

Waterfront Master Plan Addendum 2016

The purpose of this addendum to the Port of Friday Harbor Waterfront Master Plan is to incorporate the “over the water” portions of the Ports waterfront into the plan. This addendum will guide future development and improvements at this site.

A life cycle analysis of the marina structures was conducted in 2009 by the Port’s engineering firm. This analysis provides an overview of existing conditions and a summary of project recommendations.

Introduction:

The original Friday Harbor Marina was built in 1972, with wood docks and creosote piles. It was protected by a 600’ long, 24’ wooden breakwater float. The marina was expanded in 1984 doubling its moorage capacity. The U.S. Army Corp of Engineers installed a concrete floating breakwater, to protect the marina.

In 2010 through 2014, a series of projects were undertaken that replaced most of the marina’s electrical system. These improvements culminated in 2014 with the replacement of the original 1972 marina, using concrete docks and steel piling.

Other marine structures owned by the Port and considered in this addendum include the Fuel Pier and floats, purchased from the County in 1982, and Spring Street Landing Marina purchased in 1994.

Over the last 15 years, the four main piers have had major repairs including pile replacement, decking and rails. This addendum will address only the floating docks, finger floats and utilities.

The Marina is the Port’s largest revenue generating facility with an operating budget of \$2,500,000.

The marina brings nearly 15,000 overnight boaters to Friday Harbor each year.

This generates more than \$3,000,000 in revenue to local businesses on the island.

Guest moorage revenue generates \$580,000 annually for the Port, 22% of its operating budget.

Permanent Moorage generates \$1,310,000 annually, 66% of the operating budget.

In 2015 commercial vessels brought 91,000 foot passengers through Port facilities.

A. Guest Docks

G, H, and D docks and fingers were installed during the 1984 expansion. G-dock and 50% of H-dock were 75% funded by Washington State Parks & Recreation through the Boating Infrastructure Grant (BIG). G dock and a portion H must be used exclusively for recreational transient moorage boats 26'—44'. The docks and power posts on these docks are now 32+ years old and heavily used by the thousands of guests that frequent the Port. The Port also offers an activity float for over the water activities and gatherings for guests free of charge.

Existing Conditions & Challenges

G-dock is comprised of 46—40' slips, 4—30' slips, and 2—24' slips. H-dock has all 30' slips and D-dock has 4—30' slips and 24—24' slips. All slips are concrete with wood walers, coated plywood fillets and "Unicorn" power pedestals, 30amp. A guest check-in station is located at the head of G-dock and is manned full time during the summer boating season.

The structural walers are in a deteriorating state and contain rot. The Unicorn power pedestals have been heavily used and often require replacement and repair. They are no longer available to purchase and are maintained using parts from decommissioned power posts. They are difficult to operate and do not fulfill new code requirements. The deck fillets that support the power pedestals are also deteriorating and require replacement. The guest check-in station is a wood framed metal roofed building with windows and a single door.

The life cycle analysis rating of the docks was good to fair with replacement recommended in 2014-2019. The greatest challenge in this location will be to complete project during the off-season and to provide access while project is underway.



B. W-DOCK

W-Dock was part of the original marina purchased by the Port in 1977 along with the W-Pier and a shore side building. The float was replaced in 2000 with 25 year old refurbished floats purchased from the Port of Bellingham.

Existing Conditions & Challenges

W-dock is comprised of 24', 31' and 45' wood fingers. The main walkway portion is concrete with a center chase way for utilities. The power posts are "Eaton" aluminum powder coated with 30 amp power. The life cycle analysis rating was fair to poor condition with replacement recommended in 2014-2019. While the main concrete walkway is acceptable, the floats, power posts and electrical wiring must be replaced. Challenges will be to relocate vessels with live-aboards and work in shallow water area.



C. Commercial Rafting & Bypass Floats

The Commercial Float and Main Pier bypass were replaced in 2000 with used floats from the Port of Bellingham. These floats are mainly used for commercial fishers, day moorage and disabled reservations. Their close proximity to shore allows for loading and unloading and easy access to shore. The combination of the bypass float with the Main Piers 80' ramp classifies the Port as an ADA accessible marina.

Existing Conditions & Challenges:

The life cycle analysis of these two floats was rated as fair with replacement recommended in 2014—2019. If structural walers and bull rails are replaced life span can be extended. There are some floatation issues on the bypass float that may require further maintenance to extend the life span.

Challenge at this location is pump-out station and lift station shut-downs.



D. Main Float

The Main float was originally the 1972 wooden breakwater float. It is 600' long and 24' wide with polypropylene floatation. It has two main float systems attached J & K floats. They are located on the south side of the main float. J-dock has 60' concrete fingers and K-dock with 50' concrete fingers. The north side of the float has concrete 40' fingers. These floats and fingers were part of the marina expansion in 1985.

Existing Conditions & Challenges

The life cycle analysis rating of the main float was good to fair with replacement recommended in 2019-2024. J and K docks have had electrical upgrades and piling repairs within the last 5 years. In 2015 walers were replaced on K-dock. They area will have an extended life expectancy of 20 more years once all waler repairs are completed. J-dock waler repairs will be complete in 2016. Main float 40' finger waler repairs should be delayed until replacement of the Main float itself.

Challenges will include detaching the J & K float systems on the south side and the 28—40' fingers on the north side. In addition all utilities and access to the floating breakwater run through the main float. This will require major power shut-downs and access issues to the heavily used guest moorage areas, United States Customs and the Seaplane Base.



E. Loading & Net Floats

The Loading and Net Floats were also components of the original breakwater float. They are large wooden structures with polypropylene floatation. They were heavily utilized when there was a large commercial fishing fleet. The floats are now mainly used for load/unload, day moorage, landing of small passenger vessels and some emergency vessel traffic.

Existing Conditions & Challenges

The life cycle analysis rating is good to fair for floatation and decking with work proposed in 2014-2019. Challenges in this area will be removal of the old float system and installation of new pile and disruption of traffic on the Main Pier. This is a high traffic area immediately adjacent to the fuel pier.



F. Fuel Pier Floats

The south side Fuel Pier floats and floats at Spring Street Landing are used for commercial business purposes, i.e. fishing charters, sailing charters, and wildlife excursions, etc. They draw thousands of customers and clients to the island and marina each year and greatly add to the community's economy with the jobs these businesses provide.

Existing Conditions & Challenges

The Fuel Pier floats have concrete walkways with two wooden and one concrete finger attached. They were replaced in 2000 with 25 year old used floats purchased from the Port of Bellingham. The power posts are fabricated, non-UL listed. The life cycle analysis rating has these floats as fair needing replacement in 2014-2019.

Challenges for replacement will be mobilizing in this restricted shallow water area and possible fuel operation disruption.



G. Spring Street Landing

The passenger vessels that operate out of Spring Street Landing carried more than 29,000 passengers across the floats in 2015. Twelve businesses operate off the docks daily throughout the boating season, employing more than 40 people.

Existing Conditions & Challenges

These floats were replaced in 2000 with used floats from the Port of Bellingham. All are wood with the exception of the walkway on the south side which is concrete. The floats have structural bull rails as opposed to cleats and these were replaced in 2013. The life cycle analysis ranked these floats as fair to worn on the decking and floatation with replacement recommended in 2014-2019. Many of the steel plate connectors are in poor shape and will need work prior to dock replacement.



Project Recommendations

1. Guest Dock & D Dock Rehabilitation

The guest docks are the top priority for rehabilitation of the Port of Friday Harbor Marina. The life of the 30-year-old floats can be extended with some immediate attention to the facility. The power posts must be upgraded to current standards. A guest services building is required to ensure staff and customer relations. An enhanced activity float for use by visiting boater and educational groups has been requested as a supplement to guest activities.

- Structural waler and rod replacement
- Fillet replacement
- Power posts
- Guest check-in station replacement
- Activity float replacement

Total Guest Dock-D Dock Project Estimated Cost = \$925,000

Funding: Port of Friday Harbor 25%, BIG grant 75%

Schedule:

- Predesign--2016
- Grant Application--2016
- Engineering--2016
- Construction—2017-18
- Completion—2018

2. Spring Street Landing Float Replacement

New floats should be installed throughout this facility. Power posts must be replaced. Due to size of project, marine contractor may be required. Port should investigate dredging opportunities in conjunction with Washington State Ferries prior to initiating float work.

Project components:

- Float replacement
- Ramp replacement
- Power post replacement

Total Spring Street Landing Project Estimated Cost: TBD

Funding: Port of Friday Harbor

Schedule:

- Predesign—2018
- Engineering—2018-19
- Construction—2020-21
- Completion—2021

3. Fuel Pier Floats

New finger floats with grating should be installed as well as new power posts. Ramps will be repaired or replaced. Work to be performed by Port staff with purchased dock components.

Project components:

- Float replacement
- Ramp replacement or repair
- Power post replacement

Total Fuel-Dock Project Estimated Cost = \$45,000

Funding: Port of Friday Harbor

Schedule:

- Predesign—2019
- Engineering—2019
- Construction—2020
- Completion—2020

4. W- Dock Rehabilitation

New finger floats (grated) should be attached to the existing W-dock float, and repairs made to the float as necessary. Work to be performed by Port staff with purchased dock components. The power posts should be upgraded to current standards.

Project components:

- Waler and rod replacement if necessary
- Finger float replacement
- Fillet replacement
- Power posts

Total W-Dock Project Estimated Cost = \$90,000

Funding: Port of Friday Harbor

Schedule:

- Predesign—2022
- Engineering—2022
- Construction—2023
- Completion—2023

The remaining projects will be carefully evaluated prior to commencing engineering design because they are integrated within an older section of the Marina that offers opportunities for reconfiguration and addition of facilities for larger vessels or an expansion of the business moorage.

5. Loading & Net Floats

These large sections of old breakwater have more width than necessary for their current use.

6. Rafting & By-pass Floats

The activity in commercial fishing has decreased over time. A reconfiguration of this area might offer larger moorage slips which is currently in short supply and which generate significant revenues.

7. Main Float

The main float, a section of the old breakwater, is much wider than it needs to be. It is not cost effective to replace it with the current footprint. There are opportunities in this area for larger slips on the north side of the float while maintaining comfortable public access to the breakwaters.

RCO Grant Timelines:

G & H Dock Re-Electrification & Upgrades: Boating Infrastructure Grant (BIG) 75%--25% Match

Tier 1 Projects are a max \$191,000 eligible with match of \$47,750. Total Project Cost: \$238,750

Tier 1 Projects are eligible only in WA, therefore competing locally only.

Tier 2 Projects are a max of \$1.45M eligible with match of \$362,500. Total Project Cost: 1.812M

Tier 2 Projects are rated federally, therefore up against large projects nationwide. We are told we always stand a good chance even when competing at the national level.

Tier 2 grants are accepted annually as opposed to bi-annually for Tier 1

Design is eligible up to \$5,000 for permits, planning, or architectural/engineering and can be provided as part of the 25% match. Any construction portion of the project (labor, equipment or materials) performed in-house may also be accounted for in the 25% match.

Timeline: March 1, 2016, Waterfront Master Plan documents

May 2, 2016: First draft of grant proposal, no presentation required

July 1, 2016: Second/Final draft, no presentation required

April/May 2017: Grant Awarded

Fall 2017: Construction