Bridgehaven Marina Maintenance Dredging: Project Proposal Clarification

For: Bridgehaven Community Club
151 North Beach Drive, Port Ludlow, WA 98365
April 6, 2004

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Purpose

To describe the changes to the proposal as first presented in the Biological Evaluation that were suggested by the Washington Department of Fish & Wildlife (WDFW) as part of their draft HPA permit. After several years of discussion with four different Habitat biologists, the proponents and their consultants urged the WDFW to make a final decision about what would be acceptable to WDFW for the Bridgehaven Community Club Association project. Below are the new changes as suggested by WDFW and now proposed by the Bridgehaven Community Club.

Project Description

Summary: The dredging proposal is to dredge a total of 7,000 cubic yards of sediment out of the marina inlet and floating dock area. A total of 2,000 cubic yards of sandy dredge sediment will be placed on the upper intertidal beach and backshore area south of the Bridgehaven spit near the old South Point ferry terminal. The remaining 5,000 cubic yards of dredge sediment will be placed in the approved deep water disposal site near Port Townsend (PSSDA Disposal site). Placement of nourishment sediment would occur once in the first year of the permit period. A second maintenance dredging would occur as needed within a 5 year period, expected to be in the fifth year. No nourishment sediment would be placed on the beach in the second dredge cycle.

Explanation: In additional to the original dredge proposal of 4,000 cubic yards, the WDFW wanted to see additional dredging between the southern boat slips and the mouth of the channel. The reason for this additional dredging according to a WDFW hydrologist (Al Wald) is to increase the stability of the area. Instead of striving for a 2:1 slope, the WDFW would like to see a 7:1 slope in this area. The additional area proposed to be dredged adds another 3,000 cubic yards onto the original proposal quantity. This should also extend the period of adequate channel depths.

WDFW also suggests that 2,000 cubic yards of this material should be placed along the intertidal area to the south, near the South Point Ferry terminal, on WA State Department of Transportation (WSDOT) land. The purpose, according to WDFW personnel, is to enhance forage fish spawning habitat and for some beneficial reuse of the sediments. Although the net shore-drift in the area is in the northward direction, WDFW suspects that the transport of this material may be so slow. In turn, they deduce that the entrance channel to the proposed dredging area will not accrue sediments at an exacerbated rate.

Coastal Geologic Services (CGS), in not proposing this beach nourishment originally, wanted to avoid the placement of dredge sediment just south (and up-drift) of the Bridgehaven Spit to prevent accelerated infill at the marina inlet. CGS also did not fully understand that the old ferry terminal, located adjacent to the beach our area, was not to be used for the temporary Hood Canal ferry. The current plan for the temporary ferry appears either to not use the South Point facility at all or to moor a floating dock further offshore for unloading passenger ferry. The earlier preferred beneficial reuse site for dredge sediment by CGS was the long narrow island north of the Bridgehaven spit. This option was flatly rejected by the landowner of the large parcels that contains the island.

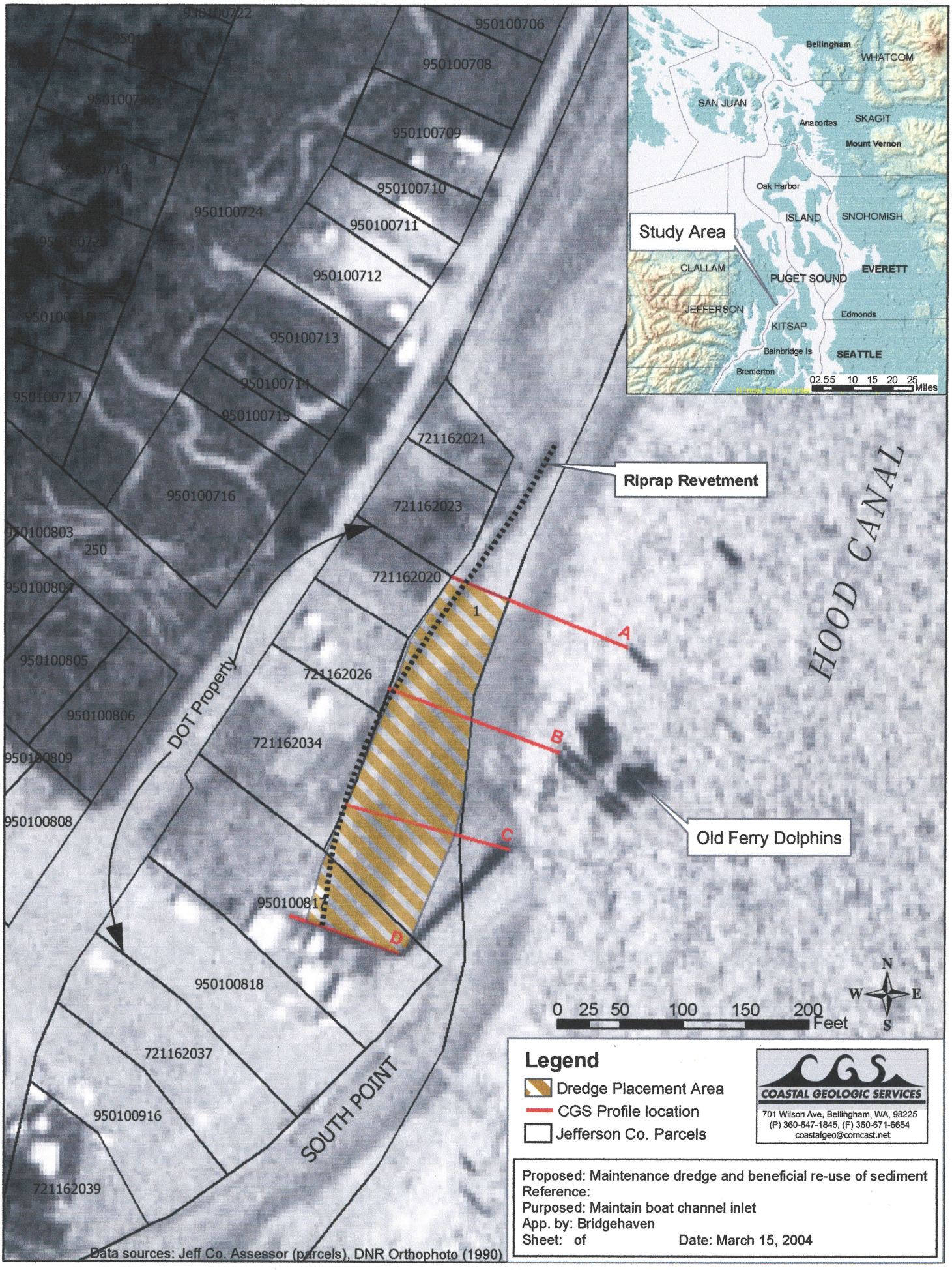
Dredge sediments over and above the 2,000 cubic yards will be disposed of at the PSSDA Disposal site near Port Townsend. This would total 5,000 cubic yards for the disposal at the approved PSSDA Disposal

site. The dredge sediment has already been tested in a manner approved by the PSSDA program and was deemed "clean" and suitable for in-water disposal. Dredge sediment will be transported by barge and tug to the PSSDA site.

Beach Nourishment Area: The beach nourishment area is shown on the site plan prepared by Coastal Geologic Services Inc. dated March 15, 2004. Sandy dredge sediment would be placed atop the rock revetment that runs the length of the nourishment area, at varying elevations. Where the revetment is relatively high elevation, the nourishment sediment would go up to +16.0 ft MLLW. The elevation of the new crest of the nourishment sediment would vary between approximately +14.5 to +16.0 ft MLLW. The nourishment sediment would extend from the concrete bulkhead at the south end of the site northward for 300 ft to the north end of the WSDOT beach. The placement area would extend waterward to elevation +7.0 ft MLLW (shown on cross sections).

Nourishment sediment would be transported by closed (temporary) pipe from the hydraulic dredge to the nourishment area. The south end would be filled first, and work would continue northward. Sediment would be dewatered by pumping sediment waterward of a temporary 4-6 ft high ecology block wall that would be placed landward of the mean higher high water (MHHW) line. Sediment would be bulldozed south in steps (using multiple lifts) after dewatering, to rough, finish elevations. This process would be repeated several times moving the ecology block wall northward. The ecology blocks would be removed from the site completely after dewatering was complete, and rough grading would be completed.

Monitoring: Besides these additions, WDFW would like to see beach elevation monitoring on a seasonal basis for the first year post dredging. Five sites will be selected to assess this parameter. The first site will be at the South Point Ferry site where the sediment will be placed. Three intermediate sites will be selected along the beach, heading north, between South Point ferry terminal and the mouth of the dredge channel. The remaining site will be at the mouth of the dredge channel. Thereafter, depending upon the amount of sediment accretion noted during the first year of sampling, an additional four-year monitoring of the beach elevation on either a seasonal or an annual basis is recommended.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Legend
Dredge Placement Area
CGS Profile location
Jefferson Co. Parcels
COASTAL GEOLOGIC SERVICES
701 Wilson Ave, Bellingham, WA, 98225
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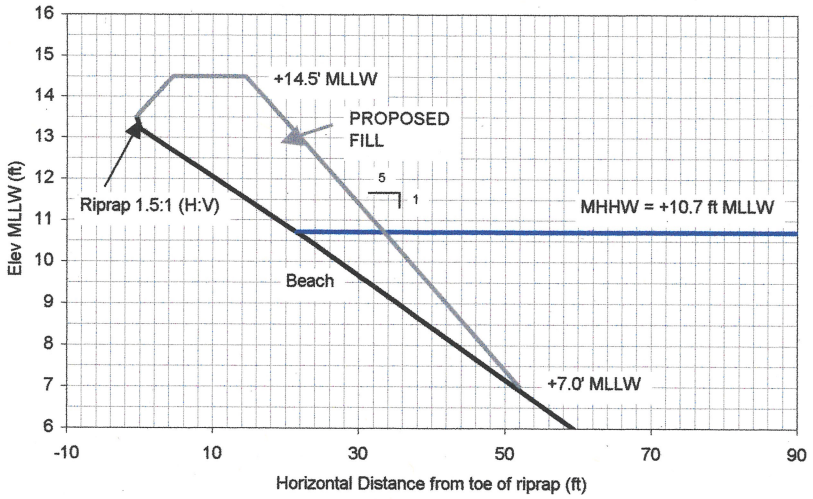
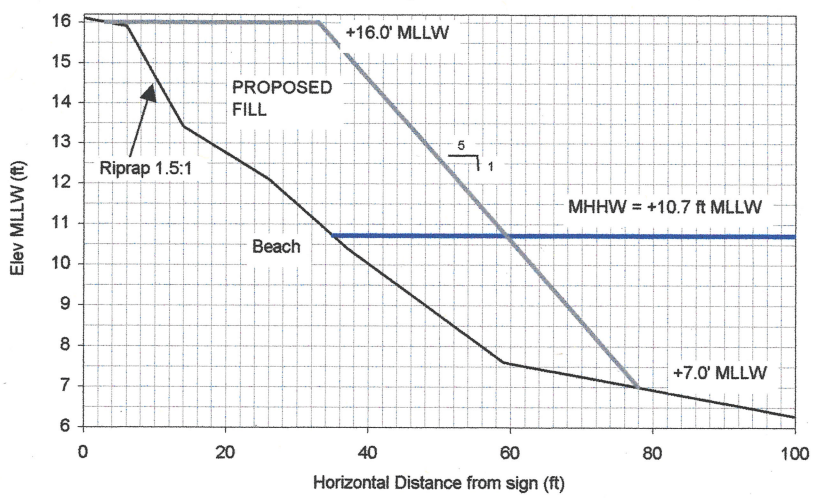
Proposed: Maintenance dredge and beneficial re-use of sediment
Reference:
Purposed: Maintain boat channel inlet
App. by: Bridgehaven
Sheet: of
Date: March 15, 2004
Data sources: Jeff Co. Assessor (parcels), DNR Orthophoto (1990)

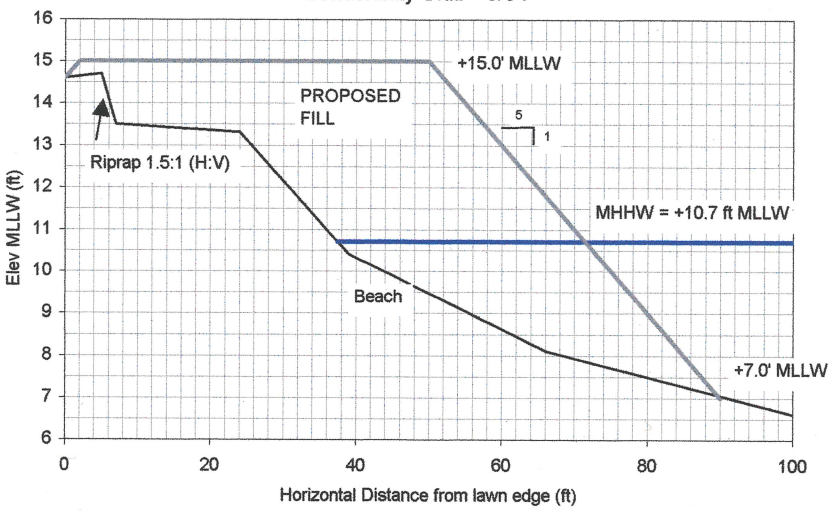
Beach Profile A near north end DOT property, south of Bridgehaven Community Club - 3/04



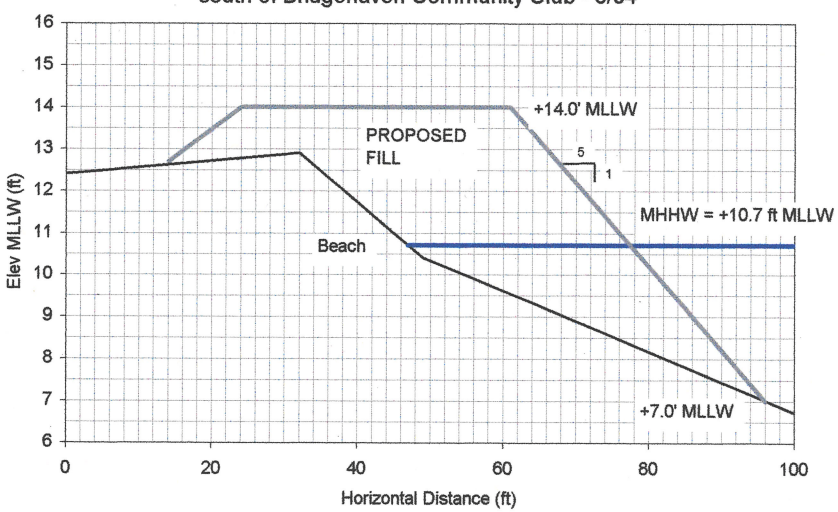
Beach Profile B near middle of DOT property, south of Bridgehaven Community Club - 3/04



Beach Profile C near south end DOT property, south of Bridgehaven Community Club - 3/04



Beach Profile D at south end DOT property, along conc. Bulkhead, south of Bridgehaven Community Club - 3/04



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