintain the land connection between the shoreline and the south jetty through periodic beach fill. The current practice requires beach fill when monitoring data show pre-determined triggering criteria are met.

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