

Proposed Bulkhead Renovation Project

Introduction:

This project is being proposed because of erosion taking place on the LPCA Community property known as Lot C. This project was originally scheduled to take place before the bridge replacement project but was postponed when the bridge was closed and became a greater priority.

Scope:

The intent of this project was to include jetty and bulkhead repairs. On February 20th, 2019 a survey and inspection of the jetty confirmed that the jetty is not sinking, it maintains its' design elevation of 16 feet. The rocks that were placed on the jetty in the 2003 repair project are in good condition and tightly placed at an angle greater than 45 degrees on the seaward sides. No work is anticipated on the jetty before 2028.

This bulkhead renovation project proposes to employ three types of bulkhead. Hard bulkhead where the bank is steep and close to the road. The hard bulkhead will match the Redi-Rock bulkhead at the bridge.



Redi-Rock bulkhead



Cornet Bay soft bulkhead project

Soft bulkhead known as shoreline softening where some of the old wooden bulkhead is replaced with natural materials including logs and native plants.



Riprap Bulkhead

The third type of bulkhead is the riprap (quarry spall overlay) bulkhead south of the bridge on Shorewood Ave.

For the location of each type of bulkhead see PDF drawing titled: **Chinook LPCA Beach Softening Plan and Section.pdf** (located on last page)

Cost:

The original proposal was described in the 2015 Reserve Study. It proposed building 985 linear feet of concrete bulkhead at a cost of \$699,181. The work was to take place in 2019 at an inflation adjusted cost of \$786,984.

The new proposal is to build a minimum of hard bulkhead and construct the rest with more environmentally acceptable, less intrusive and potentially more aesthetically pleasing soft bulkhead at an estimated project cost of **\$320,000**.

Some public and private money is available for shoreline softening projects and LPCA did ask one agency to rate our project. Our project received 3 points out of a possible 5, making the potential for funding doubtful. Given the time and cost involved in grant writing and the fact that much of the project cost would not qualify for funding because it is for hard or armored bulkhead, the LPCA is not pursuing public funding or private grants.

The cost of the project is based on the Engineer's Estimate of \$291,555 plus contingency for possible changes and increased construction costs during the one to two years permitting may require. If this project is approved by the Members, the permit process will likely require some changes to the proposal but it is anticipated the beach softening and removal of much of the old wooden bulkhead will make permitting easier. Once the design and approval is finalized it will go out to qualified contractors for competitive bids.

In 2018 the Reserve Study Committee realized the the LPCA would not likely build 985 linear feet of concrete bulkhead at a cost of \$786,984 so they removed it from the Reserve Study and replaced it with the lesser number of \$297,000. This number was based on talks with Chinook Engineering about using as much soft bulkhead as practical. This significant reduction in cost contributed to making the previously underfunded Reserve Study, fully funded. This project is fully funded in the current LPCA Reserve Study and will not require a special assessment and is not expected to create underfunded liabilities for future maintenance projects.

Conclusion:

There are advantages and disadvantages to alternative types of bulkheads such as cost, the environment, fish and wildlife habitat, beach access and aesthetics. Fortunately there are many resources available for those who are interested in knowing more. For information on soft shore stabilization see Island County's website including an interesting 5 minute video at:

<https://www.islandcountywa.gov/Health/DNR/Shore-Friendly/Pages/Home.aspx>

You can also find pictures of Cornet Bay (north Whidbey) before and after the wooden bulkhead was removed at:

<https://www.islandcountymrc.org/projects/cornet-bay-restoration/>

The December wind storm exposed some vulnerabilities in our shoreline, undermining the ends of bulkheads in four places requiring emergency repair. LPCA funds are available for this project and waiting longer to pursue it is unlikely to make it less expensive.

Submit questions to: lpca99@gmail.com or lpca.pres@gmail.com

See preliminary Beach Softening Plan and Section on next page:

