2015 FINAL TOWN OF FRIDAY HARBOR SHORELINE MASTER PROGRAM



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ORDINANCE NO. 1576

AN ORDINANCE adopting the official Shoreline Master Program for the Town of Friday Harbor, and repealing Ordinance No. 1538 in its entirety.

WHEREAS, the Town of Friday Harbor is required to revise its adopted Shoreline Master Program pursuant to RCW 90.58; and

WHEREAS, the Town of Friday Harbor has held the mandated public participation process in accordance with RCW 90.58.120 for consideration of said revisions:

NOW, THEREFORE, BE IT ORDAINED, by the Town Council of Friday Harbor as follows:

SECTION 1. GENERAL

1.01 Title

This document shall be known and may be cited as the Shoreline Master Program for Town of Friday Harbor, Washington.

1.02 Short Title

This document may be referred to internally as the Master Program.

1.03 Official Maps

The Town of Friday Harbor Shoreline Designated Environments Map and the Town of Friday Harbor Shoreline View Corridors Map, referred to herein as the Maps, are hereby adopted as part of this Master Program. The Maps shall show all areas of Friday Harbor which fall under the jurisdiction of this Master Program and the official designated environments for all affected lands and water. The Maps are to be used for general planning purposes only and may not be substituted for survey data. Copies of the Maps are attached hereto, Attachment 1 as the Shoreline Jurisdiction Map and Attachment 2 as the Shoreline View Corridor Map.

There shall be two official copies of the Maps, one of which shall reside in the custody of the Town of Friday Harbor, and the other at the Washington State Department of Ecology. Whenever any portion of either Map is legally amended, the official copies shall be altered promptly to reflect that amendment.

As the Maps are an inseparable part of this Master Program, no part of the Maps may be altered or amended without the approval of the Washington State Department of Ecology, as provided in RCW 90.58.190.

When questions arise as to the precise boundaries of any designated environment, the Shoreline Administrator shall make the final determination, subject to the provisions of Development Code Administration Ordinance 1119.

Unofficial copies of the Maps may be included herein and prepared for administrative purposes as needed.

SECTION 2. APPLICABILITY

2.01 General Applicability

This Master Program shall apply to all land and waters in or under the jurisdiction of the Town of Friday Harbor as the same may fall under jurisdiction of Chapter 90.58, RCW, the Shoreline Management Act, referred to herein as the Act. The Master Program provides goals, policies and regulations, which are additional to all other ordinances of the Town of Friday Harbor. If the provisions of the Master Program conflict with other applicable local ordinances, policies, and regulations, the one most satisfying the provisions of The Actshall apply. Changes to comprehensive plans and associated ordinances shall be consistent with the policies of the Shoreline Management Act and this Master Program pursuant to RCW 90.58.340.

2.02 Applicability to Persons and Non-Federal Agencies

This Master Program shall apply to every person, individual, firm, partnership, association, corporation, local or state governmental agency, public or municipal corporation, or other non-federal entity which develops, owns, leases or administers lands, shorelands or waters, which fall under jurisdiction of the Act.

2.03 Applicability to Federal Agencies

- A. Federal agencies shall not be required to obtain permits for substantial developments undertaken by the federal government on lands owned in fee simple by the federal government, except in those cases where the federal government grants or reserves to the State or local government substantial jurisdiction over activities on those lands. For federal activities on nonfederal land, when this master program becomes part of the state master program it will be used for federal consistency in evaluating federal permits and activities in Washington coastal waters.
- B. The substantial development permit system shall apply to non-federal activities constituting substantial developments undertaken on lands subject to non-federal ownership, lease or easement even though such land may fall within the external boundaries of federally owned lands.
- C. The substantial development permit system shall apply to substantial development undertaken on lands not federally owned but under lease, easement, license, or other similar property right short of fee ownership, to the federal government.

2.04 Applicability to Use and Development

This Master Program shall apply to all development as defined in Section 13, below. No use or development shall be undertaken on the Local Shoreline except use or development that is consistent with the policy of the Shoreline Management Act of 1971 and this Master Program.

2.05 Requirement for Permit.

Except as exempt in Section 2.06 below, no substantial development shall be undertaken on the Local Shoreline until a permit for such development has been approved in accordance with this Master Program. All work undertaken pursuant to a substantial development permit shall proceed in compliance with the permit and with the applicable local and state regulations.

2.06 Exemptions from Substantial Development Permit

- A. The following developments shall not require substantial development permits. This list of exemptions is amplified and supplemented by provisions of WAC 173-27-040, or as amended.
 - 1. Any development of which the total cost or fair market value, whichever is higher, does not exceed \$6,416 as adjusted under RCW 90.58.030(3)(e), if such development does not materially interfere with the normal public use of the water or shorelines of the state;
 - 2. Normal maintenance and repair of existing structures or developments, including damage by accident, fire, or the elements.
 - Construction of the normal protective bulkhead common to single-family residences; provided that such bulkheads are of entirely soft design and located at or landward of the OHWM.
 - 4. Construction of a single-family residence on shorelands by an owner, lessee or contract purchaser, for his or her own use or the use of his or her family, which residence does not exceed a height of thirty five (35) feet above average grade level and which meets all requirements of the state agency or local government having jurisdiction.
 - 5. Construction of a dock, designed for pleasure craft only, for the private, noncommercial use of the owner, lessee or contract purchaser of a single-family residence, for which the total cost or fair market value, whichever is higher, does not exceed \$2,500 in saltwater or \$10,000 in freshwater.
 - 6. Construction or modification of navigational aids such as channel markers.
 - 7. A public or private project that is designed to improve fish or wildlife habitat or fish passage, pursuant to RCW 90.58.147.

SECTION 3. SHORELINES OF STATEWIDE SIGNIFICANCE

3.01 General

The Shoreline Management Act designates certain water areas of the state as Shorelines of Statewide Significance. Water areas so designated are important to the entire State. Because these areas are resources from which all people in the State benefit, local master programs must give preference to uses of such areas which favor public and long-range goals.

3.02 Designation of Shorelines of Statewide Significance

The State legislature has designated all salt waters surrounding the Islands of San Juan County, seaward from the line of extreme low tide, as Shorelines of Statewide Significance (RCW 90.58.030(2)(e)).

3.03 Policies Governing the Use of Shorelines of Statewide Significance

A. Introduction

The Shoreline Management Act establishes policies which govern the use of Shorelines of Statewide Significance (RCW 90.58.020). All proposed activities within

Shorelines of Statewide Significance must first be consistent with the policies of this section before meeting the other provisions of this Master Program. Uses which are consistent with the following policies, cited in order of descending preference, shall be given preference by the Town of Friday Harbor. Uses which are not generally consistent with these policies should not be permitted on Shorelines of Statewide Significance.

B. Policies

- 1. The statewide interest should be recognized and protected over the local interest on Shorelines of Statewide Significance.
- 2. The natural character of Shorelines of Statewide Significance should be preserved.
- 3. Shorelines of Statewide Significance should be used in ways which will produce long-term benefits as opposed to short-term benefits or conveniences.
- 4. Actions that would commit resources to irreversible uses or would detrimentally alter natural conditions characteristic of such shorelines should be severely limited.
- 5. The visual impact of every proposed project should be thoroughly evaluated and adverse impacts should be minimized.
- 6. Public access to publicly owned areas of Shorelines of Statewide Significance should be increased.
- 7. Recreational opportunities for the public in Shorelines of Statewide Significance should be increased.

SECTION 4. GOALS & GENERAL SHORELINE USE & DEVELOPMENT POLICIES

4.01 General

The Shoreline Management Act establishes eight land and water use elements to be incorporated into every master program when appropriate. These are shoreline use, economic development, public access, circulation, recreation, conservation, flood damage prevention, and historic and cultural preservation.

The following goals and policies provide the foundation on which this entire Master Program rests.

4.02 Shoreline Use

A. Goal

To assure protection of the unique character of Friday Harbor, as recognized and described in the Town's Comprehensive Plan, while providing for uses of the Local Shoreline, which do not diminish the quality of the shoreline environment, and to assure the optimum opportunity for participation by local residents in the decision-making processes, which may affect that unique character.

To protect shoreline and aquatic zone resource areas including but not limited to Critical Areas and Critical Saltwater Habitats.

To monitor and adapt to changing shoreline conditions related to climate change and sea level rise utilizing state guidance as it becomes available.

Most of the factors which create the unique character of the Town depend upon the type of development that occurs within the Local Shoreline. Preservation of Friday Harbor's uniqueness especially requires that all such development be essentially consistent with the pattern, scale, and character of existing development within the Local Shoreline and its adjacent areas. Evaluation of proposed development shall include consideration of the impact upon:

- 1. The principle of no net loss of ecosystem and value.
- 2. The Town's character when viewed from the water, as well as from the land; and
- 3. The Aquatic Environment.

B. Policies

- 1. Uses which protect the potential long-term benefits to the public against compromise for reasons of short-term economic gain or convenience should be fostered.
- 2. Multiple use of overwater shoreline facilities is strongly encouraged.
- 3. Areas of the Local Shoreline which are particularly appropriate for specific shoreline and water area uses should be designated and reserved for those uses.
- 4. Except for residential uses, the Local Shoreline should be reserved for Water-Oriented Uses. Uses which are not water-oriented should not be permitted.
- 5. Shoreline land which does not abut the waterfront should be reserved for residential uses or for Water-Oriented Uses; provided that, other uses may be permitted if they provide public open spaces and public shoreline views, consistent with this Master Program.
- Continuing studies of the physical and economic aspects of shoreline systems should be encouraged in order to provide a continuously updated information base against which the impact of any proposed shoreline or water use can be measured.
- 7. Residents of Friday Harbor should be permitted to review any application for a shoreline permit prior to the Town Council action on the application. In addition, public meetings and hearings may be held upon request in order to further serve this purpose.
- 8. The goals and policies of this Master Program should be considered in all land use decisions that affect uplands adjacent to the shoreline.
- Incremental change in shoreline condition due to issues related to climate change will be monitored and administration of this ordinance may be adapted as data becomes available.

4.03 Economic Development

A. Goal

To acknowledge the critical importance of a balanced and diversified local economy for the long-range well-being of Friday Harbor and the Island community, by evaluating proposals for economic development along the shoreline or over the water with regard to the degree to which physical and social qualities of the Town will be enhanced.

In recognition of the fact that the foundation of the Town's economic structure is its unique retained character, the long-range well-being of Friday Harbor requires that

development within the Local Shoreline areas be designed and located in ways which are essentially consistent with the pattern, scale, and character of existing development within the Local Shoreline and its adjacent areas.

B. Policies

- Commercial development on shorelines and over water should occur where such development already exists, and such development should be consistent with the provisions of this Master Program.
- 2. All shoreline and over water development and use activities should be designed and constructed in a manner appropriate to the site and vicinity and to minimize cumulative adverse effects on the land and water environments.
- 3. All shoreline and over water development and use activities, including construction of commercial, industrial, residential and recreational uses, should be required to use all available and practical methods to minimize pollution, erosion, siltation and interference with natural water and sediment circulation.
- 4. Any shoreline or over water use which generates sewage or other wastes should have waste disposal facilities that are of approved design and sufficient capacity to prevent any cumulative adverse environmental impacts.
- 5. Preservation of public shoreline views should be accomplished by maintaining open space between buildings, by clustering buildings and by minimizing building height and total lot coverage by buildings.
- 6. Preservation of open space should be encouraged in all proposed uses of shorelines.
- 7. Off-premise commercial signs should be prohibited within the Local Shoreline.
- 8. Upon completion of public service and/or utilities projects, shorelines, tidelands, and bed lands should be restored to pre-project configurations and replanted with native species. Locations should be chosen which will not obstruct or destroy public shoreline views. Whenever possible these facilities should be placed underground or designed to do minimal damage to the scenic and ecological qualities of the area.
- 9. The handling or processing of petroleum products, other than that necessary for local consumption, is not compatible with the biological and physical character of Friday Harbor and should be prohibited.
- 10. Development and use of public lands should conform to the same limitations and standards imposed on development and use of private lands.

4.04 Public Access and Public Shoreline Views

A. Goal

- To assure safe, convenient and diversified physical access for the public to the water and to and along the shoreline, and to assure that intrusions created by such public access will not endanger the quality of life or property of Town residents, or have adverse effects on fragile natural features of the shoreline and water areas.
- 2. To protect the economic base of Friday Harbor and the surrounding community by

preserving, among other unique characteristics, the quality and scope of existing public shoreline views.

- 3. To preserve public shoreline views and public access to the Local Shoreline.
- 4. The Shoreline Management Act places emphasis on the right of the general public to enjoy the physical and aesthetic qualities of the shoreline and water areas, while allowing for controlled development consistent with the public interest. Public access can include activities ranging from shellfish harvesting to simple appreciation of a water view. Access can be to uplands adjacent to the shoreline, to tidelands, beaches, stream corridors, and to the water itself.
- 5. While public access is most frequently gained over public land, it can also be a mitigating component in a development on private land. In such cases, the public should gain some form of access to or near the water or shoreline, while the developer is able to complete a project that otherwise may have unacceptable impacts on public views, access, and use of the shoreline and water. Most often, this right of public access is obtained via a development condition and is expressed in an easement or conveyance in fee simple. In addition to acquisition of public access on private lands, public access may also be achieved by developers contributing to the cooperative development of public properties.
- 6. An intent of the Shoreline Management Act and this Master Program is to plan, provide and maintain a comprehensive system of public access. Such a system should be designed to provide safe and abundant access to water and shoreline recreational areas while preventing trespass onto private properties. Water Oriented uses and activities are encouraged that provide an opportunity for substantial numbers of the public to enjoy the Local Shoreline.

B. Policies

- 1. A comprehensive public access plan should be developed and adopted.
- 2. Public agencies should acquire or otherwise assure appropriate public access to public shorelines.
- 3. Rights-of-way in the shoreline should be made available for public access.
- 4. Public access should be designed with provisions for physically impaired persons.
- 5. Public access afforded by shoreline street-ends should be enhanced.
- Buffer zones or other appropriate design features should be provided in public access areas where necessary to protect private property and to clearly separate public and private use areas. On the other hand, development should not impair or degrade existing or planned public access.
- 7. Public access provisions should be designed to provide for public safety and to alleviate potential impacts to private property and individual privacy.
- 8. The nature and time of use of public access areas should be regulated where potential hazards for injury exist by specification of use limitations in conditions of permit approval.
- 9. Public access as close as possible to the water's edge should be provided.
- 10. Public access to Local Shorelines should be appropriately marked and maintained.

- 11. Public access areas should be connected by trails and paths where appropriate.
- 12. Public access development should be designed, located and constructed to protect ecological and aesthetic values as well as private property.
- 13. Substantial development within the Local Shoreline should not impair or detract from the public's physical access to the water.
- 14. Public shoreline views should be preserved to the maximum extent consistent with the rights of the owner whose property is proposed for development. Wherever reasonable, existing public shoreline views should be enhanced, provided that enhancement of views should not be construed to mean excessive removal of vegetation that obstructs or impairs views, and that any removal of vegetation be in compliance with Section 6.02(F) of this ordinance.
- 15. New public shoreline views should be created.

4.05 Circulation

A. Goal

To develop sure, safe, economical transportation systems to assure efficient movement of people with minimum disruption of the shoreline environment, and minimum conflict between different types of users.

B. Policies

- 1. The capacity of the Local Shoreline to absorb circulation impacts should be considered when reviewing proposals for development within the Local Shoreline.
- 2. Pedestrian and bicycle routes to and along the shoreline should be encouraged.
- 3. Motorized vehicles should be prohibited along the shoreline except on roads and in specifically designated areas.
- 4. Public agencies should, where appropriate, acquire parking areas and screen them from the water and shoreline areas.
- 5. Roads should be maintained at widths consistent with safety standards for limited speeds.
- 6. In building, improving or maintaining roads minimizing or eliminating ecological impact should be considered.
- 7. Roads should follow the natural terrain as much as possible in maintaining reasonable levels of safety.
- 8. Where the land is scarred or stripped of natural cover it should be replanted with native species or landscaped.
- 9. Wherever practical new roads proposed near shorelines should be set back at least 200 feet from the OHWM.

4.06 Recreation

A. Goal

To encourage diverse, appropriate and adequate water-oriented recreational opportunities which are compatible with over-water or shoreline locations and natural

site conditions.

B. Policies

- Recreational use of Local Shoreline areas must be recognized as only one of many potential uses and should be subject to the same constraints as other recognized uses.
- 2. Recreational use of public Local Shorelines should be encouraged for local residents, and visitors, consistent with environmental limitations.
- Privately and publicly owned recreational facilities should provide adequate water supply, fire protection and waste control, and otherwise meet public health, safety and general welfare standards.
- 4. The Town and Port of Friday Harbor should coordinate review of public and private recreational developments on the Local Shoreline to ensure consistency and compatibility with adopted plans and policies.
- Recreational uses which are not water-oriented should be required to locate outside the Local Shoreline. Recreational uses which are not water-dependent should not be allowed over water.
- 6. Recreational facilities and activities incompatible with shoreline locations should not be permitted within the shoreline area.

4.07 Conservation

A. Goal

To assure preservation and conservation of the natural environment and natural resources, including habitats for threatened and endangered species, for the benefit of existing and future generations.

B. Policies

- 1. Aesthetic and ecological qualities of the Local Shoreline should be recognized as valuable resources and preserved.
- 2. Critical saltwater habitats as defined in Section 13.01 of this ordinance should be preserved and where possible restored.
- 3. The natural, dynamic processes of shoreline formation and change should not be interfered with except for urgent reasons of public necessity or benefit.
- 4. There should be no net loss of the ecological functions and values of the shoreline as a result of actions permitted under this Master Program.
- 5. Removal of flora and fauna from shorelines shall be in compliance with all applicable state laws and local laws.
- 6. Vegetation on shorelines should be retained or increased with native vegetation to the extent possible in new shoreline development.
- 7. Sand, gravel and mineral extraction is incompatible with existing and planned shoreline use and should not be permitted. When grading and/or excavation are necessary for site preparation for development, all available practical methods to control ecological degradation, erosion, siltation and other impacts on adjoining

properties and water quality should be provided.

- 8. Commercial harvesting of timber is incompatible with existing and planned use of the shoreline and should not be permitted. When noncommercial timber cutting occurs on shorelines, in conjunction with other development, aesthetic effects and protection against ecological degradation, erosion and siltation should be considered.
- 9. Appropriate conservation easements may be accepted by the Town.

4.08 Historic and Cultural Preservation

A. Goal

Shoreline features should be protected to prevent the destruction of, or damage to, any site having archaeological, historic, cultural, or scientific value through coordination and consultation with the appropriate local, state, tribal and federal authorities.

B. Policies

- Sites should be protected in collaboration with appropriate tribal, state, federal, and local governments. Cooperation among public and private parties is to be encouraged in the identification, protection, and management of cultural resources.
- 2. When and/or where appropriate, access to such sites should be made available to parties of interest. Access to such sites must be designed and managed in a manner that gives maximum protection to the resource.
- 3. Opportunities for education related to archaeological, historical and cultural features should be provided when and/or where appropriate and incorporated into public and private management efforts, programs and development.

4.09 Critical Areas

A. Goal

To acknowledge the presence of identified critical areas within and adjacent to the shoreline jurisdiction and provide appropriate protective policy and regulation.

B. Policies

There are three of the five categories of critical areas (WAC 365-190) within the Town's Shoreline jurisdiction: wetlands (see Section 6.02(I)), frequently flooded areas (see Section 6.02(H)(4)), and fish and wildlife habitat conservation areas (see Sections 6.02(F) and 6.02(H)(5)), which includes critical saltwater habitats, including Critical Chinook Salmon Habitat and Critical Southern resident Killer Whale habitat.

- 1. All development in the vicinity of the wetland should provide protective buffers, where no development or landscaping can occur.
- 2. The WRIA 2 Salmon Recovery Plan notes the importance of providing a vegetated

riparian buffer and overhanging riparian vegetation to improve the habitat for juvenile Chinook salmon. As a result, when substantial new upland development or redevelopment occurs, the on-site landscaping should be designed to incorporate or increase native plant buffers along the shoreline

3. Critical areas within the shoreline area should be conserved and protected from loss or degradation.

SECTION 5. DESIGNATED SHORELINE ENVIRONMENTS

5.01 General

In order to employ the goals and policies of this Master Program effectively, the Local Shoreline areas are assigned environment designations as set forth in WAC 173-26-241 and are shown on Attachment 1. The designations are applied to each area based on existing development patterns, the known biological and physical limitations of the area and the goals and desires of the public.

The system of environment categories is intended to encourage shoreline preferred uses that will enhance the character of the environment in which they occur and to provide reasonable restrictions on development to prevent degradation of that character.

5.02 Common Description

A. Friday Harbor

The Urban Residential 2 designation begins at the southern edge of Town and includes the area along Turn Point Road within 200 feet of OHWM to the northern property line of parcel number 351392507 extended across Turn Point Road to the eastern edge of parcel number 351392511, then north along said line to the north corner of parcel number 351392511, then south along the western edge of parcel number 351392511 to a point 200-feet from the OHWM.

Along the shoreline the designation then changes to Urban and includes the entirety of parcel number 351391251, parcel number 351391250, parcel number 351391213, and parcel number 351391212. Using the western property line of parcel number 351391212 extended southerly across Warbass Way to the northern property line of parcel number 351391217 the Urban Designation follows the northern property line of parcel number 351391217 and parcel number 351391215 to the southern tip of the parcel. The Urban Designation then extends across Harrison Street to the northwestern corner of parcel number 351392511 and follows the eastern boundary of parcel number 351392511 south to a point where the northern property line of parcel number 351392507, extended westerly across Turn Point Rd. touches parcel number 351392511.

The Urban Residential 1 designation follows the jurisdiction line 200 feet from the OHWM northwest to a point on the boundary between parcel number 351349608 and parcel number 351352002 where the designation boundary follows the property line of parcel number 351349608 northerly to the intersection with the OHWM.

The shoreline designation changes back to Urban north of this line northeasterly 200-feet from the OHWM to the southeastern property lines of parcel number 351150020, parcel number 351149107, and parcel number 351155023, to intersection with the

OHWM.

The Urban Residential 2 designation then proceeds generally northerly, 200 feet from the OHWM to the northern Town Boundary.

Parcel numbers are valid as recorded on the date of adoption. As parcel numbers change over time the specific location of any development may need to be determined.

The shoreline administrator shall determine the need, if any, for site specific location determination.

All of the water area within the Town's jurisdiction is designated Aquatic.

B. Trout Lake

All of the land adjacent and within 200 feet upland of the OHWM of Trout Lake is in the Natural Designation. The rest of the Lake is in the Aquatic Environment.

C. Undesignated Shorelines

1. Undesignated shorelines are automatically designated Conservancy in accordance with WAC 173-26-211(2)(e).

5.03 Urban Environment

A. Statement of Purpose

The Urban Environment is an area of intensive and diverse land use. The purpose of the Urban Environment designation is to ensure full use of already urbanized shorelines by providing for and maintaining a variety of uses, particularly those that are water-dependent, water-related, or for water enjoyment. Protection of existing ecological functions and restoration of ecological functions in areas that have been previously degraded shall be pursued.

B. Designation Criteria

Areas to be designated Urban should meet one or more of the following criteria:

- 1. Shorelines used or planned for high-intensity commercial, port, public recreational and/or residential development;
- 2. Shorelines designated for expansion of urban uses based on adopted Town plans for utilities, roads and other services; or
- 3. Shorelines without biological or physical limitations for urban development.

C. Management Policies

- 1. Because shorelines suited to urban uses are limited, new urban development should be located in already developed areas, which is consistent with the provisions of this Master Program.
- Only uses which are water-dependent, water-related or for water-enjoyment should be located on the waterfront portion of the shoreline. New non water oriented uses should be prohibited except as part of mixed use developments or where they do not conflict with or limit opportunities for water oriented uses, or where there is no direct access to the shoreline.

- Public physical and visual access to the Local Shoreline should be provided wherever possible. Planning for acquisition and development of public access areas should be pursued. New and expanded development should be designed to include public access.
- 4. Public access points should be linked by pedestrian routes where practical.
- 5. To make maximum use of available waterfront land and accommodate future water-dependent uses, nonconforming uses may not be renewed after the use has been discontinued for twelve consecutive months. Subsequent uses should conform to the policies and regulations of this Master Program.
- 6. The character and appearance of urban development should be enhanced through the application of sign, landscaping and site planning standards
- 7. All urban shoreline development should be regulated in a manner designed to minimize cumulative adverse impacts on critical habitats, adjacent shoreline, upland areas, and ensure no net loss of the ecological functions and values of the shoreline.
- 8. Shoreline Urban areas should be fully developed before expansion of intensive development is allowed.

5.04 Urban Residential Environments

A. Statement of Purpose

The purpose of the Urban Residential designations is to recognize and provide for residential areas and other uses compatible with residential use such as public access and recreational use.

B. Designation Criteria

There are two Urban Residential designations:

- Urban Residential 1 should be applied to the area along Warbass Way which is characterized by large residential structures that are located very close to the OHWM.
- 2. Urban Residential 2 should be applied to the residential area at the north end of the town's shoreline and the sparsely developed residential shoreline at the south end of the town's shoreline, which are characterized by smaller residential structures that are set well back from the shoreline and undeveloped shoreline parcels.
- 3. Areas to be designated Urban Residential should meet one or both of the following criteria:
 - Shoreline areas in which single-family residential uses predominate; or
 - b. Areas planned for single-family residential use, in terms of utilities, access, and amenities.

C. Management Policies

1. Urban Residential shorelines should be restricted to uses compatible with residential use.

- Nonresidential uses permitted on Urban Residential shorelines should protect the residential character of the area. Permitted uses should not generate traffic, noise or pollutants at a level greater than that generated by existing residential uses and should not detract from the aesthetic quality of the area.
- 3. Multi-family and multi-lot residential and recreational developments provide public access and joint use for community recreational facilities as required by WAC 173-26-211(5.f.ii.B) as amended from time to time.
- Access, utilities, and public services should be available and adequate to serve existing needs and/or planned future development as required by WAC 173-26-211(5.f.ii.C) as amended from time to time.

5.05 Natural Environment

A. Statement of Purpose

The purpose of the Natural Environment designation is to preserve valuable natural resources and ecological functions and values, and to protect those shoreline areas that are relatively free of human influence or that include intact or minimally degraded shoreline functions sensitive to human use. These systems require that only very low intensity uses be allowed in order to maintain the ecological functions and ecosystem-wide processes. Consistent with the policies of the designation, local government should include planning for restoration of degraded shorelines within this environment.

B. Designation Criteria

Areas to be designated Natural should meet one or more of the following criteria:

- 1. Shorelines which represent undisturbed natural conditions;
- 2. Areas having a high scenic value in their natural states;
- 3. Areas which serve to maintain the natural character of adjoining natural shorelines occurring beyond Town jurisdiction.
- 4. Areas with potential for valuable habitat.

C. Management Policies

- 1. Natural areas should be kept free of all development which would adversely affect their character and scenic value.
- 2. Only those alterations which would not be detrimental to the forces which created and now maintain a Natural area should be permitted.
- 3. Limited access to Natural areas should be permitted for scientific, historic, educational and low-intensity recreational purposes, provided that no significant adverse impact on the area will result.
- 4. Uses which consume physical and biological resources should be prohibited.

5.06 Aquatic Environment

A. Statement of Purpose

The Aquatic Environment designation is designed to protect the quality and quantity of

surface water and marine waters, to preserve critical habitats, to preserve water areas for Water-Dependent Uses such as navigation and appropriate recreation, and to preserve natural features and resources of Friday Harbor from unnecessary degradation.

B. Designation Criteria

Areas designated Aquatic shall include all water bodies under jurisdiction of the Act and within the boundaries or under the jurisdiction of the Town of Friday Harbor, including the water surface and underlying lands, waterward from the OHWM.

C. Management Policies

- Allow new over-water structures only for water-dependent uses, public access, or ecological restoration.
- 2. In order to reduce the impacts of shoreline development and increase effective use of water resources, multiple uses of over-water facilities should be encouraged.
- 3. The size of new over-water structures should be limited to the minimum necessary to support the structure's intended use
- 4. Development in the Aquatic Environment should not degrade critical habitats.
- 5. Development in the Aquatic Environment should be compatible with the adjacent upland environment designation; provided that, in the event Aquatic development is adjacent to two different upland environments the most restrictive shall apply unless the Shoreline Administrator determines that application of the less restrictive would not compromise the public interest.
- 6. The natural circulation and volume of water should be maintained to the greatest extent possible.
- 7. Except for ecologic restoration and public access, uses which are not water-dependent should be prohibited, provided that Water-Enjoyment Uses at or near the OHWM, which provide public access to the Local Shoreline, may be considered as a conditional use subject to applicable use policies and regulations.
- 8. The Aquatic environment should be managed in a manner that will result in no net loss of the ecological functions and values. Activities and uses which will degrade the ecological or aesthetic values of the area should be prohibited.
- 9. Developments and activities using Aquatic areas should be located and designed to minimize interference with navigation, minimize adverse visual impacts, allow for passage of fish and other aquatic animals, and minimize adverse effects on water quality, geomorphic shoreline processes, and biological resources.
- 10. Land-based motor vehicles should not be permitted on tidelands except when necessary for emergency vehicles or when authorized in permitted construction or repair or for boat launchings.

SECTION 6. USE POLICIES AND REGULATIONS

6.01 Introduction and Applicability

Chapter 173-26 WAC establishes twenty-one categories of use to be addressed in local

master programs to carry out the intent and purposes of the Shoreline Management Act. The policies and regulations for each category are the criteria to be used for evaluating proposals for any permit under this Master Program or for any development within the Shoreline jurisdiction of the Town.

Chapter 173-26-201(2)(c) WAC establishes the principle of no net loss of ecological function with the baseline condition to be the conditions in existence on the date of adoption of this Ordinance. Individual development projects shall be evaluated for potential impacts and the principle of no net loss of ecosystem function or value shall be applied.

The entire marine portion of shoreline jurisdiction is considered a fish and wildlife habitat conservation area critical saltwater habitat. This area is considered a critical area defined by RCW 36.70A.060, RCW 36.70A.030, WAC 365-190-130 and WAC 173-26-221. It includes critical saltwater habitat based on federal designations for Southern Resident Killer Whales and Chinook Salmon.

The area seaward of the extreme low tide is Shorelines of State Wide Significance which require a higher level of protection as set forth in WAC 173-26-251.

Policies and regulations were developed for each use category based on the goals and general policies in Section 4, above. General Regulations are established in Section 6.02. Specific use policies and regulations for each shoreline environment consistent with Section 5 are established in Sections 6.03 through 6.21.

6.02 General Regulations

The following general regulations are based on the goals and general policies in Section 4, above, and shall apply to all use activities in all shoreline environments in which they are permitted.

Any use and/or development that would cause harmful impacts to critical saltwater habitat, loss of community uses, impacts to views or loss of extraordinary aesthetic values is prohibited.

New structural flood hazard reduction measures in shoreline jurisdiction are allowed only when it can be demonstrated by a scientific and engineering analysis that they are necessary to protect existing development, that nonstructural measures are not feasible, that impacts on ecological functions and priority species and habitats can be successfully mitigated so as to assure no net loss, and that appropriate vegetation conservation actions are undertaken consistent with WAC 173-26-221.

Projects that foster habitat and natural system enhancement, provided that the primary purpose is restoration of the natural character and functions of the shoreline, can be permitted subject to the conditions of this Master Program and the adopted Restoration Plan. Restoration projects are subject to the Regulatory Relief provisions of RCW 90.58.580 as amended from time to time.

A. Environmental Protection

 Because Friday Harbor is Designated a critical saltwater habitat, new docks, bulkheads, bridges, fill, floats, jetties, utility crossings and other human-made structures that intrude into or over critical saltwater habitat are prohibited except through a conditional use permit and where:

- a. Public need is clearly demonstrated, and
- b. The project includes appropriate mitigation, and
- c. The project results in no net loss of ecological function and value.

Private, noncommercial docks for individual residential or community use may be authorized provided that:

- d. Avoidance of impacts to critical saltwater habitats by an alternative alignment or locations is not feasible. This includes seeking moorage at public or private marinas.
- e. The project including required mitigation will result in no net loss of ecological functions associated with critical saltwater habitats.
- Any Development or Use activity within the Local Shoreline requires a Marine Critical Habitat Area study. This study, conducted by a qualified professional, shall include but not be limited to;
 - a. Description of shore type;
 - b. Potential for forage fish spawning;
 - c. Backshore habitat description;
 - d. Presence and location of eelgrass;
 - e. Presence and location of kelps;
 - f. Survey and scale map of existing shoreline modifications referenced to a field delineated OHWM if required WAC 173-27-180(9)(b);
 - g. Existing public or private stormwater outfalls
 - h. Presence and location of shellfish beds
 - i. Marine species present in the immediate location
- 3. Mitigation sequencing is required of all development in all areas of the shoreline jurisdiction.
- 4. Under WAC Chapter 173-26 uses and shoreline modifications along the Friday Harbor shoreline shall be designed, located, sized, constructed and/or maintained to achieve no net loss of shoreline ecological functions. Further, all cleanup and restoration activity shall comply with all relevant state and Federal Law.
- All uses and developments within the Local Shoreline shall be located, designed and constructed to achieve no net loss of ecological function and value to the Local Shoreline.
- 6. All uses and developments within the Local Shoreline shall use measures to prevent increases in surface runoff and shall control runoff so that adjacent properties and water bodies are not impacted by or degraded by sedimentation or pollutants. Such measures include but are not limited to:
 - a. Avoiding impervious surfaces in the shoreline setback area,
 - b. Retaining the maximum amount of native vegetation,
 - c. Avoiding the removal of trees, and

- d. Installing bio-retention and bio-filtration facilities for those circumstances where impervious surfaces must be used.
- 7. The release of oil, chemicals, nutrients, fertilizers, pathogens, and other hazardous materials into the water is prohibited.
- 8. All uses and developments within the Local Shoreline shall use effective methods for control of erosion during construction and operation.
- 9. Clearing, grading and filling for site preparation shall be limited to the minimum amount necessary for development.
- 10. All new uses and development within the Local Shoreline shall be sited and designed to avoid any new or maintenance dredging.
- 11. Where there is development or redevelopment resulting in a net increase in impervious surface of a parcel that fronts the Shoreline, an accompanying net increase in the area of shoreline vegetation is required.

12. Mitigating Impacts to the Shoreline

- a. An applicant for a use, land surface modification or development permit within the shoreline shall utilize the following mitigation sequencing guidelines that appear in order of preference, during design of the proposed project:
 - 1) Avoiding the impact or hazard by not taking a certain action, or redesigning the proposal to eliminate the impact. The applicant shall consider reasonable, affirmative steps and make best efforts to avoid critical area impacts. If impacts cannot be avoided through redesign, or because of site conditions or project requirements, the applicant shall then proceed with the following sequence of steps in subsection (9)(a)(2) through (9)(a)(7) of this section.
 - 2) Minimizing the impact or hazard by limiting the degree or magnitude of the action or impact with appropriate technology or by changing the timing of the action.
 - 3) Restoring the impacted critical areas by repairing, rehabilitating or restoring the affected critical area or its buffer.
 - 4) Minimizing or eliminating the hazard by restoring or stabilizing the hazard area through plantings, engineering or other methods.
 - Reducing or eliminating the impact or hazard over time by preservation or maintenance operations during the life of the development proposal, activity or alteration.
 - 6) Compensating for the adverse impact by enhancing critical areas and their buffers or creating substitute critical areas and their buffers.
 - 7) Monitoring the impact, hazard or success of required mitigation and taking remedial action based upon findings over time.
- b. In the required Critical Saltwater Habitat Areas study, the applicant shall include a discussion of how the proposed project will utilize mitigation sequencing to avoid, minimize, and mitigate impacts to shoreline ecological function and value, critical areas and associated buffers. The applicant shall seek to avoid, minimize and mitigate overall impacts to the functions and values of all affected

critical areas.

- c. In addition to the above steps, the specific development standards, permitted alteration requirements, and mitigation requirements of this chapter and elsewhere in this ordinance apply.
- d. In determining the extent to which the proposal shall be further redesigned to avoid and minimize the impact, the Town may consider the purpose, effectiveness, engineering feasibility, commercial availability of technology, best management practices, safety and cost of the proposal, and identified modifications to the proposal.
- 13. In areas mapped as potential flood zones by FEMA, development proposals must include plans in duplicate drawn to scale showing the nature, location, dimensions, and elevations of the area in question; existing or proposed structures, fill, storage of materials, drainage facilities, and the location of the foregoing. Specifically, the following information is required:
 - a. Elevation in relation to mean sea level, of the lowest floor (including basement) of all structures recorded on a current elevation certificate (FF 81-31) with Section B completed by the local official.
 - b. Elevation in relation to mean sea level to which any structure has been flood proofed;
 - c. Certification by a registered professional engineer or architect that the flood proofing methods for any nonresidential structure meet flood proofing criteria in FEMA National Flood Insurance Program (NFIP) as amended from time to time.
 - d. Description of the extent to which a watercourse will be altered or relocated as a result of proposed development.
- 14. Extended Moorage is subject to the requirements of WAC 332-52-155.
- 15. All Structures in the Local Shoreline shall comply with Section 6.02.

B. Public Access

- 1. Public access shall be required for all Local Shoreline development except single family residential development of 4 parcels or less based on nexus and proportionality, provided that, public access may not be required where it is demonstrated by the applicant and determined by the Town in its findings that one or more of the following provisions apply:
 - Unavoidable hazards to the public exist which cannot be controlled by any practical means;
 - b. Inherent security requirements of the use cannot be satisfied through the use of alternative design features or other solutions;
 - The cost of providing the access, easement, or an alternative amenity, is unreasonably disproportionate to the total cost of the proposed development;
 - d. Unacceptable environmental harm will result which cannot be mitigated; or
 - e. Significant undue and unavoidable conflict between the proposed use and

adjacent uses would occur and cannot be mitigated; and provided further, that the applicant has first demonstrated and the Town has determined in its findings that all reasonable alternatives have been exhausted, including but not limited to:

- 1) Regulating access by such means as a gate and/or limiting hours or use;
- 2) Designed separation of uses and activities, i.e. fences, terracing, use of one- way glazing, hedges, landscaping, etc.; and
- 3) Provisions of or contribution to an access site geographically separated from the proposal such as a trails system.
- 2. No development shall be permitted to obstruct or impede public access to publiclyowned shorelines and water areas.
- 3. Any public open space, access area or view corridor required or otherwise provided in association with new or expanded development, shall be of a size, location and design appropriate to the site, proposed primary use, adjacent uses, and the existing and projected demand by the community.
- 4. To the extent possible, public access locations shall have direct access from public roads.
- 5. Public access signs, such as the standard state approved logo or equivalent, shall be constructed, installed and maintained by the applicant. If the Town determines that use limitations are appropriate for reasons of public safety or to avoid use conflicts, such limitations shall be specified in permit conditions and posted on an on premise sign.
- 6. Required public access sites shall be fully developed and available for public use at the time of occupancy or use of the development.
- 7. Provisions for physically impaired persons shall be included, where feasible, in accordance with Americans with Disabilities Act requirements.
- 8. Public access easements and permit conditions shall be recorded on property deeds and, in the case of a subdivision, on the face of a plat as a condition running in perpetuity with the land. The required easement and/or conditions shall be recorded with the County Auditor's office at the time of permit approval.
- 9. Future actions shall not diminish the usefulness or value of the public access.

C. Public Shoreline View Protection

- All uses and developments within the Local Shoreline shall be located, designed and constructed to minimize the impact on public shoreline views. Development which would substantially reduce the extent or aesthetic quality of such views shall not be permitted, except where such a denial would be unduly oppressive to the property owner or would destroy or derogate a fundamental attribute of property ownership.
- 2. In recognition of the fact that nearly all development projects will include some increase in the extent to which structures will occupy a given site, the amount of acceptable public shoreline view loss, if any, shall be determined by giving due regard to the following factors:

- a. The nature, significance, and extent of existing public shoreline views across the property, to include:
 - 1) The number of points from which such views exist, and the size and location of each:
 - The content and quality of the particular view available from each such point, to include any territorial components that may be an integral part of the view; and
 - 3) The extent to which any such views might be obscured or lost by seasonal or other changes in existing or reasonably anticipated vegetation or by reasonably likely new development on other property, both shoreline and non-shoreline, in the immediate area.
- b. The nature, significance, and extent of public shoreline view loss or gain that would likely result from the proposed development, to include:
 - 1) The number of existing viewpoints which would be impacted and the extent of view loss reasonably anticipated for each;
 - 2) Whether or not any existing views will be enhanced or new viewpoints created by the project; and
 - 3) Whether or not it appears that there will be a net gain or net loss of public shoreline views.
- c. The extent to which public shoreline views are already being preserved or enhanced by the owner's election, for whatever reason, to propose less than the full measure of development rights available to the subject.
- d. The extent to which additional public shoreline view preservation limitations on the development, beyond those contained in the proposal, would reduce the value of the subject property.
- e. The extent to which development on other properties in the immediate area has already degraded or preserved public shoreline views.
- 3. In evaluating the significance of existing public shoreline views, under (2)(a) and (2)(b) above:
 - a. The public view corridors identified on Attachment 2 of this Program shall be conclusively deemed of greater value than other public shoreline view points:
 - b. Public shoreline views from streets, sidewalks, parks or other public property shall be presumed of greater value than public shoreline views from privately owned property;
 - c. Public shoreline views of greater expanse shall be presumed of more value than those of significantly lesser expanse; and
 - d. Public shoreline views from traveled portions of streets shall be presumed of lesser value than those from other public areas.

D. Parking

In addition to parking requirements imposed by other Town ordinances, the following regulations shall also apply:

- 1. Parking areas serving shoreline and over water uses shall be located off the street and landward of uses served unless incorporated into authorized structures.
- 2. Wherever adequate on-site parking cannot be provided, an upland parking site, 200 feet landward of the OHWM shall be required. Upland sites may be used to serve individual uses or be used cooperatively, subject to applicable local regulations.
- 3. Where there is no land area available on the landward side of developments, parking areas shall be setback no closer than 25 feet from the OHWM and shall be entirely screened from view from the water by planting or providing a solid fence of natural materials and of a design consistent with other applicable ordinances. In no case shall a fence or other screen block views of the water from public roads or areas.
- 4. If upland parking sites, 200 feet landward of the OHWM, are acquired by the Town, the Council may require applicants to participate in their use.
- 5. Where public access is included as a part of a development proposal, additional parking spaces to serve the general public may be required.

E. Archaeological - Historic - Cultural Sites

- 1. Known Historic, Cultural or Archaeological Sites:
 - a. Upon receipt of an application for a shoreline permit or application for a demolition permit within the shoreline zone, or request for a statement of exemption for development on properties within 500 feet of a site known to contain a historic, cultural or archaeological resource(s), the town shall require a cultural resource site survey/assessment. The site assessment shall be conducted by a professional archaeologist or historic preservation professional, as applicable, to determine the presence of historic or significant archaeological resources. Buildings or structures over 40 years in age shall be inventoried in a DAHP Historic Property Inventory Database entry and archaeological sites shall be recorded on DAHP Archaeological Site Inventory Forms. The fee for the services of the professional archaeologist or historic preservationist shall be paid by the applicant.
 - b. If the cultural resource site assessment identifies the presence of archaeological or significant historic, cultural resources, recommendations shall be prepared by a professional archaeologist or historic preservation professional, as part of the survey/assessment. The fee for the services of the professional archaeologist or historic preservation professional shall be paid by the applicant. In the preparation of such plans, the professional archaeologist or historic preservation professional shall solicit comments from the Washington State Department of Archaeology and Historic Preservation and the affected Tribe(s). Comments received shall be incorporated into the conclusions and recommended conditions of the survey/assessment to the maximum extent practicable.
 - 1. A Cultural Resources survey/assessment shall contain the following minimum elements:
 - a) The purpose of the project; a site plan for proposed on-site

development; including indication of any existing building or structures on-site as well as any that are proposed for removal; depth and location of all ground disturbing activities including, but not limited to, utilities, paved areas, clearing and grading, landscaping or new landscape features (i.e. fencing, walls, etc.); and examination of project on-site design alternatives; and an explanation of why the proposed activity requires a location on, or access across and/or through, an historic or archaeological resource; and

- A description of the historic/archaeological resources present, including any building or structure over 40 years of age affected by the proposal; and
- An analysis of the significance of the historic resource and an analysis of the potential adverse impacts as a result of the activity;
- d) An analysis of how these impacts will be/have been avoided; or
- e) A recommendation of appropriate mitigation measures if the resources cannot be avoided. Some mitigation measure may require a permit from DAHP. In the case of archaeological resources mitigation measures may include but are not limited to the following:
 - i) Recording the site with the State Department of Archaeology and Historic Preservation, or listing the site in the National Register of Historic Places, Washington Heritage Register, as applicable, or any locally developed historic registry formally adopted by the Town;
 - ii) Adaptive re-use of buildings or structures according to the US Secretary of the Interior's Standards for Rehabilitation.
 - iii) Preservation in place:
 - iv) Covering an archaeological site with a nonstructural surface to discourage pilferage (e.g., maintained grass or pavement);
 - v) Excavation and recovery of archaeological resources;
 - vi) Inventorying prior to covering of archaeological resources with structures or development; and
 - vii) Archaeological monitoring of construction excavation.
- 2) The Administrator shall consult with the Washington State Department of Archeology and Historic Preservation and affected Tribe(s) prior to approval and acceptance of the survey/assessment.

- 3) Based upon consultation with DAHP and the affected Tribe(s), the administrator may reject or request revision of the conclusions reached in a survey/assessment when the administrator can demonstrate that the assessment is inaccurate or does not fully address the historic/archaeological resource management concerns involved.
- c. Within 15 days of receipt of a complete development permit application in an area of known historic/archaeological resources, the town shall notify and request a recommendation from appropriate agencies such as the Washington State Department of Archaeology and Historic Preservation and affected Tribes(s). Recommendations of such agencies and other affected person shall be duly considered and adhered to whenever possible and reasonable. Notification shall include the following information:
 - 1) The date of application, the date of notice of completion for the application, and the date of the notice of application;
 - 2) The date, time, place, and type of the hearing, if applicable, and scheduled at the date of notice of the application;
 - 3) A site map including the street address, tax parcel number, township, range, and section of the proposed project area;
 - 4) A description of the proposed project action and a list of the project permits included in the application, and, if applicable, a list of any studies requested by the town;
 - 5) The identification of other permits not included in the application to the extent known by the town;
 - 6) The identification of existing environmental documents that evaluate the proposed project and, if not otherwise stated on the document providing notice of application, the location where the application and any studies can be reviewed;
 - 7) Any other information determined appropriate by the town:
 - A statement of the limits of the comment period, the right of each agency to comment on the application within a 15-day time period, receive notice of and participate in any hearings, request a copy of the decision once made, and to appeal a decision when allowed by law. In addition, the statement shall indicate that any agency wishing to receive personal notice of any hearings must notify the hearing examiner's office within 15 days of the date of the notice of application.
- d. In granting shoreline permits or statements of exemption for such development, the Town may attach conditions to require consultation with

the Washington State Department of Archaeology and Historic Preservation affected Tribe(s), and to assure that historic/archaeology resources are properly protected, or for appropriate agencies to contact property owners regarding purchase or other long-term arrangements. Provision for the protection and preservation of historic/archaeological site, structures or areas shall be incorporated to the maximum extent practicable.

2. Inadvertent Discovery:

- a. Whenever historic, cultural or archaeological sites or artifacts are discovered in the process of development on shorelines, work on that portion of the development site shall be stopped immediately and the find reported as soon as possible to the Administrator.
- b. The Administrator shall then notify the Washington State Department of Archaeology and Historic Preservation, affected Tribe(s) and other appropriate agencies and shall require than an immediate site assessment be conducted by a professional archaeologist or historic preservation professional, as applicable, pursuant to subsection 1. a of this section to the extent of damage to the resource. The site assessment shall be distributed to the Washington State Department of Archaeology and Historic Preservation and affected Tribe(s) for a 15-day review period. If the above listed agencies or governments have failed to respond within the applicable review period following receipt of the site assessment, such stopped work may resume.
- c. If human remains are encountered, all activity must cease and the area must be protected and the find reported to local law enforcement and the County coroner or medical examiner.

3. Public Access:

- a. If a private or publicly owned building or structure of historic significance is identified, public access shall be encouraged as appropriate for purposes of public education; provided that:
 - 1) The type and/or level of public access is consistent with the long term protection of both historic resource values and shoreline ecological functions; and
 - 2) An access management plan is developed in accordance with siteand resource-specific conditions in consultation with the Washington State Department of Archaeology and Historic Preservation, affected Tribe(s) and/or other agencies, as appropriate, the address the following:
 - a) Hours of operation;
 - b) Entrance fees and/or permits;

- c) Interpretive and/or directional signage;
- d) Lighting;
- e) Pedestrian and handicap access; and/or
- f) Traffic and parking.
- b. For archaeological and cultural resource sites, the Washington State Department of Archaeology and Historic Preservation, affected Tribe(s) and/or other agencies, as appropriate, shall be in agreement prior to providing public access to a site. An access and resource management plan shall be developed in consultation with the Washington State Department of Archaeology and Historic Preservation and the affected Tribe(s).

F. Tree and Vegetation Management

General Standards:

- a. The intent of preserving vegetation in the Local Shoreline is to support the functions of healthy critical areas and critical area buffers and maintain no net loss of ecological function or value.
- b. Landscape plans required under Section 6.02(F) shall be prepared by a licensed landscape architect or certified arborist.
- c. Any proposal to remove trees or other vegetation in the Local Shoreline or critical areas and critical area buffers shall be subject to the requirements in Section 6.02(F).

2. Requirements for Tree and Vegetation Management:

- a. Significant native trees shall be retained, unless removal is required due to documented hazardous conditions as determined by a certified landscape architect, certified arborist, or other native plant specialist as pre-approved by the Town for approved shoreline access where no other feasible solution is available. In such circumstances, removal of significant native trees shall be subject to the requirements of Subsection b below.
- b. Removal, pruning, thinning, limbing, or cutting of native trees or native vegetation within the Local Shoreline or in an aquatic area (with the exception of normal and routine tree and vegetation maintenance within rights-of-way, utility corridors, public access points and pathways, park and recreational facilities, existing landscaped areas, and public safety purposes) shall be subject to the following standards:
 - Existing native shoreline vegetation in an aquatic area or within a shoreline buffer shall be preserved and permanently protected, with limited exceptions to establish and maintain the following:

- a) Water-dependent and water-related uses.
- b) Public-recreation and public-access uses.
- c) Town-approved public view corridors.
- d) Utilities and roads
- e) In the case of a documented hazardous condition or Shoreline Variance or Shoreline Conditional Use Permit.
- 2) Proposed removal of native shoreline vegetation as described in Subsection a. and b. shall comply with Section 6.02(A).
- 3) Proposals to remove, prune, thin, limb, or cut trees or native vegetation within the Local Shoreline or in an aquatic area shall be subject to the standards of the Town's clearing and grading ordinance this Master Program, and may be subject to the findings of the arborist regarding preservation of the health and appearance of the tree(s) and surrounding native vegetation. Danger tree abatement may be achieved by felling or topping the tree. Habitat needs may require leaving the fallen tree in the riparian corridor or maintaining a high stump.
- c. Non-destructive pruning or thinning of lateral branches to preserve or enhance views or trimming, shaping, thinning, or pruning of a tree necessary to its health and growth shall be consistent with the following standards:
 - 1) This provision is not interpreted to allow clearing of vegetation.
 - 2) A minimum of 60% of the original crown shall be retained to maintain tree health.
 - 3) Trimming does not include topping, stripping, or imbalances.
 - 4) Trimming does not directly impact the nearshore functions and values, including fish and wildlife habitat conservation areas.
 - 5) Trimming is not within a wetland or wetland buffer.
- d. In addition to the requirements of Subsections a and b above, a tree removal request prepared by a certified landscape architect or certified arborist shall be submitted in writing to the Town prior to any native tree removal and shall include information on the location, number, type, and size of tree(s) being removed, and information on any replacement tree(s) or other vegetation to be planted.
- e. Removal of non-native or invasive vegetation within the Local Shoreline is permitted provided that the removal shall not cause a net loss to the ecological values and functions.

f. The Shoreline Administrator may condition an approval for tree or native vegetation removal to require replacement trees, restoration of native vegetation, stabilization of soil and steep slopes, or other requirements as appropriate to protect shoreline ecological function.

3. Critical Saltwater Habitats:

- a. As part of meeting project site area landscaping requirements, and in coordination with any buffer requirements, the applicant for a proposed new development, expansion, or redevelopment project of a non-water-dependent use, other than public shoreline access trails that will abut the Town's critical saltwater habitat areas, must submit a landscaping plan for approval specifying:
 - 1) Protection of existing native riparian vegetation within all areas of the subject parcel(s) within 200 feet of the OHWM.
 - 2) If native vegetation within 200 feet of the OHWM has been destroyed or significantly degraded, the landscaping plan shall specify replacement by installation of dense native riparian vegetation consisting of trees, shrubs, and groundcovers within and along portions of the 200-foot-wide strip of land lying immediately landward of the line of OHW for currently unarmored shorelines, or the landward edge of existing shoreline armoring for currently armored shorelines commensurate with the impact to the vegetation by the new development.
 - 3) Water-dependent uses and public access trails that will abut the Town's marine shorelines are exempt from the locational requirements of planted areas, but must provide a landscaping/mitigation plan that provides equal to or greater environment function than already exists.
 - 4) Riparian vegetation should be encouraged, but not required, elsewhere on the site for aesthetic continuity with the riparian vegetation required along the shoreline.
 - 5) Any restrictions or conditions that are tied to the parcel through the development of a landscape plan shall be recorded on a revised Notice on Title.
- b. The landscaping plan must be prepared by a licensed landscape architect or certified arborist and meet the following requirements:
 - Locations and Sizes of Required Shoreline Planting Areas The landscaping plan shall specify the particular species of native riparian vegetation appropriate to the subject areas that are to be planted preferably at existing ground-level, or if that is not feasible, then in raised planting beds.

- 2) Plant Selection The native riparian plant species shall be specified on the landscaping plan. The suitability of the species must be reviewed and approved by a certified landscape architect or certified arborist.
- 3) Plant Sizes The landscaping plan shall specify the sizes of the riparian plants to be installed. Because smaller stock may be acceptable based upon site-specific conditions, the plan may specify that the certified landscape architect or certified arborist may make field determinations to substitute smaller stock for the stock size set forth on the plan.
- 4) Site Preparation The landscaping plan shall specify that: (a) an amended planting soil shall be placed in the planting beds if needed; (b) all existing exotic vegetation must be removed from the planting beds; and (c) the project certified landscape architect or certified arborist may make field determinations for the installation of barriers to limit Canada geese intrusion and feeding on installed plants.
- 5) Plant Monitoring The landscaping plan shall specify that a minimum 5-year monitoring plan for herbaceous plants and 10-years for shrubs and trees will be conducted to ensure the long-term survival and stability of the riparian planting beds, with the elements of the monitoring to be: (a) annual inspections of the plants; (b) replacement of failed riparian plants; (c) removal of exotic invasive species that may have become established; and (d) photographic documentation of planting success.
- 6) Criteria for Success The landscaping plan shall specify that, at the end of the 5th year of the monitoring, the riparian planting beds shall be considered successful if the following performance standards are met: (1) a minimum 80 percent survival rate of the riparian vegetation within the planting beds; and (2) a minimum of 50 percent cover within the planting beds by riparian vegetation 4 feet or taller.

G. Water Quality, Stormwater, and Nonpoint Pollution

- 1. General All shoreline development and use shall incorporate reasonable methods of prevention, control, and treatment to protect and maintain surface and/or ground water quantity and quality.
- Submittal Requirements All proposals for development activity or land surface modification located within the Local Shoreline shall submit for approval a professionally certified storm water plan with their application, unless exempted by the Shoreline Administrator. The storm water plan shall include the following:
 - a. Provisions for temporary erosion control measures; and
 - b. Provisions for storm water detention, storm water quality treatment and storm water conveyance facilities; and
 - c. Certification that activities conducted in accordance with the plan will result in no

net increase of volume, flow rate, or stormwater born pollutants into the Aquatic Environment.

3. Standards

a. Shoreline uses and activities shall apply best management practices (BMPs), as described in the adopted Storm Water Technical Manual Large Parcel Erosion and Sediment Control Plan to minimize any increase in surface water runoff and to control, treat and release surface water runoff so that receiving properties, wetlands or streams, and Shoreline are not adversely affected. The property owner is required to ensure that all types of BMPs are regularly maintained and continue to function as intended.

Low impact development techniques shall be considered and implemented to the greatest extent practicable.

- b. New outfalls or discharge pipes to the shoreline (including stormwater and sewer outfalls) shall not be located in critical saltwater habitats. If a new outfall or discharge pipe is demonstrated to be necessary and there is no alternative location, it shall be designed so that
 - 1) The outfall is located below the surface of the beach or the bed of the water body waterward of the intertidal zone, or
 - 2) If location as stipulated in 1) above is not practical the outfall and energy dissipation pad is installed above the OHWM.
- c. In addition to providing storm water quality treatment facilities, the developer and/or property owner shall provide source control BMPs designed to treat or prevent storm water pollution arising from specific activities expected to occur on the site. Examples of such specific activities include, but are not limited to: car washing at detached and attached stacked (multifamily) residential sites; oil storage at marinas providing service and repair; and pesticide, herbicide, fertilizer and nutrient use to maintain landscaping.
- d. No release of oils, hydraulic fluids, fuels, paints, solvents or other hazardous materials shall be permitted into any waters. If water quality problems occur, including equipment leaks or spills, work operations shall cease immediately and the Shoreline Administrator and other agencies with jurisdiction shall be contacted immediately to coordinate spill containment and cleanup plans.
 - It shall be the responsibility of property owners to fund and implement the approved spill containment and cleanup plans and to complete the work by the deadline established in the plans.
- e. All materials that come into contact with water shall be constructed of untreated wood, cured concrete, steel or other approved nontoxic materials. Materials used for overwater decking or other structural components that may leach into the water shall comply with regulations of responsible agencies (i.e., Washington State Department of Fish and Wildlife or Department of Ecology) to avoid discharge of pollutants.
- f. The application of pesticides, herbicides, or fertilizers shall comply with the following standards:
 - 1) The application of pesticides, herbicides or fertilizers within shoreline

- setbacks shall utilize best management practices (BMPs) outlined in the BMPs for Landscaping and Lawn/Vegetation Management Section of the 2005 Stormwater Management Manual for Western Washington, or as amended, to prevent contamination of surface and ground water and/or soils, and adverse effects on shoreline ecological functions and values.
- 2) Pesticides, herbicides, or fertilizers shall be applied in a manner that minimizes their transmittal to adjacent water bodies. The direct runoff of chemical-laden waters into adjacent water bodies is prohibited. Spray application of pesticides shall not occur within 100 feet of open waters including wetlands, ponds, and streams, sloughs and any drainage ditch or channel that leads to open water except when approved by the town.
- The use of pesticides, herbicides or fertilizers within the shorelines jurisdiction, including applications of herbicides to control noxious aquatic vegetation, shall comply with regulations of responsible federal and state agencies.
- 4) A copy of the applicant's National Pollutant Discharge Elimination System (NPDES) permit, issued from Washington State Department of Ecology, authorizing aquatic pesticide (including herbicides) to the receiving waters must be submitted to the Shoreline Administrator prior to the application.

H. Critical Areas

- The provisions included in this Master Program will replace existing critical areas ordinance provisions for critical areas within the shoreline jurisdiction consistent with RCW 90.58.030(2)(d)(ii). Development and uses within critical areas and critical area buffers of the Local Shoreline shall be governed by this Master Program.
- 2. All activities within critical areas and critical area buffers shall be consistent with the environmental protection regulations in Section 6.02(A).
- Critical areas within the Local Shoreline include:
 - a. Wetlands (see Section 6.02(I))
 - b. Frequently flooded areas (see Section 6.02(H)(4))
 - c. Fish and wildlife habitat conservation areas (see Sections 6.02(F) and 6.02(H)(5))
- 4. Frequently Flooded Areas. Frequently flooded areas within the Town are within the Urban Residential 2 environment designation. Protection measures are addressed within the development regulations for this environment designation.
- 5. Fish and Wildlife Habitat Conservation Areas. Protection of fish and wildlife habitat conservation areas are addressed in Section 6.02(F) related to riparian vegetation management and protection. Protection is also provided through the use and modification regulations within critical saltwater habitat regulated under the Aquatic environmental designation within this Master Program (see Section 5.06).

I. Wetlands

- 1. Applicability The following provisions shall apply to wetlands and wetland buffers located within the shorelines jurisdiction.
- 2. Wetland Determinations, Delineations, Regulations, Criteria, and Procedures All determinations and delineations of wetlands shall be made using the criteria and procedures outlined in WAC 173-22-035 and contained in 1987 Corps of Engineers Wetland Delineation Manual and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0 or as amended). All determinations, delineations, and regulations of wetlands shall be based on the entire extent of the wetland, irrespective of property lines, ownership patterns, or other factors.
- 3. Wetland Determinations Either prior to or during review of a development application, the Shoreline Administrator shall determine whether a wetland or its buffer is present on the subject property using the following provisions:
 - a. During or immediately following a site inspection, the Shoreline Administrator shall make an initial assessment as to whether any portion of the subject property or surrounding area (that shall be the area within 250 feet of the subject property) meets the definition of a wetland. If this initial site inspection does not indicate the presence of a wetland on the subject property or surrounding area, no additional wetland studies will be required at that time.
 - However, if the initial site inspection or information subsequently obtained indicates the presence of a wetland on the subject property or surrounding area, then the applicant shall follow the procedure in subsection (3)(b) of this section.
 - b. If the initial site inspection or information subsequently obtained indicates that a wetland may exist on or near the subject property or surrounding area, the applicant shall submit a report prepared by a qualified professional approved by the Town.
 - c. If a wetland study and report are required, at a minimum the report shall include the following:
 - 1) A summary of the methodology used to conduct the study;
 - A professional survey that is tied to a known monument, depicting the wetland boundary on a map of the surrounding area which shows the wetland and its buffer;
 - A description of the wetland habitat(s) found throughout the entire wetland (not just on the subject property) using the U.S. Fish and Wildlife Service classification system (Classification of Wetlands and Deepwater Habitats in the U.S., Cowardin et al., 1979);
 - 4) A description of nesting, denning, and breeding areas found in the wetland or its surrounding area;
 - A description of the surrounding area, including any drainage systems entering and leaving the wetland, and a list of observed or documented plant and wildlife species;
 - 6) A description of historical, hydrologic, vegetative, topographic, and soil

modifications, if any;

- 7) A proposed classification of the wetland as Category I, II, III, or IV wetland; and
- 8) A completed rating form and required figures using the Washington State Wetland Rating System for Western Washington (Washington State Department of Ecology Publication No. 14-06-019, or latest version).
- d. Formal determination of whether a wetland exists on the subject property, as well as its boundaries and rating, shall be made by the Shoreline Administrator after preparation and review of the delineation report, if applicable, by the Town's consultant. The Shoreline Administrator's decision under this section shall be used for review of any development permit or activity proposed on the subject property for which an application is received within five (5) years of the delineation report, provided that the Shoreline Administrator may modify any decision whenever physical circumstances have markedly and demonstrably changed on the subject property or the surrounding area as a result of natural processes or human activity. Delineation reports should be forwarded to the Department of Ecology for review as early as possible.

4. Wetland Buffers and Setbacks

a. No land surface modification shall occur and no improvement may be located in a wetland or its buffer, except as provided in subsections (4) through (10) of this section.

Buffer Requirements. The standard buffer widths in Table 2 have been established in accordance with the best available science. They are based on the category of wetland and the habitat score as determined by a qualified wetland professional using the Washington state wetland rating system western Washington.

The standard buffer widths assume that the buffer is vegetated with a native plant community appropriate for the eco-region. If the existing buffer is non-vegetated, sparsely vegetated, or vegetated with invasive species that do not perform needed functions, the buffer either should be planted to create the appropriate plant community or the buffer should be widened to ensure that adequate functions of the buffer are provided.

Additional buffer widths are added to the standard buffer widths depending on the habitat score. For example; a Category I wetland scoring 32 points for habitat function would require a buffer of 250 feet (100' standard buffer + 150')

Required or standard buffers for wetlands are as follows and are measured from the outer edge of the wetland boundary:

Table 2: Wetland Buffers

Wetland Category	Standard Buffer Width	Buffer width if wetland scores 21 – 25 habitat points	Buffer width if wetland scores 26-29 habitat points	Buffer width if wetland scores 30-36 habitat points
Category I: Based on total score	100 ft	130 ft	190 ft	250 ft
Category I: Bogs	250 ft	N/A	N/A	N/A
Category I: Natural Heritage Wetlands	250 ft	N/A	N/A	285 ft
Category I: Coastal Lagoons	200 ft	N/A	215 ft	275 ft
Category I: Estuarine	200 ft	N/A	N/A	N/A
Category I: Forested	100 ft	130 ft	190 ft	250 ft
Category II:	100 ft	130 ft	190 ft	250 ft
Category III:	80 ft	125 ft	185 ft	N/A
Category IV:	50 ft	N/A	N/A	N/A

Habitat score is one (1) of three (3) elements of the rating form.

Modification to Buffer for Divided Wetland Buffer – Where a legally established, improved public right-of-way, improved easement road or existing structure divides a wetland buffer, the Shoreline Administrator may approve a modification of the required buffer in that portion of the buffer isolated from the wetland by the road or structure, provided the isolated portion of the buffer:

- 1) Does not provide additional protection of the wetland from the proposed development; and
- 2) Provides insignificant biological, geological or hydrological buffer functions relating to the portion of the buffer adjacent to the wetland.
- b. Buffer Setback Structures shall be set back at least 10 feet from the designated or modified wetland buffer. The Town may allow minor improvements within this setback that would clearly have no adverse effect during their construction, installation, use, or maintenance, on fish, wildlife, or their habitat or any vegetation in the buffer or adjacent wetland.
- c. Stormwater management facilities Stormwater management facilities are limited to stormwater dispersion outfalls and bioswales. They may be allowed within the outer twenty-five percent (25%) of the buffer of Category III or IV wetlands only, provided that:
 - 1) No other location is feasible; and
 - 2) The location of such facilities will not degrade the functions or values of the wetland; and
 - 3) Stormwater management facilities are not allowed in buffers of Category I or II

wetlands.

- d. Water Quality facilities Water quality facilities as determined by the town may be allowed within the outer twenty-five percent (25%) of the buffer of Category III or IV wetlands only, provided that:
 - 1) No other location is feasible; and
 - 2) The location of such facilities will not degrade the functions or values of the wetland; and
 - 3) Water quality facilities are not allowed in buffers of Category I or II wetlands.
- e. Utilities and Rights-of-Way The following work may only be allowed in critical areas and their buffers subject to Town review after appropriate mitigation sequencing has been considered and implemented, provided that activities will not increase the impervious area or reduce flood storage capacity in the Town:
 - 1) All utility work in improved Town rights-of-way;
 - 2) All normal and routine maintenance, operation and reconstruction of existing roads, streets, and associated rights-of-way and structures; and
 - 3) Construction of sewer or water lines that connect to existing lines in a sensitive area or buffer where no feasible alternative location exists based on an analysis of technology and system efficiency.

All affected critical areas and buffers shall be expeditiously restored to their preproject condition or better. For purposes of this subsection only, "improved Town rights-of-way" include those rights-of-way that have improvements only underground, as well as those with surface improvements.

- 5. Wetland Buffer Fence or Barrier Prior to beginning development activities, the applicant shall install a 6-foot-high construction-phase chain link fence or equivalent fence with silt screen fabric, as approved by the Shoreline Administrator and consistent with Town standards, along the upland boundary of the entire wetland buffer. The construction-phase fence shall remain upright in the approved location for the duration of development activities.
 - Upon project completion, the applicant shall install between the upland boundary of all wetland buffers and the developed portion of the site, either (a) a permanent 3-to 4-foot-tall split rail fence; or (b) equivalent barrier, as approved by the Shoreline Administrator. Installation of the permanent fence or equivalent barrier must be done by hand where necessary to prevent machinery from entering the wetland or its buffer.
- 6. Permit Process The Town shall consolidate and integrate the review and processing of the critical areas aspects of the proposal with the shoreline permit required for the proposed development activity, except as follows:
 - a. For wetland modifications or wetland buffer modifications affecting greater than 25 percent of the standard buffer utilize the shoreline variance process pursuant to Section 7 of this Ordinance.

- b. For wetland buffer modifications affecting 25 percent or less of the standard buffer utilize the underlying development permit.
- c. For wetland restoration plans utilize the underlying development permit.

Modification of Wetlands

a. No land surface modification shall occur and no improvement shall be located in a wetland, except as provided in this subsection. Work in-water or within wetlands may also require state and federal approval. It is the property owner's responsibility to obtain all necessary permits.

Submittal Requirements – The applicant shall submit a report prepared by a qualified professional. The report shall include the following:

- A determination and delineation of the sensitive area and required buffer containing all the information specified in subsection (3) of this section for a wetland;
- 2) A description of the area of the site that is within the sensitive area or within the setbacks or buffers required by this chapter;
- 3) An analysis of the impact the proposed development would have on the sensitive area and the sensitive area buffer;
- 4) An analysis of the mitigation sequencing as outlined in Section 6 of this Ordinance;
- 5) An assessment of the habitat, water quality, storm water detention, ground water recharge, shoreline protection, and erosion protection functions of the wetland and its buffer. The report shall also assess the effects of the proposed modification on those functions;
- 6) Sensitive site design and construction staging of the proposal so that the development away from the sensitive area and/or sensitive area buffer will minimize net loss of sensitive area and/or sensitive area buffer functions to the greatest extent feasible;
- 7) A description of protective measures that will be undertaken, such as siltation curtains, hay bales and other siltation prevention measures, and scheduling the construction activity to avoid interference with wildlife and fisheries rearing, nesting or spawning activities;
- 8) Information specified in subsection (8) of this section;
- 9) An evaluation of the project's consistency with the shoreline variance criteria contained in WAC 173-27-170; and
- 10) Such other information or studies as the Shoreline Administrator may reasonably require.
- c. Decisional Criteria The town may only approve an improvement or land surface modification in a wetland if:
 - 1) The project demonstrates consideration and implementation of appropriate mitigation sequencing as outlined in Section 6 of this Ordinance;
 - It will not adversely affect water quality;

- 3) It will not adversely affect fish, wildlife, or their habitat;
- 4) It will not have an adverse effect on drainage and/or storm water detention capabilities;
- 5) It will not lead to unstable earth conditions or create an erosion hazard or contribute to scouring actions;
- 6) It will not be materially detrimental to any other property or the Town as a whole;
- 7) Compensatory mitigation is provided in accordance with Table 3 in subsection (8) of this section;
- 8) Fill material does not contain organic or inorganic material that would be detrimental to water quality or fish and wildlife habitat;
- 9) All exposed areas are stabilized with vegetation normally associated with native wetlands and/or buffers, as appropriate; and
- 10) There is no feasible alternative development proposal that results in less impact to the wetland and its buffer.
- 8. Compensatory Mitigation All approved impacts to regulated wetlands require compensatory mitigation so that the goal of no net loss of wetland function, value, and acreage is achieved. A mitigation proposal must utilize the mitigation ratios specified below as excerpted from: Washington State Department of Ecology, U.S. Army Corps of Engineers Seattle District, and U.S. Environmental Protection Agency Region 10, March 2006. Wetland Mitigation in Washington State Part 1: Agency Policies and Guidance (Version 1). Washington State Department of Ecology Publication No. 06-06-011a. Olympia, WA.

Table 3: Compensatory Mitigation

Category and Type of Wetland Impacts	Reestab- lishment or Creation	Rehabili- tation Only1	Reestablishment or Creation (R/C) and Rehabilitation (RH)1	Reestablishment or Creation (R/C) and Enhance- me nt (E)1	Enhancement Only1
All Category IV	1.5:1	3:1	1:1 R/C and 1:1 RH	1:1 R/C and 2:1 E	6:1
All Category	2:1	4:1	1:1 R/C and 2:1 RH	1:1 R/C and 4:1 E	8:1
Category II	3:1	6:1	1:1 R/C and 4:1 RH	1:1 R/C and 8:1 E	12:1
Category Forested	6:1	12:1	1:1 R/C and 10:1 RH	1:1 R/C and 20:1 E	24:1
Category I – based on score for functions	4:1	8:1	1:1 R/C and 6:1 RH	1:1 R/C and 12:1 E	16:1
Category I	Not	6:1	Not allowed	Not allowed	Case-by-case
Natural Heritage site	allowed	Rehabilitation of a Natural Heritage site			
Category I Bog	Not allowed	6:1 Rehabilitation of a bog	Not allowed	Not allowed	Case-by-case

¹ These ratios are based on the assumption that the rehabilitation or enhancement actions implemented represent the average degree of improvement possible for the site. Proposals to implement more effective rehabilitation or enhancement actions may result in a lower ratio, while less effective actions may result in a higher ratio. The distinction between rehabilitation and enhancement is not clear-cut. Instead, rehabilitation and enhancement actions span a continuum. Proposals that fall within the gray area between rehabilitation and enhancement will result in a ratio that lies between the ratios for rehabilitation and the ratios for enhancement.

9. Wetland Buffer Modification

- a. Departures from the standard buffer requirements shall be approved only after the applicant has demonstrated consideration and implementation of appropriate mitigation sequencing as outlined in Section 6 of this Ordinance.
- b. Approved departures from the standard buffer requirements of subsection (4) of this section allow applicants to modify the physical and biological conditions of portions of the standard buffer for the duration of the approved project. These approved departures from the standard buffer requirements do not permanently establish a new regulatory buffer edge. Future development activities on the subject property may be required to re-establish the physical

and biological conditions of the standard buffer.

- c. Modification of Wetland Buffers When Wetland Is Also to Be Modified Wetland buffer impact is assumed to occur when wetland fill or modification occurs. Any proposal for wetland fill/modification shall include provisions for establishing a new wetland buffer to be located around the compensatory mitigation sites and to be equal in width to its standard buffer specified in subsection (4)(a) of this section.
- d. Modification of Wetland Buffers When Wetland Is Not to Be Modified No land surface modification may occur and no improvement may be located in a wetland buffer, except as provided for in this subsection.
 - 1) Types of Buffer Modifications Buffers may be reduced only-through buffer averaging:
 - a) Buffer averaging requires that the area of the buffer resulting from the buffer averaging is equal in size and quality to the buffer area calculated by the standards specified in subsection (4) of this section. Buffers may not be reduced at any point by more than 25 percent of the standards specified in subsection (4) of this section, unless approved through a shoreline variance. Buffer averaging calculations shall only consider the subject property.
 - 2) Decisional Criteria An improvement or land surface modification may be approved in a wetland buffer only if:
 - The development activity or buffer modification demonstrates consideration and implementation of appropriate mitigation sequencing as outlined in Section 6 of this Ordinance;
 - b) It will not adversely affect water quality;
 - c) It will not adversely affect fish, wildlife, or their habitat;
 - d) It will not have an adverse effect on drainage and/or storm water detention capabilities, ground water recharge or shoreline protection;
 - e) It will not lead to unstable earth conditions or create an erosion hazard;
 - f) It will not be materially detrimental to any other property or the Town as a whole;
 - g) Fill material does not contain organic or inorganic material that would be detrimental to water quality or to fish, wildlife, or their habitat;
 - h) All exposed areas are stabilized with vegetation normally associated with native wetland buffers, as appropriate; and
 - There is no feasible alternative development proposal that results in less impact to the buffer.

As part of the modification request, the applicant shall submit a report prepared by a qualified professional and fund a review of this report by the Town's consultant. The report shall assess the water quality, habitat, drainage or storm water detention, ground water recharge, shoreline protection, and erosion protection functions of the buffer; assess the effects of the proposed modification on those functions; and address the 9 criteria listed in subsection (9)(d)(2) of this section.

10. On-Site Versus Off-Site Mitigation – On-site mitigation for a wetland or its buffer is preferable to off-site mitigation. Given on-site constraints, the Town may approve a plan to implement all or a portion of the required mitigation off-site, if the off-site mitigation is within the same drainage basin as the property that will be impacted and bears a nexus to and is roughly proportionate with the impact. The applicant shall demonstrate that the off-site mitigation will result in higher wetland functions, values, and/or acreage than on-site mitigation. Required compensatory mitigation ratios shall be the same for on-site or off-site mitigation, or a combination of both.

If the proposed on-site or off-site mitigation plan will result in the creation or expansion of a wetland or its buffer on any property other than the subject property, the plan shall not be approved until the applicant submits to the Town a copy of a statement signed by the owners of all affected properties, in a form approved by the Town Attorney and recorded with the San Juan County auditor, consenting to the wetland and/or buffer creation or increase on such property, and to the required maintenance and monitoring that may follow the creation or expansion of a wetland or its buffer.

11. Mitigation Plan and Monitoring and Maintenance Program – Applicants proposing to alter wetlands or their buffers shall submit a mitigation plan prepared by a qualified professional. The mitigation plan shall consist of a description of the existing functions and values of the wetlands and buffers affected by the proposed project, the nature and extent of impacts to those areas, and the mitigation measures to offset those impacts. The mitigation plan shall also contain a drawing that illustrates the compensatory mitigation elements. The plan and/or drawing shall list plant materials and other habitat features to be installed.

To ensure success of the mitigation plan, the applicant shall submit a monitoring and maintenance program prepared by a qualified professional. At a minimum, the monitoring and maintenance plan shall include the following:

- a. The goals and objectives for the mitigation plan;
- b. Success criteria by which the mitigation will be assessed;
- c. Mitigation sites planted to herbaceous vegetation shall be monitored for a minimum of five years and sites planted to woody species shall be monitored for a minimum of 10 years. Monitoring would occur at site completion (Year 0) and then in Year 1, 2, 3, 5, 7 and 10.
- d. A contingency plan in case of failure; and
- e. Proof of a written contract with a qualified professional who will perform the monitoring program.

The monitoring program shall consist of at least two (2) site visits per year by a qualified professional, with annual progress reports submitted to the Town and all other agencies with jurisdiction.

The cost of producing and implementing the mitigation plan, the monitoring and maintenance program, reports, and drawing, as well as the review of each component by the Town's wetland consultant, shall be borne by the applicant.

- 12. Shoreline Variance for Wetland Modification or Wetland Buffer Modification An applicant who is unable to comply with the specific standards of this section must obtain a shoreline variance, pursuant to Section 7 of this Ordinance and meet the criteria set forth in WAC 173-27-170. In addition, the following Town submittal requirements and criteria must also be met:
 - a. Submittal Requirements As part of the shoreline variance request, the applicant shall submit a report prepared by a qualified professional and fund a review of this report by the Town's qualified professional. The report shall include the following:
 - A determination and delineation of the sensitive area and sensitive area buffer containing all the information specified in subsection (3) of this section for a wetland;
 - 2) An analysis of whether any other proposed development with less impact on the sensitive area and sensitive area buffer is feasible:
 - 3) Sensitive site design and construction staging of the proposal so that the development will have the least feasible impact on the sensitive area and sensitive area buffer:
 - 4) A description of the area of the site that is within the sensitive area or within the setbacks or buffers required by this chapter;
 - 5) A description of protective measures that will be undertaken, such as siltation curtains, hay bales and other siltation prevention measures, and scheduling the construction activity to avoid interference with wildlife and fisheries rearing, nesting or spawning activities;
 - 6) An analysis of the impact that the proposed development would have on the sensitive area and the sensitive area buffer:
 - 7) How the proposal minimizes net loss of sensitive area and/or sensitive area buffer functions to the greatest extent feasible;
 - 8) Whether the improvement is located away from the sensitive area and the sensitive area buffer to the greatest extent feasible;
 - 9) Information specified in subsection (8) of this section for compensatory mitigation; and
 - 10) Such other information or studies as the Shoreline Administrator may reasonably require.
 - b. Decisional Criteria The Town may grant approval of a shoreline variance only if all of the following criteria are met:
 - 1) No other permitted type of land use for the property with less impact on the sensitive area and associated buffer is feasible;
 - 2) The proposal has the minimum area of disturbance;
 - 3) The proposal maximizes the amount of existing tree canopy that is retained;
 - 4) The proposal utilizes to the maximum extent feasible innovative construction, design, and development techniques, including pervious surfaces, that minimize to the greatest extent feasible net loss of sensitive area functions

and values;

- 5) The proposed development does not pose an unacceptable threat to the public health, safety, or welfare on or off the property;
- 6) The proposal meets the mitigation, maintenance, and monitoring requirements of this chapter; and
- 7) The granting of the shoreline variance will not confer on the applicant any special privilege that is denied by this chapter to other lands, buildings, or structures under similar circumstances.
- 13. Wetland Restoration Town approval is required prior to wetland restoration. The Town may permit or require the applicant or property owner to restore and maintain a wetland and/or its buffer by removing material detrimental to the area, such as debris, sediment, or vegetation. The Town may also permit or require the applicant to restore a wetland or its buffer through the addition of native plants and other habitat features. Restoration may be required whenever a condition detrimental to water quality or habitat exists due to a direct impact of the proposed development or use on the wetland. When the Town requires wetland restoration, the requirements of subsection (8) of this section, Compensatory Mitigation, shall apply.
- 14. Wetland Access The Town may develop access through a wetland once it has obtained the required state and federal approval, and through its buffer in conjunction with a public park, provided the purpose supports education or passive recreation, and is designed to minimize environmental impacts during construction and operation.

J. Development Requirements

From the date of adoption of this Shoreline Master Program the Town shall not adopt any rezone, change in development density, change in parcel development standards or change in any other regulated parameter of development or use within the Shoreline in effect at the date of adoption of this Shoreline Master Program without documented consideration of the no net loss of ecosystem function or value requirements of the Act and an amendment to the shoreline master program.

Shoreline Environment	Shoreline Urban	Shoreline Residential 1	Shoreline Residential 2	Shoreline Natural
Density	9000 square foot minimum lot size.	4 units per acre	4 units per acre in the northern group. 14 units per acre in the southern group	Not applicable
Structure Height	27 feet	27 feet	27 feet	Not applicable
Shoreline Buffer	25 feet	25 feet	50 feet	See Section 6.21.

Front Yard Setback	Not Required	Front yards shall extend a minimum of 20 feet from the right-of- way except for those properties	Front yards shall extend a minimum of 20 feet from the right-of-way.	Not applicable.
		located northeasterly of and abutting Warbass Way		
Side Yard Setback	10 feet in View Protection District.	Side yards shall total not less than 15 feet with no one side yard less than five feet.	Side yards shall total not less than 15 feet with no one side yard less than five feet.	Not applicable.
Rear Yards	n/a	Rear yards shall extend a minimum of five feet from the rear property line	Rear yards shall extend a minimum of five feet from the rear property line.	Not applicable.
Lot Coverage	60 %	60%	60% in the northern group. 30% in the southern group.	Not applicable

6.03 Agriculture

A. Introduction

Agricultural activities are those methods used in animal husbandry and vegetation and soil management, such as tilling, control of weeds, plant diseases and insect pests, soil maintenance and fertilization. Many of these practices require use of agricultural chemicals, most of which are water-soluble and may wash into contiguous land or water areas, causing significant alteration and damage to plant and animal habitats, particularly in shoreline areas. Also, when proper land management techniques are not observed, large quantities of mineral and organic sediments enter water bodies through surface erosion.

B. Policies

- Erosion control measures consistent with standards established by the U.S. Department of Agriculture should be employed.
- 2. Commercial feedlots and similar practices which concentrate animal wastes, pesticides or herbicides should not be permitted on shorelines.
- 3. Agricultural practices typically require extensive land area and therefore should not be encouraged in areas intended for intensive, multiple uses.
- Best Management Practices for elimination of pesticide, herbicide, or nutrient runoff should be employed.

C. Regulations by Environment

- 1. Commercial Agricultural activities are prohibited in the Urban, Residential and Natural Environments.
- 2. Residential Agricultural activities are permitted within the Urban Residential Environment(s) subject to Section 6.02, above, and the policies and regulations of this Master Program provided that permitted agricultural activities will not allow any fertilizers, pesticides, or other agricultural chemicals to be introduced to the Aquatic Environment.

6.04 Aquaculture

A. Introduction

Aquaculture is the culture or farming of food fish, shellfish or other aquatic plants and animals. Potential locations for aquaculture are relatively restricted because of specific water quality, temperature, oxygen content, flow, salinity and other requirements. Aquaculture operations can impede surface navigation, and can have adverse visual and environmental impacts if not properly sited and operated.

B. Policy

Aquaculture should not be allowed in the following areas:

- 1. Areas that have little natural potential for the type(s) of aquaculture under consideration;
- 2. Areas that have water quality problems that make the areas unsuitable for the type(s) of aquaculture under consideration;
- 3. Areas devoted to established uses of the aquatic environment with which the proposed aquacultural methods(s) would substantially and materially conflict. Such uses would include but are not limited to navigation, mooring, sport or commercial fishing, log rafting, underwater utilities, and active scientific research;
- 4. Areas where the design or placement of the facilities would substantially degrade the aesthetic qualities of the shoreline or the water area;
- 5. Areas where an aquacultural proposal will result in any cumulative environmental impacts that cannot be eliminated or entirely mitigated through enforceable conditions of approval.

- 1. While Aquaculture is a preferred water dependent use, aquaculture operations may only be allowed by Conditional Use Permit in the Aquatic Environment subject to Section 6.02, above, the policies and regulations of this Master Program including but not limited to Section 3 above, and the requirements of WAC 173-26-241(3) or as amended.
- 2. Any aquaculture operation shall be designed and operated in a manner that prevents any effluents, by-products, chemicals, feed, nutrients, or other substance from entering the Aquatic Environment which cannot be mitigated.
- 3. Aquaculture is not permitted in areas where it would result in a net loss of ecological functions or adversely impact eelgrass and/or macroalgae. Impacts to

ecological functions shall be mitigated consistent with the mitigation sequence. Aquacultural facilities should be designed and located so as not to spread disease to native aquatic life, or establish new nonnative species which cause significant ecological impacts. WAC 173-26-241(3)(b)(i)(C).

- 4. Aquaculture is not permitted in areas where it would conflict with navigation and/or other water dependent uses WAC 173-26-241(3)(b)(i)(C).
- 5. Aquacultural facilities shall not significantly impact the aesthetic qualities of the shoreline. WAC 173-26-241(3)(b)(i)(C).
- 6. Commercial geoduck operations are subject to Department of Natural Resources siting characteristic requirements.
- Commercial geoduck aquaculture should only be allowed where sediments, topography, land and water access support geoduck aquaculture operations without significant clearing or grading. WAC 173-26-241(b)(ii).
- 8. The planting, growing, and harvesting of farm-raised geoduck clams requires a substantial development permit if a specific product or practice causes substantial interference with normal public use of the surface waters, but not otherwise. WAC 173-26-241(b)(iii).
- 9. The design and operation of any aquaculture operation shall be certified by a licensed professional to meet the requirements of Section 6.04.B of this Ordinance.

D. Regulations by Environment

- Aquaculture is prohibited in the Natural Environment and its associated Aquatic Environment.
- 2. Aquaculture is allowed through a conditional use permit in the Urban and Residential Environments and their associated Aquatic Environments.

6.05 Breakwaters

A. Introduction

Breakwaters are protective structures built offshore to protect harbor areas, moorings or beaches from wave action. Breakwaters can be rigid (rock or rubble), open-pile or floating construction. All types reduce or eliminate wave action but rigid breakwaters also obstruct the flow of sand and can starve beaches. Floating breakwaters do not generally have this effect.

Rigid breakwaters cover and eliminate aquatic habitats and create a different habitat. Water circulation may be impeded. Pile driving in construction of open-pile or floating breakwaters temporarily damages aquatic habitats and might, depending on location and time of activity, damage spawning areas. Breakwaters can serve to provide public access to shorelines.

B. Policies

- 1. Rigid breakwaters should not be allowed.
- Floating breakwaters should be constructed only where Water-Dependent Uses are located seaward of the OHWM and where protection from strong wave action is essential.

- Floating breakwaters should be permitted only where design features will eliminate significant detrimental effects on water circulation, sediment movement, and aquatic life.
- 4. Location, design and use of floating breakwaters should minimize restrictions on public use of the water.
- 5. When floating breakwaters are allowed, multiple-party use should be encouraged in order to increase public access to the water.

C. Regulations

- 1. Rigid breakwaters are prohibited.
- Floating breakwaters may be permitted as a conditional use only for Water-Dependent Uses, public access, shoreline stabilization or other specific public purposes.
- Floating breakwaters shall conform to all design requirements of the State Department of Fish & Wildlife and U.S. Army Corps of Engineers, except where conformity would be incompatible with protection of aquatic habitat and water and sediment circulation.
- 4. Floating breakwaters shall be designed in a manner which will not impede water circulation, fish migration, navigation, or visual access to the water.
- 5. Shoreline permit applications for floating breakwaters shall include at least the following information:
 - a. Purpose of breakwater and use to be protected;
 - b. Direction of net longshore drift;
 - c. Direction of strongest prevailing winds and tidal current;
 - d. Proposed construction materials and construction method; and
 - e. Certification by a licensed engineer that the proposed breakwater will, over the life of the structure, meet the requirements of Sections 6.05.B and 6.05.C of this ordinance.
- 6. Floating breakwaters shall permit public pedestrian access consistent with the public access section of this ordinance.

D. Regulations by Environment

- 1. Floating Breakwaters are prohibited in the Urban, Urban Residential and Natural Environments.
- 2. Floating breakwaters may be permitted as a conditional use permit in the Aquatic Environment subject to Section 6.02, above, and the policies and regulations of this Master Program including but not limited to Section 3, above.

6.06 Bulkheads

A. Introduction

Bulkheads, also described as Shoreline Stabilization Structures, are walls constructed parallel to shore, usually at or near the OHWM to prevent bank erosion by waves or

currents. They may also be used as retaining walls to protect edges of a filled area.

Bulkheads may be constructed of timber piling, concrete, steel or rock and may be solid, open-pile, or "soft" engineered construction. They do not provide permanent erosion protection because waves continue to erode the foreshore and gradually undermine the bulkhead and/or subject it to more forceful waves. While bulkheads protect adjacent uplands temporarily they may accelerate beach erosion. Other principal effects of bulkheads are aesthetic impacts and potential displacement or destruction of fish and shellfish habitats.

B. Policies

- 1. Bulkheads should be located, designed and constructed so that adverse impacts on nearby beaches and on aquatic habitats will not result.
- 2. Bulkheads should be designed and constructed to eliminate cumulative impacts on the shoreline and the aquatic habitat.
- 3. Bulkheads should not be constructed seaward of OHWM and should not exceed the minimum height necessary to stabilize the bank.
- 4. Use of erosion-resistant vegetation or other non-structural methods is preferred over the use of a bulkhead wherever possible.

- 1. Bulkheads which are exempt from shoreline substantial development permit requirements under Section 2.06, above, shall not be constructed until the Shoreline Administrator has reviewed the proposal and determined that the project is consistent with the policies and regulations of this Master Program.
- 2. Bulkheads shall be authorized only where the proponent demonstrates that one of the following conditions exists:
 - a. Erosion is seriously threatening an established primary structure on adjacent uplands;
 - b. A bulkhead is necessary in connection with a Water-Dependent Use permitted by this Master Program; or
 - c. A bulkhead is the most feasible means to stabilize a landfill permitted by this Master Program.
- 3. New developments shall be constructed so that protective bulkheads will not be required.
- 4. New bulkheads for existing primary residential development are allowed only where no alternatives, including relocation or reconstruction of existing structures, are feasible and less expensive than the proposed bulkhead, and then only if no net loss of ecological functions will result. Enlargement of an existing bulkhead is a new bulkhead.
- 5. Encroachment waterward of engineered softshore stabilization structures may be allowed if the structure provides for restoration of ecological function.
- 6. Bulkheads, whether new construction, extension of existing structure, or

maintenance/repair of existing structure; where permitted, shall be;

- a. Of soft design where possible and shall comply with all design requirements of the Washington State Department of Fish & Wildlife and U.S. Army Corps of Engineers.
- b. Shall be limited to the minimum size necessary.
- 7. Shoreline permit applications for bulkheads shall provide a geotechnical report including at least the following information:
 - a. Purpose of bulkhead;
 - b. Demonstration and evidence of serious erosion problem that would damage the primary structure within 3 years;
 - c. Extreme low tide, mean lower tide, mean tide, mean higher tide, field located OHWM and extreme high tide elevations;
 - d. Materials and method of construction;
 - e. Elevations of the toe and crest of the proposed bulkhead with respect to water levels; and
 - f. Certification by a Licensed Engineer that the proposed bulkhead project will create no net loss of intertidal ecosystem function or value.
- 8. Replacement of existing stabilization structures shall be based on demonstrated need consistent with WAC 173-26-231(3)(a)(iii)(C). Waterward encroachment of replacement structure is allowed only for residences occupied prior to January 1, 1992 or for soft shoreline stabilization measures that provide restoration of ecological functions

D. Regulations by Environment

- 1. Bulkheads are permitted in the Urban and Urban Residential Environments subject to Section 6.02, above, and the policies and regulations of this Master Program.
- 2. Bulkheads are prohibited in the Natural Environment.
- 3. Bulkheads are prohibited in the Aquatic Environment

6.07 Commercial Development

A. Introduction

Commercial developments are those involving the use or construction of facilities for wholesale and retail trade and services. These include hotels, motels, shops, restaurants, offices and indoor recreation facilities. Not included are ports, industrial, residential and recreational boating uses.

Commercial development frequently requires extensive space for normal operation and parking. The principal impacts on shorelines from commercial development are aesthetic effects, erosion and introduction of pollutants (e.g., sedimentation, wastes). Pollutants are generated from surface runoff, oil and fuel spills, and from poorly contained organic wastes. Intensive commercial use also affects traffic volumes and circulation patterns.

In many cases, commercial development will include associated uses which are identified as separate use categories in this Master Program. Associated signs, utilities, landfills, transportation facilities and ports and water-dependent industry are subject to policies and regulations established for those uses in addition to the provisions of this section.

B. Policies

- 1. New commercial development within the Local Shoreline should occur only in areas where commercial development already exists, and only when it is consistent with the provisions of this Master Program.
- 2. Commercial development on waterfront land should be restricted to Water-Oriented Uses with preference given to Water-Dependent Uses.
- Commercial development on shoreline land which is not waterfront should be restricted to Water-Enjoyment Uses. Water-Related Uses, and other uses which provide outdoor open space, open to the public without charge, and which offer public shoreline views, may also be permitted, as a conditional use, provided such uses are setback a minimum of 100 feet from OHWM.
 - a. Where public access easements are not possible, public access policies may be satisfied by employing design elements such as wide walkways parallel to sidewalks, landscaping and benches.
 - b. Public sidewalks and adjoining private areas open to the public should be designed to create a physically and visually continuous pedestrian route along the landward side of Front Street to encourage use by the general public rather than by business patrons
- 4. New and expanded commercial developments should be designed and located to protect and enhance public shoreline views consistent with this Master Program.
- 5. New and expanded commercial development should be permitted only where adequate parking area is or can be made available.
- 6. New and expanded commercial development should avoid impacts to existing navigation, recreation, and public access.

- Non Water-Dependent commercial over-water uses are prohibited except in existing structures, and where necessary to support water-dependent uses.
- New non Water-Oriented commercial uses are prohibited unless they are part of a mixed use project, navigation is severely limited, and the use provides a significant public benefit with respect to SMA objectives.
- 3. Shoreline permit applications for commercial development shall include a detailed statement explaining the nature and intensity of the relationship of the proposed development to the Local Shoreline i.e. water-dependent, water-related or water-enjoyment. Such statements shall include at least the following:
 - a. Nature of the commercial activity;
 - b. Need for shoreline or over water location;

- c. Proposed measures to enhance the relationship of the activity to the shoreline or water;
- d. Proposed provisions for public physical and visual access to the Local Shoreline; and
- e. Certification by a Licensed Engineer or Architect that the project will not contribute to any net loss of Local Shoreline ecosystem function or value.
- 4. Draining or filling water bodies for commercial development is prohibited.
- 5. Commercial docks and boat fueling stations shall be permitted to locate over water. No other commercial uses may include over-water structures.
- 6. Bulkheads and/or land filling are prohibited seaward of the OHWM in association with commercial development.
- 7. Shoreline permit applications for commercial development shall include a parking plan, showing the location, dimensions and capacity of the proposed parking area and the proposed landscaping or screening.
- 8. Commercial development on the landward side of Front Street, or on land which does not otherwise abut the water, which is not water-dependent shall be subject to the following requirements:
 - a. On-site parking shall not be located seaward of buildings, and adequate street access shall be provided; and
 - b. A landscaping plan shall be submitted with shoreline permit applications.
- 9. Water-dependent and water-related commercial uses shall be required to provide public access and ecological restoration where feasible and appropriate.
- 10. All commercial development will not result in a net loss of shoreline ecological functions or have significant adverse impacts to other shoreline uses such as existing navigation, recreation, and public access as required by WAC 173-26-241(3.d.).

D. Regulations by Environment

- Commercial development shall be permitted in the Urban Environment subject to Section 6.02, above, and the policies and regulations of this Master Program, provided that commercial structures not permitted over the water shall be set back at least 25 feet from the OHWM and shall not exceed the average height of existing buildings within 200 feet of the proposal.
- 2. Commercial development is prohibited in the Urban Residential and Natural Environments.
- Water-dependent commercial development shall be permitted in the Aquatic Environment subject to Section 6.02, above, and the policies and regulations of this Master Program including but not limited to Section 3, above. Other commercial development is prohibited.

6.08 Dredging

A. Introduction

Dredging is the removal or displacement of earth (sand, gravel, mud, silt and/or other materials) from the bottom of a water body or wetland. Dredging is normally done for specific purposes such as constructing or maintaining navigation channels, marinas, submarine pipelines or cables or to obtain fill material for construction.

Dredge spoil is material removed by dredging. Disposal of dredge spoils is also subject to policies and regulations for landfills.

Dredging usually occurs in shallow areas and may disturb aquatic life and water quality by causing a temporary increase in turbidity, altering nutrient and dissolved oxygen levels in the water and suspending toxic materials from sediments. It may cause loss of aquatic plants and animals by removal or from effects of suspended sediments. Dredge spoil disposal in water or shoreline areas can affect water quality by sedimentation or introduction of pollutants. Disposal sites are less damaged by depositing spoils in areas with like particle size and composition.

B. Policies

- 1. Dredging operations should be located and conducted in a manner that will minimize damage to the natural resources and systems of the dredge area, surrounding bedlands and the area in which dredge spoils are to be deposited.
- 2. Dredge spoil disposal in water areas should not be allowed except for habitat improvement.
- 3. Dredge spoil disposal sites should be identified with assistance of the State Department of Fish & Wildlife, State Department of Natural Resources, State Department of Ecology, U.S. Army Corps of Engineers, and the U.W. Friday Harbor Marine Laboratories.
- 4. Dredging solely to obtain fill material should not be allowed.

- 1. Dredging may be permitted as a conditional use for any of the following purposes and only where other alternatives are impractical:
 - a. To improve water quality or aquatic habitat;
 - b. To maintain or improve navigability or water flow; or
 - c. To mitigate conditions which could endanger public safety.
 - d. Maintenance dredging of established navigation channels and basins is restricted to maintaining previously dredged and/or existing authorized location, depth and width.
- 2. All dredge spoils shall be deposited at disposal sites which are consistent with the policies and regulations of this Master Program.
- Dredge spoil disposal in water areas is not allowed except for habitat improvement or where deposition on uplands would be more detrimental to shoreline resources than deposition in water.
- 4. Dredging for fill materials is prohibited except for projects associated with MTCA or

CERCLA habitat restoration, or any other significant restoration effort approved by a shoreline CUP. Placement of fill must be waterward of OHWM.

- 5. Applications for shoreline permits for dredging shall include at least the following information:
 - a. Location, size and physical characteristics of proposed dredge site;
 - b. Information on stability of bedlands adjacent to proposed dredge site;
 - c. Total initial spoils volume and composition;
 - d. Location, size, capacity and physical characteristics of proposed spoils disposal site;
 - e. Plan for disposal of maintenance spoils for life of project or period of twenty-five years, whichever is shorter; and
 - f. Certification by a Licensed Engineer that the project will not create any net loss of aquatic ecosystem function or value.

D. Regulations by Environment

- 1. Dredging may be permitted in the Urban, Urban Residential, and Aquatic Environments as a conditional use subject to Section 6.02, above, and to the policies and regulations of this Master Program.
- 2. Dredging is prohibited in the Natural Environment.

6.09 Forest Management

A. Introduction

Forest management practices are those methods used for the protection, production and harvesting of timber. Poor logging practices on shorelines result in slash and debris accumulation and may increase the suspended sediment load and the turbidity of the water.

B. Policy

Friday Harbor Shorelines have been converted or are planned for conversion to nonforest uses. Commercial timber harvest is not an appropriate use of Town shorelines.

C. Regulation

Commercial timber harvest is prohibited within 200 feet of the OHWM of any designated shoreline environment.

6.10 Jetties and Groins

A. Introduction

Jetties are built perpendicular to shore at harbor entrances to prevent creation of sand bars where these impede navigation. They are normally built of steel, rock or concrete, depending on foundation, wave and economic conditions. A jetty must be high enough to obstruct sand movement entirely; this prevents sand buildup but also impounds sand that would otherwise supply down drift beaches, starving them and contributing to beach erosion.

Groins are barrier structures built seaward from shore, sometimes in series, to preserve or create a beach by trapping sand. This is achieved at the expense of down drift shores unless the groin system is filled to capacity with sand.

Since Friday Harbor does not experience littoral drift of a magnitude requiring a jetty nor a beach which a groin system would enhance, adverse effects of such structures are likely to outweigh benefits.

B. Policies

- Jetties and groins should not be permitted unless the applicant demonstrates that the project would result in long-term public benefit which outweighs adverse impacts on natural shoreline processes.
- 2. In reviewing applications for jetties or groins the Town should consider carefully the ecological and aesthetic effects on the shoreline and the water.

C. Regulations

- Jetties and groins may be permitted only as conditional uses and only after a licensed engineer has certified that the project will create no net loss of intertidal or aquatic ecosystem function or value.
- 2. Applicants for shoreline permits for jetties or groins shall have the burden of proving consistency with Sub-Section 6.10(B)(I) above.

D. Regulations by Environment

- Jetties and groins may be permitted in the Urban and Urban Residential Environments as a conditional use subject to the policies and regulations of this Master Program.
- 2. Jetties and groins are prohibited in the Natural Environment.
- Jetties may be permitted in the Aquatic Environment as a conditional use subject to Section 6.02, above, and the policies and regulations of this Master Program including but not limited to Section 3, above. Groins are prohibited in the Aquatic Environment.

6.11 Landfills

A. Introduction

Landfill (fill) is placement of soil, sand, gravel, rock, sediment, earth retaining structure, or other material in water areas to create new land area, or on shorelands to raise the elevation of the land. Solid waste disposal is depositing garbage, ashes, construction waste, vehicles and vehicle parts and other discarded material in water or on land.

Landfill commonly eliminates natural vegetation and covers and destroys plant and animal life. It may also alter or destroy natural shoreline features, create erosion and siltation problems and reduce water surface area.

Solid waste disposal in a landfill is a potential source of organic and inorganic pollutants harmful to water quality and to public health and safety. Adequate containment of these materials cannot be assumed.

B. Policies

- 1. Landfills should not be permitted where any feasible upland or structural alternative exists and, where permitted, should be tightly controlled.
- 2. While landfill may be appropriate for some water-oriented uses, priority should be given to Water-Dependent Uses and public uses. Several factors should be considered in evaluating fill proposals, and in designating areas appropriate for fill. These factors include the total water surface area reduction, impacts on water flow, circulation and quality, impacts on natural resources and systems, potential destruction of habitats, potential erosion problems and potential restrictions of navigation.
- 3. Landfills and associated development, where permitted, should provide public access to the Local Shoreline.
- 4. Landfill for solid waste disposal is an inappropriate use of the shoreline.
- 5. Landfill should be authorized only for Water Oriented uses.

- 1. Landfills located seaward of the OHWM shall be permitted only as conditional uses and when in conjunction with and where necessary to support:
 - a. Water-Dependent Uses consistent with the provisions of this Master Program;
 - b. Public access:
 - c. Cleanup and disposal of contaminated sediments as part of an interagency environmental cleanup plan;
 - d. Disposal of dredged material in accordance with the DNR Dredged Material Management Program;
 - e. Expansion or alteration of transportation facilities of statewide significance currently located in the shoreline (if alternatives to fill are shown to not be feasible); or
 - f. Mitigation actions, environmental restoration, beach nourishment or enhancement projects.
- Landfill for uses associated with Water-Dependent Uses but which are not themselves water dependent, including parking, are prohibited seaward of the OHWM.
- 3. Landfills shall be permitted only when they conform to an approved development plan for an activity or use which has already been approved or is being reviewed concurrently.
- 4. Pile or pier supported structures, such as wharves or boardwalks, shall be used instead of landfills in water areas where seaward extension of the shoreline is necessary and where such structures are feasible. Landfills may be authorized only where no feasible alternative upland or structural solution exists.
- 5. Sanitary landfills and/or the disposal of solid wastes are prohibited within shoreline jurisdiction.
- 6. Applications for shoreline permits which include landfilling shall include at least the

following information:

- a. Source, volume and physical composition of fill material;
- b. Purpose and proposed use of fill area;
- c. Documentation of authorized use or proposed use;
- d. Method and schedule of placement and compaction;
- e. Surfacing and runoff treatment controls;
- f. Perimeter erosion controls:
- g. Location of fill relative to the field delineated OHWM, extreme high water, mean higher high water, mean high water, and mean lower low water level; and
- h. Certification by a Licensed Engineer that the project will not result in any net loss of intertidal or aquatic ecosystem function or value.
- 7. Where fills are permitted the amount of material used shall be the minimum necessary for the proposed uses.
- 8. Landfills for the sole purpose of creating additional land area are prohibited.

D. Regulations by Environment

- Landfills shall be permitted in the Urban and Urban Residential Environments subject to Section 6.02, above, and the policies and regulations of this Master Program, provided that landfills are prohibited for the sole purpose of creating additional land area.
- 2. Landfills are prohibited in the Natural Environment.
- 3. Landfills may be permitted in the Aquatic Environment only as a conditional use, subject to Section 6.02, above, and the policies and regulations of this Master Program including but not limited to Section 3, above.

6.12 Marinas

A. Introduction

Marinas are facilities that provide wet mooring and/or dry storage and services for more than four pleasure craft or commercial craft. Marinas are located over intertidal and subtidal areas and may extend landward from the OHWM, or a marina may be an upland based facility with water access via a travel lift, hoist or marine railway. They can be of open construction (floating breakwater, buoys, piers and floats) or solid (rigid breakwater or fill). Marinas are sometimes associated with other uses such as fuel and public launching facilities, boat rental, repair services, equipment sales and parking.

Activity generated by marinas varies with their size and range of services offered. They generate boat and vehicular traffic and related noise. Construction and operation of marinas affect water quality and fish and shellfish habitats by introducing pollutants (fuel, oil, heavy metals and human wastes; erosion and siltation). Temporary circulation and sand movement may be impeded and affect beaches or alter aquatic habitats. Marinas with several associated uses may require extensive land area and larger parking areas. Activities including but not limited to dredging, landfill, bulkheads,

utilities, and commercial development associated with marina development are subject to the policies and regulations for those categories.

B. Policies

- Marinas should be located and designed so their structures and operations will be aesthetically compatible with the area visually affected, and will not unreasonably impair public shoreline views.
- Marinas should be designed to provide adequate navigational access to and from the proposed development and existing and future development on adjacent properties.
- 3. Marina facilities should be designed to accommodate public access and enjoyment of the shoreline, including provisions for walkways, viewpoints, restroom facilities, and other recreational uses according to the scale of the facility.
- 4. Marinas, wherever possible, should use open-type construction to prevent degradation of fish and/or shellfish resources and habitat.
- 5. Installation and maintenance of sewage disposal (pump-out) facilities or services should be required and conveniently available to all users of marina facilities.
- 6. Floating homes should be prohibited. Houseboats and live-aboard vessels should be allowed.

C. General Regulations

- 1. The Town shall require the following information in its review of marina proposals:
 - a. Existing natural shoreline and backshore features and uses and bathymetric contours (1-foot increments);
 - b. Geo-hydraulic processes and flushing characteristics, volume, rates, and frequencies;
 - Biological resources and habitats for the Local Shoreline including eelgrass and understory kelp;
 - d. Existing and proposed aquatic land leases in the immediate area;
 - e. Site orientation; exposure to wind, waves, flooding or tidal/storm surges; and type and extent of shore defense works or shoreline stabilization and flood protection necessary;
 - f. Impact upon existing and created demand for shoreline and water uses including physical access, recreation, and public shoreline views;
 - g. The need for additional facilities;
 - h. The design of the facilities including but not limited to sewage disposal, restrooms, solid waste disposal, proposed signage, proposed exterior lighting, a proposed landscaping plan, and proposed use of noise-generating equipment;
 - i. Management and operations including accommodation of live-aboard vessels, including houseboats, provisions for the prevention and control of fuel spillage, and restrictions related to disposal of wastes and toxic materials;
 - j. Proposals shall be designed by a licensed engineer in accordance with the

provisions of Section 6.02 and shall be designed to achieve no net loss of Local Shoreline ecological function or value; and

- k. Other information that may be requested by the Shoreline Administrator.
- 2. Marina development shall comply with all applicable federal, state and local agency policies and regulations.
- 3. Public and private marinas shall be equipped to contain and clean up oil, gasoline and other hazardous substance spills.
- 4. Marinas shall allow no more than 10 percent of their occupancy for live-aboard uses.
- 5. Where landfill seaward of the OHWM is permitted it shall be only for the necessary water-dependent portions of the facility and shall conform in particular to the policies and regulations of Section 6.11, above. Landfill is prohibited for the creation of new parking areas or accessory uses within 25 feet from the OHWM.

D. Regulations - Design/Renovation/Expansion

- 1. Marinas shall be designed to:
 - a. Maintain a minimum setback of thirty (30) feet from the preferential rights line as established by survey;
 - b. Maintain a minimum setback of fifty (50) feet from existing development in the aquatic environment; and
 - c. Provide access to every mooring slip by a fairway that has a width that equals or exceeds 1 ½ times the length of that slip.
- 2. Marinas shall not extend seaward farther than the following limits:
 - a. The Construction Limit Line; or
 - b. Where no Construction Limit Line exists the seaward boundary of the preferential lease right area as set forth in WAC 332-30-122(1)(A)(ii) or its successor and WAC 332-30-142 (8)(d) or as amended.
- 3. Marina design shall provide thorough flushing of all enclosed water areas and shall not restrict the movement of aquatic life requiring shallow water.
- 4. The marina design shall minimize interference with geo-hydraulic processes and disruption of existing shore forms.
- Marinas shall be designed so their structures and operations will be aesthetically compatible with or will enhance existing shoreline features and uses. Marinas shall mitigate for adverse development impacts on-site and to adjacent properties.
- 6. Marinas shall be designed so that all requirements for public health, safety, and welfare are met.
- 7. All new Marinas or Boating Facilities shall be designed to provide public access.
- 8. Shoreline embankments of all marinas shall be stabilized above and below the water's edge during and after construction.
- 9. Long-term dry mooring (for 5 or more vessels) and all other storage areas shall be set back not less than one hundred (100) feet from the OHWM. This shall not apply

to hand-launch vessels.

- 10. Unless native vegetation on the perimeter of parking, dry mooring, and other storage areas is retained, these perimeter areas shall be landscaped with native plants or other approved materials. The permit application shall identify the size, location, and species of landscaping materials stressing native vegetation
- 11. Marinas may include specific areas restricted for security reasons. The incorporation of reasonable public access facilities into the design shall be required.
- 12. Marina development shall require the installation of vessel pump-out and on-shore sewage and waste disposal facilities.
- 13. New marinas and expansion areas in existing marinas shall not have covered mooring.

E. Regulations - Parking and Circulation

- 1. Parking facilities shall be provided according to the following schedule:
 - a. 1 vehicle space per 2 slips; and
 - b. 1 additional parking space shall be provided for every three hundred (300) square feet of interior floor space devoted to accessory retail sales or services.
- 2. Parking and outdoor storage areas associated with marinas shall be landscaped in a manner which provides a visual buffer between these uses and the top of the bank.
- 3. Short-term loading areas may be located at ramps or near berthing areas. Long-term parking and paved storage areas shall be separated from the OHWM by a vegetated native vegetation setback zone of at least fifty (50) feet.

F. Regulations - Utilities

- 1. All marinas shall have accessible boat sewage disposal systems on-site or other pump-out services.
- All marinas shall provide facilities for the adequate collection and dumping of marina originated materials including, but not limited to, sewage, solid waste, and petroleum waste.
- 3. All marinas shall provide restrooms for boaters' use. They shall be located within seventy-five (75) feet of the landward end of the dock or pier, be identified by signs and be accessible to tenants twenty-four (24) hours a day. Marinas with fewer than ten (10) slips shall provide one (1) toilet and hand washing facility. Marinas with ten to one hundred slips shall provide one (1) toilet and hand washing facility for each gender. Marinas exceeding one hundred (100) slips shall provide an additional toilet and hand washing facility for each gender.
- 4. Marinas in public ports may, by conditional use permit, install public floating restrooms provided that existing restrooms are more than 600 feet by direct walkable route from vessel slips, said restrooms are connected to shoreside utility systems, and said restrooms do not block views more than vessels moored in the vicinity.
- 5. Distribution systems for plumbing and wiring at a marina site shall be placed at or

- below ground and dock levels.
- 6. Public boat launch facilities shall provide and maintain dump stations and restrooms or portable toilets.

G. Regulations - Management and Operations

- 1. The discharge of sewage and/or toxic material from boats and/or shore installations shall be prohibited.
- 2. No commercial fish or shellfish processing discharge or discarding of unused bait, scrap fish, or viscera shall be permitted.
- Marinas which dispense fuel shall have adequate facilities and establish posted operational procedures for fuel handling and storage in order to prevent/minimize accidental spillage.
- 4. Marinas shall have facilities, equipment, and established posted procedures for containment, recovery, and mitigation of spilled petroleum, sewage, and toxic products.
- 5. Signs shall be posted where they are readily visible to all marina users describing regulations:
 - Pertaining to handling and disposal of waste, wastewater, toxic materials, and recycling;
 - b. Prohibiting the use of marine toilets (i.e., no untreated sewage discharge); and
 - c. Describing best management practices (BMPs) for boat maintenance and repairs on site.
- 6. Refuse or litter receptacles shall be provided and maintained at several locations convenient to users in sufficient numbers to properly store all solid waste generated on site.
- 7. Marina docks shall be equipped with adequate lifesaving equipment such as life rings, hooks, and ropes.
- 8. Current best management practices to control environmental pollution shall be applied to boat construction, repair and maintenance activities and, where applicable, shall be made a condition to shoreline permits.
- 9. Mooring of floating homes shall be prohibited in marinas.

H. Regulations by Environment

- 1. Marinas and Boating Facilities shall be permitted in the Urban Environment subject to Section 6.02, above, and the policies and regulations of this Master Program.
- 2. Marinas and Boating Facilities are prohibited in the Urban Residential and Natural Environments.
- Marinas shall be permitted in the Aquatic Environment subject to Section 6.02, above, and the policies and regulations of this Master Program including but not limited to Section 3, above.

6.13 Mineral Extraction

A. Introduction

Mineral extraction is the removal of naturally occurring materials from the earth for economic use. The Puget Sound region is rich in nonmetallic minerals including sand, gravel, clay, coal and various types of stone. The dollar value of these is comparatively high but the processes of extraction frequently result in erosion and siltation, water quality problems, degradation of fish and shellfish habitats and those of other bottom-dwelling marine animals. Removal of sand and gravel can deplete resources which may not be restored through natural processes.

B. Policy

Friday Harbor shorelines are used for, or are planned for conversion to uses, which are incompatible with mineral extraction.

C. Regulation

Mineral extraction is prohibited in all environment designations.

6.14 Mooring buoys

A. Introduction

A mooring buoy is a device which floats on the water and is attached to the bottom, and which is, or can be, used for holding a vessel in place.

B. Policies

- 1. Mooring buoys should be located only where they will not materially interfere with navigation.
- 2. Mooring buoys should be located and designed to minimize adverse impacts on the bedland and aquatic environments.
- 3. Mooring buoys should only be used for Water-Dependent Uses.

- 1. Mooring buoys shall be permitted only by conditional use permit with the condition that the permit expires no later than five (5) years from the date of issuance.
- 2. Applicants for mooring buoys must first demonstrate that the use of an existing dock or pier would be infeasible.
- 3. Mooring buoys shall not be installed prior to the owner receiving a license or approval from DNR and DFW.
- 4. Mooring buoys shall not be located seaward of the Construction Limit Line. Where no Construction Limit Line exists, buoys shall be located at a distance specified by the Washington Department of Fish and Wildlife, and the U.S. Coast Guard to balance the goals of avoiding nearshore habitat and minimizing obstruction to navigation. Mooring buoys shall not be located in areas of intensive vessel traffic.
- Mooring buoys shall not be located within 200 feet of the OHWM without the written consent of the upland property owner and vessels moored to mooring buoys shall

not swing within 200 feet of OHWM without written consent of all affected upland property owners.

- Buoys located within 200 feet of OHWM shall lie between preferential rights lines, as established by survey, extended beyond the shoreline. Vessels moored to the buoys shall not swing across the preferential rights lines without the written consent of the adjoining upland property owner.
- 7. Vessels moored to buoys shall not swing within fifty (50) feet of existing piers, docks, or floats.
- 8. Mooring buoys shall be used only for the mooring of vessels that are in navigable condition.

D. Regulations by Environment

- 1. Mooring buoys may be permitted offshore from the Urban and Urban Residential Environments as a conditional use and shall be subject to Section 6.02, above, and the provisions of Section 3, above.
- 2. Mooring buoys are prohibited offshore from the Natural Environment.

6.15 Piers and docks

A. Introduction

Piers and docks are structures extending from shore over the water, used for landing places or mooring for vessels. Piers are built as platforms above the water and are usually associated with a ramp and float, while docks float on the water surface.

Piers and docks can be used for recreational or commercial purposes but not for residential purposes. Those containing more than 4 slips are considered marinas and are regulated only under Section 6.12, above. Ferry Terminals are regulated under Section 6.20.

Docks generally have less visual impact than piers but can alter sand movement and water circulation in areas where tides and littoral drift are significant. Piers do not obstruct sand movement and can provide diverse marine habitat. Both types can impede navigation, decrease aesthetic values for shoreline views, reduce usable water surface area and increase local levels of pollutants (e.g., fuel, oil, heavy metals,

organic wastes) associated with boat use. Pile driving for dock or pier construction can temporarily disrupt water quality and might, depending on location and time of construction, harm spawning areas.

B. Policies

- 1. Piers and docks should be limited to the minimum length and size necessary to obtain adequate mooring depth at low tide.
- 2. Piers and docks should be designed to provide adequate navigational access to and from the proposed development and existing and future development on adjacent properties.
- 3. In evaluating applications for piers or docks, the capacity of the site to absorb effects of waste discharges and gas and oil spills should be considered.

- 4. Piers and docks should be constructed of non-toxic materials and grated to allow light transmission wherever possible.
- 5. Use of other treated wood containing toxic compounds should only be used where non-toxic materials are deemed impracticable and should be minimized

- 1. Piers and docks are allowed only for water-dependent uses or public access.
- 2. Piers and docks shall be restricted to the minimum size necessary to serve the proposed use.
- Piers and docks shall be permitted only when specific need is demonstrated and space in existing facilities is inadequate except for docks associated with a singlefamily residence that provides access to watercraft.
- 4. All shoreline permit applications for piers or docks shall be evaluated on the basis of multiple considerations, including but not limited to potential impacts on littoral drift, sand movement, water circulation and quality, fish and wildlife, navigation, scenic values and public access to the shoreline and the water.
- 5. All shoreline permit applications for piers or docks, whether exempt or not, shall be designed by a licensed engineer in accordance with the provisions of Section 6.02 and shall be designed to achieve no net loss of Local Shoreline ecosystem function or value.
- 6. All docks shall have stops to keep floats off the tidelands at low tide.
- 7. Piers and docks shall not extend seaward of the Construction Limit Line, as depicted on Attachment 1, or, where no such line exists, more than (two hundred) 200 feet seaward of the OHWM.
- 8. Piers and docks shall be limited in size to not more than 120 lineal feet as measured around the perimeter of that portion located seaward of the minus four (-4) foot line as measured at MLLW.
- 9. Pier and dock moorings shall be designed to:
 - a. Maintain a minimum setback of thirty (30) feet from the preferential rights line as established by survey;
 - b. Maintain a minimum setback of fifty (50) feet from existing development in the aquatic environment; and
 - c. Provide access to every mooring slip by a fairway that has a width that equals or exceeds 1 ½ times the length of that slip.
- 10. Mooring of floating homes shall be prohibited at piers and docks.
- 11. Piers, docks and floats shall be constructed of materials that comply with requirements of federal and state regulations, and as follows:
 - a. Wood products treated with creosote or pentachlorophenol are prohibited on all new structures or repair projects that come in contact with or could leach into water.
 - b. No treated wood shall be used for the decking on the overwater structures.

- c. Treated wood can be used for all structural elements of the overwater structure.
- d. Treated wood materials may be utilized on pilings in repair projects for timber structures.
- e. All treated wood used in the aquatic environment shall be restricted to those that have met or exceed the industry BMP Manual standards found in Best Management Practices for the Use of Treated Wood in Aquatic Environments: USA Version as revised. Western Wood Preservers Institute, Vancouver, WA. The conditions found in An Agreement Concerning the Use of Treated Wood in Aquatic Areas between Ecology and Department of State Fish & Wildlife, dated August 1995, also fulfill this requirement. However, the use of treated wood should be minimized wherever practicable.
- 12. Docks and Piers and shall be grated to provide light transmission. Dock surfaces designed to allow maximum light penetration shall be used on walkways or gangplanks in nearshore areas.

D. Regulations by Environment

- 1. Piers and docks shall be permitted in the Urban Environment subject to Section 6.02, above, and the policies and regulations of this Master Program.
- Piers and docks used only for recreational purposes shall be permitted in the Urban Residential Environment(s) subject to Section 6.02, above, and the policies and regulations of this Master Program. When permitted, new residential development of more than two dwellings shall be required to provide joint use or community docks rather than individual docks.
- 3. Piers and docks are prohibited in the Natural Environment.
- 4. Piers and docks are permitted in the Aquatic Environment subject to Section 6.02, above, and the policies and regulations of this Master Program including but not limited to Section 3, above.

6.16 Ports and Water-Dependent Industry

A. Introduction

Ports are public harbor areas, properly formed under 53.04 RCW, which provide facilities and services for waterborne commerce. The Port of Friday Harbor owns all but three parcels of land in the downtown core waterfront and manages the adjoining harbor area under a DNR Port Management Agreement. The Port provides marina facilities, fuel facilities, office and retail space, the waterfront park and significant public access.

As centers of waterborne traffic, ports attract various commercial activities. Many do not require a water location and can congest the shoreline and preempt uses which do require waterfront locations.

The principal effects on shorelines and the water from port development are the introduction of pollutants, erosion, alteration of natural habitats, aesthetic effects, increased traffic volumes, and changes to circulation patterns. Intensive use associated with ports may also result in indirect impacts on public services and safety.

Activities, including but not limited to, marinas, dredging, landfill, bulkheads, utilities, and piers and docks are subject to the policies and regulations for those use categories.

B. Policies

- 1. Proposed port developments should be consistent with an adopted, long-range port development plan.
- Port docks and facilities should be designed to minimize cumulative impacts on other Water-Oriented Uses and to achieve no net loss of the functions and values of shoreline resources.
- 3. Port development decisions should be based on community needs and should be consistent with Port and Town Comprehensive plans.
- 4. Non-Water Dependent industries should not be permitted in the Local Shoreline.
- 5. Cooperative, multiple use of docking, cargo handling, storage, and parking facilities should be encouraged.
- 6. New and or expanded port facilities should include public access to the Local Shoreline.

C. Regulations

- 1. All proposed port development activities shall be consistent with an adopted comprehensive port development plan.
- 2. Seaplane bases shall be located in a manner that will minimize adverse impacts on the human and natural environments.
- 3. Development which is not Water-Oriented is prohibited within the Local Shoreline.
- 4. Marinas, utilities, roads, parking areas, docks and other facilities which are installed or constructed to serve the Port shall be subject to the appropriate sections of this Master Program.
- Physical and visual public access to the water and shoreline shall be provided in new port developments, except that access shall not be required in port areas where public safety would be endangered or port operations would be prevented by public access.
- 6. New port development shall be set back at least 25 feet landward of the OHWM to protect water quality, minimize erosion and provide a visual buffer between the bank and structures; provided that, this shall not apply to new developments which require location over or adjacent to the water.
- 7. Parking associated with ports and water-dependent industry shall be subject to the policies and regulations of Section 6.02, above, and 6.20, below.

D. Regulations by Environment

- 1. Ports and water-dependent industry shall be permitted in the Urban Environment subject Section 6.02, above, and to the policies and regulations of this Master Program.
- 2. Ports and water-dependent industry are prohibited in the Urban Residential and

Natural Environments.

3. Ports and water-dependent industry shall be permitted in the Aquatic Environment subject to Section 6.02, above, and the policies and regulations of this Master Program including but not limited to Section 3, above.

6.17 Recreation

A. Introduction

Recreational developments that depend on or use the water or the shorelines include various boating activities, swimming, fishing, viewing of water-dependent commercial and port activities, walkways and parks. Parking areas for recreational developments are subject to Sections 6.02, above, and 6.20, below. Piers and docks and marinas are separate land use categories with policies and regulations in other sections of this Master Program.

Impacts associated with recreational developments depend on the intensity and variety of uses, type and scale of construction and sensitivity of the site.

B. Policies

- 1. Preference should be given to developments which provide for recreational activities and improvements facilitating public access to the Local Shoreline.
- 2. A variety of water-oriented recreational activities should be encouraged to locate on shorelines to satisfy diverse needs and interests of residents and visitors.
- 3. Linkages, such as sidewalks, walking and/or bicycle paths, between shoreline recreational and public access areas should be provided.
- 4. Recreational developments should be located, designed and operated to be compatible with adjacent uses and to achieve no net loss of ecological functions and values and minimize cumulative impacts on aesthetic qualities of the Local Shoreline.
- 5. Recreational developments should be designed to preserve or create open space and public shoreline views, consistent with this Master Program.

- 1. The Town may adjust or require changes to project dimensions, use intensity, parking provisions or landscaping in approving recreational developments, to ensure that public shoreline views and ecological qualities of the site are protected.
- 2. In efforts to meet recreational demands of visitors, the Town shall seek to protect the rights and property of residents from adverse impacts.
- 3. Safe pedestrian walkways shall be provided between parking areas and recreational facilities they serve.
- 4. Recreational development shall be permitted only where adequate water supply, sewage disposal, solid waste disposal and parking can be assured.
- 5. Recreational facilities which normally require the use of large quantities of chemical fertilizers and herbicides, such as playing fields, shall not be located over water or in shoreline areas, unless adequate provisions can be made for protection of water areas from drainage and surface runoff.

6. Shoreline permit applications for recreational development shall include a parking plan, a landscaping plan, and certification by a licensed architect and a certified arborist that the project will not result in any net loss of Local Shoreline function or value.

D. Regulations by Environment

- 1. Recreational development shall be permitted in the Urban and Urban Residential Environments subject to Section 6.02, above, and the policies and regulations of this Master Program.
- 2. Recreational development of a nature and intensity consistent with the purpose and management policies of the Natural Environment shall be permitted subject to Section 6.02, above, and the policies and regulations of this Master Program; provided that, roads, parking areas, restrooms and other facilities shall be setback 200 feet from the OHWM. Use of chemical fertilizers, pesticides and herbicides shall not be permitted. Any permitted landscaping shall consist solely of native vegetation.
- 3. Recreational development shall be permitted in the Aquatic Environment subject to Section 6.02, above, and the policies and regulations of this Master Program including but not limited to Section 3, above.

6.18 Residential Development

A. Introduction

Residential development means one or more buildings or portions of buildings, short plats, or subdivisions, designed and/or used for dwellings. Residential development includes single-family and multifamily dwellings together with common appurtenances to residential uses such as driveways, utilities, garages, small sheds, and fences. Floating homes are considered residential development but mooring of live-aboard vessels and houseboats is not. Residential development also does not include hotels, motels, camping facilities, or recreational vehicle parks.

Landfills, bulkheads, utilities and docks associated with residential development are subject to policies and regulations for those use categories. Parking areas for developments other than detached, single-family units are subject to Sections 6.02(D), above.

The primary impacts from residential development are aesthetic effects, view blockage, associated impacts from intensified human activities, increased surface water runoff, erosion and effects on traffic volumes and circulation patterns. Multifamily development generally involves more land area and more intensive use and impact than individual single-family developments.

B. Policies

- 1. Residential development is not a Water-Dependent Use and should not be permitted to locate over the water, provided that mooring of live-a-board boats and houseboats should not be considered residential development, but shall be subject to Section 5.05, above.
- 2. Residential use is identified as a priority use only when developed in a manner

- consistent with the control of pollution and prevention of damage to the natural environment.
- 3. The scenic qualities of the shoreline and the water should be considered in every application for residential development.
- 4. To protect the scenic qualities, all structures should be located where they will blend into their surroundings as much as possible.
- Residential development should not be permitted on shorelines where bulkheading or other structural fortification would be necessary at the time of construction or in the foreseeable future to protect the development.
- 6. New residential development should occur where residential uses already exist which are consistent with the provisions of the Master Program.
- 7. New residential development or redevelopment should restrict the need to use pesticides, herbicides, and fertilizers to the maximum extent possible.
- 8. New residential development or redevelopment should be subject to the large parcel stormwater management regulations as specified in the Town's Stormwater Technical Manual.

C. Regulations

- New and or expanded residential development shall be located and designed to preclude the need for shoreline stabilization structures at the time of construction or in the foreseeable future.
- 2. Multi-family residential development which will require bulkheads or other structural fortification at the time of construction or in the foreseeable future is prohibited.
- 3. Single-family residences and appurtenant structures sited in the Shoreline Residential 1 designation shall be setback at least 25 feet landward of the OHWM. Multi-family development, sited in the Shoreline Residential 1 designation shall be setback at least 25 feet landward of OHWM and the public access requirements as set forth the in Section 6.02(B) above, shall apply.
- 4. Single-family residences and appurtenant structures sited in the Shoreline Residential 2 designation shall be setback at least 50 feet landward of the OHWM. Multi-family development sited in Shoreline Residential 2 designation shall be setback at least 50 feet landward of OHWM and the public access requirements as set forth in Section 6.02(B) above, shall apply.
- 5. Residential development and accessory uses shall also meet standards provided in other appropriate Town ordinances.
- 6. Residential and appurtenant structures which will exceed the physical capability of the site to absorb impacts of development or which will significantly and adversely alter aesthetic qualities of the site shall not be approved.
- 7. Creation of landfills in water bodies for the purpose of residential development is prohibited.
- 8. Appurtenant uses shall be designed and located to be compatible with adjacent uses and to avoid obstruction of water and shoreline views from neighboring properties.

- Barriers, signs or impediments to public access of publicly owned tidelands shall not be allowed.
- 10. New residential development or redevelopment shall restrict the need to use pesticides, herbicides, and fertilizers to the maximum extent possible.
- 11. New residential development or redevelopment shall be subject to the large parcel stormwater management regulations as specified in the Towns Stormwater Technical Manual.
- 12. Any new residential development or redevelopment project shall be certified by a licensed architect or engineer to ensure no net loss of Local Shoreline ecosystem function or value.
- 13. New multiunit residential development or subdivisions shall provide community and/or public access to the shoreline consistent with Section 6.02 B.

D. Regulations by Environment

- 1. Residential development shall be permitted in the Urban and Urban Residential Environments subject to Section 6.02, above, and the policies and regulations of this Master Program.
- 2. Residential development is prohibited in the Natural and Aquatic Environments.

6.19 Signs

A. Introduction

The effects of signs may be pleasing or distracting depending on their number, location and design. Proliferation of signs can reduce effectiveness of individual signs, and make traffic control signs and signals less visible. Uncontrolled use of signs can degrade property values and detract from the natural beauty and enjoyment of the shoreline.

B. Policy

Local Shorelines should be kept free of all unnecessary signs.

C. Regulation

All signs shall be subject to the provisions of Title 14 FHMC.

D. Regulations by Environment

- 1. Signs and outdoor advertising shall be permitted in the Urban and Urban Residential Environments subject to Section 6.02, above, and the policies and regulations of this Master Program.
- 2. Signs and outdoor advertising are prohibited in the Natural Environment, except official warning signs or signs required by law.
- 3. Signs and outdoor advertising shall be permitted in the Aquatic Environment subject to Section 6.02, above, and in accordance with Section 3, above, and only in conjunction with Water-Dependent Uses, and only if they cannot be located effectively on land.

6.20 Transportation Facilities

A. Introduction

Transportation facilities that provide service to the general public and depend on or serve Friday Harbor shorelines include roads, paths, ferry terminal facilities, sea plane operations and public and private parking areas. Excluded are port, marina and other mooring developments, regulated by other sections of this Master Program. Airports are also excluded as they are infeasible and impractical for development on Town shorelines.

The impact of existing roads, ferry and parking facilities, and seaplane operations has been substantial. Planning for new facilities requires more awareness of their relationships to other shoreline uses and of the impacts of their construction and use.

B. Policies

- 1. Transportation facilities should not be located over water or on shorelines if they could feasibly and practically be located elsewhere.
- 2. When transportation facilities are located over water or on shorelines, they should be designed and constructed to minimize their impacts on shoreline resources, natural systems, and critical habitats.
- Old roads, rights-of-way and other facilities that provide public shoreline views or access to the water should be retained in public ownership and kept open whenever possible.
- 4. Transportation facilities and utilities should be installed in the same rights-of-way when the effect will be to reduce cumulative impacts of installation on shorelines.
- 5. Airport facilities other than for seaplanes should not be located on shorelines.
- 6. Trails and bicycle routes along shorelines should be provided.

C. Regulations

- 1. New arterial or collector roads shall be located outside the shoreline area if an upland location is feasible and practical.
- 2. New transportation facilities shall be located and designed to minimize need for landfill, vegetation removal, bank stabilization and grading.
- 3. Any new transportation facility project shall be certified by a licensed engineer to ensure no net loss of local shoreline ecosystem function or value.
- 4. Airport facilities other than for seaplanes shall not be located on shorelines.
- 5. Cut and fill slopes shall be stabilized and, where appropriate, planted with native vegetation.
- 6. Roadside brush shall be controlled by mechanical rather than chemical means.
- 7. Provisions for pedestrian access, where appropriate, shall be included in new public transportation facilities to and along the shoreline.

D. Regulations by Environment

1. Transportation facilities shall be permitted in the Urban and Urban Residential

Environments subject to Section 6.02, above, and the policies and regulations of this Master Program.

- 2. Transportation facilities are prohibited in the Natural Environment.
- 3. Only ferry, seaplane and port terminal facilities, where shoreline crossings are essential, shall be permitted in the Aquatic Environment, subject to Section 6.02, above, and the policies and regulations of this Master Program including but not limited to Section 3, above.

6.21 Utilities

A. Introduction

Utilities are services and facilities that produce, store, transmit or process electrical power, gas, water, sewage, oil or communications. Utility development includes installation of pipes or wires, structures and utilities apparatus. Disruption to soil and vegetation are the primary effects of installations on shorelines. In water areas, dredging or trenching temporarily affects aquatic life by removal or by suspension of sediments. Visual impacts may result from clearing rights-of-way, placement of structures and design and location of signs.

B. Policies

- 1. Utilities and transportation facilities should be installed in the same rights-of-way when the effect will be to reduce cumulative impacts on the shoreline.
- 2. Disturbance of the shoreline resulting from installation and/or maintenance of utilities should be minimized.
- 3. New utility facilities should be located underground to prevent cumulative impacts on public shoreline views, consistent with this Master Program.

C. Regulations

- 1. Utilities and transportation facilities shall be installed in the same rights-of-way when the effect will be to reduce cumulative impacts on the shoreline.
- 2. Immediately upon completion of utilities installation or maintenance projects, shoreline areas disturbed shall be restored to pre-project configurations, replanted with local vegetation and the vegetation maintained until it is firmly established, pursuant to section 6.02(G) of this ordinance.
- 3. Utility lines, pipes, stations, plants and other apparatus shall not be installed in shoreline areas unless there is no feasible alternative.
- 4. Utility lines shall be installed underground.
- 5. Underwater cables which must cross shorelines shall be installed underground from the MLLW mark to at least fifteen feet landward of the OHWM.
- 6. Where utility installation in shoreline areas is approved, clearing shall be confined to the minimum necessary for installation and to prevent interference with operation by vegetation.
- 7. Where utility lines or similar apparatus must cross shorelines they shall be located within the route which will cause the lease ecological and aesthetic damage to the

shoreline.

- 8. Where they do exist, utility services routed through shoreline areas shall not be a sole justification for more intense development.
- 9. New utility projects shall be certified by a licensed engineer to ensure no net loss of Local Shoreline ecological function or value.

D. Regulations by Environment

- 1. Utility development shall be permitted in the Urban and Urban Residential Environments subject to Section 6.02, above, and the policies and regulations of this Master Program.
- 2. Utility development shall be permitted in the Natural and Aquatic Environments, subject to Section 6.02, above, and the policies and regulations of this Master Program including but not limited to Section 3, above, only if no feasible alternative exists and if the facilities are installed underground.

6.22 Environments – Uses Summary and Comparison

Table 4. Uses Summary and Comparison

USES	URBAN	URBAN RESIDENTIAL	NATURAL	AQUATIC
Agriculture	N	Υ	N	N .
Aquaculture	С	С	N	С
Breakwaters	N/Y	N/Y	N	C/S
Bulkheads	Υ	Y	N	N
Commercial Development	Y/S	N	N	Y/S
Dredging	С	С	N	С
Forest Management	С	С	С	N
Jetties and Groins	С	С	N	C/S
Landfills	Y/S	Y/S	N	C/S
Marinas	Υ	N	N	YS
Mineral Extraction	N	N	N	N
Mooring Buoys	C/S	C/S	N	C/S
Piers and docks	Υ	Y/S	N	Y/S
Ports	Υ	N	N	Υ
Recreation	Y	Y	Y/S	Υ

	_			01011101100 1101 1010
Residential	Υ	Υ	N	N
Development				
Signs	Υ	Υ	N	Y/S
Transportation Facilities	Υ	Y	N	Y/S
Utilities	Y	Υ	Y/S	Y/S

LEGEND

- Y (Yes) Use permitted in the specified environment subject to the policies and regulations contained in Master Program.
- N (No) Use prohibited in the specified environment.
- C (Conditional) Use permitted as a conditional use in the specified environment.
- S (Special) See use regulations for special circumstances.

SECTION 7. VARIANCES

7.01 General

The purpose of a variance permit is strictly limited to granting relief from specific bulk, dimensional or performance standards set forth in this Master Program where there are extraordinary or unique circumstances relating to the property such that the strict implementation of this Master Program will impose unnecessary hardships on the applicant or thwart the policies set forth in RCW 90.58.020.

In all instances extraordinary circumstances shall be shown and the public interest shall suffer no substantial detrimental effect.

An applicant for a variance must show that if he or she complies with these regulations he or she cannot make reasonable use of his or her property. The fact that he or she might make a greater profit by using his or her property in a manner contrary to the intent of this Master Program is not sufficient reason for granting a variance.

7.02 Authority

The Town Council shall have the authority to issue variances from the standards of this Master Program.

7.03 Criteria

A. On Shorelands

Variance permits for development that will be located landward of the OHWM, except within those areas designated by the Department as wetlands pursuant to Chapter 173.22 WAC, may be authorized provided the applicant can demonstrate all of the following:

- 1. That the strict application of the bulk, dimensional or performance standards set forth in the applicable Master Program precludes or significantly interferes with reasonable use of the property not otherwise prohibited by the Master Program;
- 2. That the hardship described in Sub-Section 7.03(1)(a) above is specifically related to the property, and is the result of unique conditions such as irregular lot shape,

- size, or natural features and the application of the Master Program, and not, for example, from deed restrictions or the applicant's own actions;
- That the design of the project is compatible with other permitted and planned activities in the area and will not cause adverse effects to adjacent properties or the shoreline environment;
- That the requested variance does not constitute a grant of special privilege not enjoyed by the other properties in the area, and is the minimum necessary to afford relief; and
- 5. That the public interest will suffer no substantial detrimental effect.

B. Over Water

Variance permits for development that will be located either waterward of the ordinary high water mark (OHWM), as defined in RCW 90.58.030(2)(c), or within wetlands as designated by the Department under Chapter 173.22 WAC, may be authorized provided the applicant can demonstrate all of the following:

- 1. That the strict application of the bulk, dimensional or performance standards set forth in the applicable Master Program precludes all reasonable use of the property not otherwise prohibited by the Master Program:
- 2. That the proposal is consistent with the criteria established under (A)(2) through (A)(5) of this Section; and
- 3. That the public rights of navigation and use of the shorelines will not be adversely affected.

7.04 Cumulative Impacts and No Net Loss

In the granting of all variance permits, consideration shall be given to the cumulative impact of additional requests for like actions in the area and analysis shall demonstrate that there will be no net loss of ecological functions and values from the cumulative impacts of variance permits.

7.05 Procedure

Applications for variances shall be made in a form prescribed by the Shoreline Administrator. Application, notice and Town review procedures shall be identical to those required for substantial development permits. If a variance application is directly related to a project for which a Substantial Development Permit is required the two shall be treated as one application and all notices shall identify the nature of the variance requested.

7.06 Department Review

Variance permits issued pursuant to this Section shall be subject to review by the Department of Ecology as required by RCW 90.58.140(10).

7.07 Variances From Uses

Variances from the use regulations of the master program are prohibited.

7.08 Relationship to Other Local Regulations

Variances granted from the provisions of other local regulations shall not be construed to constitute variances from the provisions of this Master Program.

7.09 Variance Compliance

Variance permits issued pursuant to this Ordinance shall comply with the requirements of WAC 173-27-170.

SECTION 8. CONDITIONAL USES

8.01 General

The purpose of a conditional use permit is to allow greater flexibility in varying the application of the use regulations of this Master Program in a manner consistent with the policies of RCW 90.58.020, provided that conditional use permits should also be granted in a circumstance where denial of the permit would result in a thwarting of the policy enumerated in RCW 90.58.020. In authorizing a conditional use, special conditions may be attached to the permit to prevent undesirable effects of the proposed use.

8.02 Authority

A. Permitted

The Town Council shall have the authority to issue conditional use permits in the following cases:

- 1. Uses expressly classified as conditional uses in the provisions of this Master Program;
- 2. Uses not classified or set forth in this Master Program; or
- 3. A change of use from a permitted use to a conditional use.

B. Prohibited

Uses which are specifically prohibited by this Master Program may not be authorized by conditional use permit.

8.03 Criteria

A. Classified Uses

Uses which are expressly classified as conditional uses in this Master Program shall be approved only when the applicant can demonstrate that all of the following criteria are met:

- 1. That the proposed use is consistent with the policies of RCW 90.58.020 and the policies of this Master Program;
- 2. That the proposed use will not interfere with the normal public use of public shorelines or water;
- 3. That the proposed use of the site and design of the project is compatible with other permitted uses within the area;
- 4. That the proposed use will cause no adverse effects to the shoreline environment

in which it is to be located; and

5. That the public interest suffers no substantial detrimental effect.

B. Unclassified Uses

With respect to uses which are not expressly classified or set forth in this Master Program as conditional uses, the applicant must demonstrate, in addition to the criteria set forth in Sub-Section 8.03(A) above, that extraordinary circumstances preclude reasonable use of the property in a manner consistent with the use regulations of this Master Program.

8.04 Cumulative Impacts and No Net Loss

In the granting of all conditional use permits, consideration shall be given to the cumulative impact of additional requests for like actions in the area and analysis shall demonstrate that there will be no net loss of ecological functions and values from the cumulative impacts of conditional use permits.

8.05 Procedure

Applications for conditional uses shall be made in a form prescribed by the Shoreline Administrator. Notice and Town review procedures for conditional use permit applications shall be identical to those required for standard shoreline permit applications.

8.06 Department Review

Conditional use permits issued pursuant to this Section shall be subject to review by the Department of Ecology as required by RCW 90.58.140(10).

8.07 Relationship to Other Local Regulations

Approval of conditional uses granted under other local regulations shall not be construed to constitute approval of a shoreline conditional use.

8.08 Conditional Use Permit Compliance

Approved Conditional Use Permits shall comply with the requirements of WAC-27-160 or as amended.

SECTION 9. REVISIONS TO PERMITS

9.01 General

A permit revision is required whenever a permit holder proposes substantive changes to the design, terms or conditions of a project from that which is approved in the permit. No change shall be made until the Shoreline Administrator has first determined if the proposed change is substantive. Changes are substantive if they materially alter the project in a manner that relates to its conformance to the terms and conditions of the permit, this Master Program or the policies and provisions of the Act.

Any permit revision granted pursuant to this Ordinance shall comply with the requirements of WAC 173-27-100.

9.02 Authority

The Shoreline Administrator shall have the authority to issue permit revisions.

9.03 Criteria

A. Scope and Intent

Applications for revisions shall only be approved if the proposed changes are within the scope and intent of the original permit and are consistent with this Master Program and the Act. For purposes of this Section, "within the scope and intent of the original permit" means all of the following:

- No additional over water construction is involved, except that pier, dock, or float construction may be increased by five hundred square feet or ten percent from provisions of the original permit, whichever is less;
- 2. Ground area coverage and height of each structure may be increased a maximum of ten percent (10%) from the provisions of the original permit;
- 3. The revised permit does not authorize development to exceed height, lot coverage, setback, or any other under requirements of the Master Program; except as authorized under a variance granted as the original permit or a part thereof;
- 4. Additional landscaping is consistent with conditions attached to the original permit and with the Master Program;
- 5. The use authorized pursuant to the original permit is not changed;
- 6. No adverse environmental impacts will be caused by the project revision;
- 7. That all the original permit conditions and improvements have been met; and
- 8. That the permit has not expired.

B. Time Limitation

Revisions to permits may be authorized after original permit authorization has expired under RCW 90.58.143. The purpose of such revisions shall be limited to authorization of changes which are consistent with this section and which would not require a permit for the development or change proposed under the terms of chapter 90.58 RCW, this regulation and the local master program. If the proposed change constitutes substantial development then a new permit is required provided that this subsection shall not be used to extend the time requirements or to authorize substantial development beyond the time limits of the original permit.

C. Cumulative Impacts

If the sum of the revision and any previously approved revisions would violate the provisions of Sub-Section 9.03(A) above, no revision may be issued. In such cases, the proposed changes require a new permit.

9.04 Procedure

Within eight (8) days of the final Town action, the revision including the revised site plan, text and final ruling on consistency with the Section shall be filed with the Department. In addition the Town shall notify parties of record of its action.

If the revision would alter or in any way affect a shoreline, or a conditional use or variance

which has been issued for the property, the Town shall submit the revision to the Department for the Department's approval, approval with conditions, or denial. The revision shall indicate that it is being submitted under the requirements of WAC 173-27-100(6). The Department shall render and transmit to the Town and the applicant its final decision within fifteen (15) days of the date of the Department's receipt of the submittal. The Town shall notify parties of record of the Department's final decision.

9.05 Effective Date

The revised permit shall become effective immediately upon final action by the Town or, when appropriate under section 9.04 above, by the Department.

9.06 Appeals

Appeals shall be in accordance with RCW 90.58.180 and shall be filed within twenty one (21) days from the date of receipt of the Town's action by the Department or, when appropriate under Section 9.04 above, the date the Department's final decision is transmitted to the Town and the applicant. Appeals shall be based only upon contentions of noncompliance with the provisions of Section 9.03 above.

Construction undertaken pursuant to that portion of a revised permit not authorized under the original permit is at the applicants own risk until the expiration of the appeals deadline. If an appeal is successful in proving that a revision is not within the scope and intent of the original permit, the decision shall have no bearing on the original permit.

SECTION 10. NON-CONFORMING USE AND STRUCTURES

10.01 General

Nonconforming uses and nonconforming structures which were lawfully established or constructed prior to the effective date of this Master Program and amendments hereto, but which do not conform to present regulations, standards and policies may continue in accordance with the following sections.

Non-conforming uses and structures <u>not</u> covered by RCW 90.58.270(5), 90.58.620, and not addressed by the SMP must comply with WAC 173-27-080.

10.02 Nonconforming Use of Land

A nonconforming use of land may be continued provided that:

- A. The use is not enlarged, increased, or extended to occupy a greater area of land than was occupied on the date the use became nonconforming;
- B. If the use is superseded by a conforming use, the nonconforming use may not thereafter be resumed; and
- C. If the use ceases for a period of more than 12 months, the subsequent use of the land shall be conforming.

10.03 Nonconforming Structure

A nonconforming structure may remain and be used provided that:

A. The structure is not enlarged or altered so as to increase its nonconformity;

- B. If damaged, it is reconstructed only to pre-existing size and height; and
- C. If moved, it is made to conform to the regulations of this Master Program.

10.04 Nonconforming Use of Structure

A nonconforming use of a structure may be continued provided that:

- A. The structure is not enlarged or extended;
- B. If the use is superseded by a conforming use, the nonconforming use may not thereafter be resumed; and
- C. If the use ceases for a period of more than 12 months, the subsequent use of the structure shall be conforming.

SECTION 11. ADMINISTRATION

11.01 General

All proposed uses and development occurring within the shoreline jurisdiction must conform to Chapter 90.58, RCW, Chapter 173-27, WAC, and Title 19, FHMC, or as amended, whether or not a permit is required.

11.02 State Environmental Policy Act Compliance

Proposals for shoreline developments which are not categorically exempt from review requirements of the State Environmental Policy Act (SEPA), as provided in WAC 197-11-305, shall be subject to Chapter 43.21C RCW, Chapter 197-11 WAC, and Title 18 FHMC, or as amended.

11.03 Application Fees

The nonrefundable application fee for all shoreline use permits governed by this Ordinance shall be reviewed annually by the Town Council who shall direct the Town Clerk to adjust the fee appropriately and post the Fee Schedule in a conspicuous place within Town Hall and make the Fee Schedule available to the public upon request.

11.04 Constitutional Limitations

Administrative provisions shall ensure permit procedures and enforcement are conducted in a manner consistent with relevant constitutional limitations on regulation of private property.

11.05 Administration, Enforcement, and Permit Review

Administrative, enforcement, and permit review procedures shall conform to the SMA and state rules as amended from time to time. (see RCW 90.58.140, 143, 210 and 220 and WAC 173-27). WAC 191(2)(a)(iii)(C), WAC 173-26-201(3)(d)(vi))

- A. All applications shall be evaluated for no net loss of ecosystem function or value. Identified impacts shall be mitigated pursuant to Section 6.02.A.11 of this Ordinance. Impacts that cannot be mitigated shall be offset through use of the Restoration Plan. Applications or exemptions that cannot be mitigated or offset shall not be approved.
- B. Applications requiring professional certification of no cumulative impacts / no net loss cannot be approved without the required certification(s).

11.06 Annexation

This program does not apply to annexed areas unless the requirements of WAC 173-26-150 and 173-26-160, or as amended, are complied with.

11.07 Exemptions

Any exemptions granted pursuant to the program shall implement the exemption procedures in accordance with WAC 173-27-040(1), or as amended.

11.08 Permit Exemption Letters

Permit Exemption Letters shall be prepared for projects requiring Federal Rivers & Harbors Act §10 permits and/or Federal Clean Water Act §404 permits. WAC 173-27-050.

11.09 Retroactive SMA/GMA relationship

The relationship between GMA critical areas ordinance regulation and SMP regulation is governed by RCW 37.70A.480, or as amended.

11.10 Administrative Interpretation

Any administrative interpretation provided pursuant to this ordinance shall be subject to the requirements of RCW 36.70B.110(11) and WAC 173-26-140, or as amended.

11.11 Federal Projects

All federal projects within the jurisdiction shall comply with the requirements of WAC 173-27-060.

11.12 Review. Monitoring and Adaptive Management

In addition to project monitoring required for individual restoration and mitigation projects, the Town should conduct system-wide monitoring of shoreline conditions and development activity, to the degree practical, recognizing that individual project monitoring does not provide an assessment of overall shoreline ecological health. The following approach is suggested:

- 1. Track information using the Town's GIS and permit system as activities occur (development, conservation, restoration and mitigation), such as:
 - New shoreline development
 - Shoreline variances and the nature of the variance
 - Compliance issues
 - New impervious surface areas
 - Number of pilings
 - Removal of fill
 - Vegetation retention/loss
 - Bulkheads/armoring

The Town may require project proponents to monitor as part of project mitigation, which may be incorporated into this process. Regardless, as development and restoration activities occur in the shoreline area, the Town should seek to monitor shoreline conditions to determine whether both project specific and SMP overall goals are being

achieved.

2. Re-review status of environmental processes and functions at the time of periodic SMP updates to, at a minimum; validate the effectiveness of the SMP. Re-review should consider what restoration activities actually occurred compared to stated goals, objectives and priorities, and whether restoration projects resulted in a net improvement of shoreline resources.

Under the Shoreline Management Act, the SMP is required to result in no net loss of shoreline ecological functions. If this standard is found to not be met at the time of review, the Town of Friday Harbor will be required to take corrective actions. The goal for restoration is to achieve a net improvement. The cumulative effect of restoration over time between reviews should be evaluated along with an assessment of impacts of development that is not fully mitigated to determine effectiveness at achieving a net improvement to shoreline ecological functions.

SECTION 12. ENFORCEMENT AND PENALTIES

12.01 General

Use or occupancy of any land, building or structure in violation of any provision of this Title shall be and hereby is declared both a public nuisance and a Class I civil infraction, as defined in Title 1, FHMC. Each day that a violation of this Title exists may be treated as a separate infraction. In addition a violation of the provisions of this Title shall be and hereby is declared subject to the provisions of RCW 90.58.210 through .230 and Chapter 173-27, WAC.

Except in circumstances where there is a serious and imminent threat to public health or safety, prior to filing a public nuisance abatement action in San Juan County Superior Court, the Town shall attempt to gain compliance by use of the civil infraction procedures set forth in Title 1, FHMC.

The penalty for committing a civil infraction under this Title shall be as set forth in Title 1, FHMC.

SECTION 13. DEFINITIONS

13.01 General

For the purpose of this Ordinance, the terms set out in this Section shall have the meanings indicated. The definitions contained in Chapter 90.58 RCW, Chapter 173-22 WAC, Chapter 173-27 WAC, and Chapter 173-26-020 WAC, or as amended, are hereby adopted.

"Act" means the Shoreline Management Act of 1971, Chapter 90.58, RCW, or as amended.

"Agricultural activities" means agricultural uses and practices including, but not limited to: Producing, breeding, or increasing agricultural products; rotating and changing agricultural crops; allowing land used for agricultural activities to lie fallow in which it is plowed and tilled but left unseeded; allowing land used for agricultural activities to lie dormant as a result of adverse agricultural market conditions; allowing land used for agricultural

activities to lie dormant because the land is enrolled in a local, state, or federal conservation program, or the land is subject to a conservation easement; conducting agricultural operations; maintaining, repairing, and replacing agricultural equipment; maintaining, repairing, and replacing agricultural facilities, provided that the replacement facility is no closer to the shoreline than the original facility; and maintaining agricultural lands under production or cultivation.

"Archaeological Object" means an object that comprises the physical evidence of an indigenous and subsequent culture including material remains of past human life including monuments, symbols, tools, facilities, graves, skeletal remains and technological by-products.

"Archaeological Resource/Site: means a geographic locality in Washington, including, but not limited to, submerged and submersible lands and the bed of the sea within the state's jurisdiction, that contains archaeological objects.

"Archaeological Significant" is that quality in American history, architecture, engineering, and culture that is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

- a. That are associated with events that have made a significant contribution to the broad patterns of our history; or
- b. That are associated with the lives of significant persons in our past; or
- c. That embody the distinctive characteristics of a type, period or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- d. That has yielded or may be likely to yield, information important in history or prehistory.

"Aquaculture" means the culture or farming of fish, shellfish, or other aquatic plants and animals. Aquaculture does not include the harvest of wild geoduck associated with the state managed wild stock geoduck fishery.

"Average grade level" means the average of the natural or existing topography of the portion of the lot, parcel or tract of real property which will be directly under the proposed building or structure; provided, that in the case of structures to be built over water, the average grade level shall be the elevation of ordinary high water. Calculation of the average grade level shall be made by averaging the ground elevations at the midpoint of all exterior walls of the proposed building or structure.

"Boating facility" (marina)- means any facility designed to handle 5 or more single family residences. Facility standards do not apply to 4 or fewer single family residences.

"Buffer" – The area immediately adjacent to critical areas, that protects these sensitive areas and provides essential habitat elements for fish and/or wildlife.

"Buffer Setback" means the area outside of and immediately adjacent to the protective

buffer described above.

"Construction Limit Line" means the line identified as that on the Town of Friday Harbor Designated Shoreline Environments Map.

"Council" means the Town Council of Friday Harbor.

"Critical Habitat" for the purposes of this SMP means areas or habitats for threatened, endangered, or listed species as designated by the appropriate federal, state or local agency. All marine Waters within the Town Boundary and the Harbor Limit Line are designated Critical Saltwater Habitats, are considered a Fish and Wildlife Habitat Conservation Area as allowed by WAC 365-190-130 and are a Designated Biological Reserve per RCW 28B.20.320.

"Critical Saltwater Habitat" means any Critical Habitat located in saltwater areas of the Aquatic Environment. For the purposes of this shoreline master program they are considered Fish & Wildlife Conservation Areas and include all marine waters within Friday Harbor Town limits.

"Cumulative impact" means the incremental, unmitigated, degradation of the functions and values of the shoreline from upland and water based development and use.

"DBH" means Diameter at Breast Height.

"Department" means the Washington State Department of Ecology

"Development" means a use involving the construction or exterior alteration of structures; dredging, drilling; dumping; filling; removal of sand, gravel or minerals; bulkheading; pile driving; placement of obstructions; or any project of a permanent or temporary nature which interferes with normal public use of the surface of waters overlying lands subject to the Act at any water level.

"Extreme low tide" means the line as estimated by the federal government below which it might reasonably be expected that the tide would not ebb. In Puget Sound area generally, this point is estimated by the federal government to be a point in elevation 4.50 feet below the datum plane of mean lower low water, (0.0). Along the Pacific Ocean and in the bays fronting thereon and the Strait of Juan due Fuca, the elevation ranges down to a minus 3.5 feet in several locations.

"Fairway" means a navigable part of a river or bay through which boats enter or depart: a part of a harbor or channel that is kept open and unobstructed.

"Fair market value" means the open market bid price, of a development, for conducting the work, using the equipment and facilities, and purchase of the goods, services and materials necessary to accomplish the development. This would normally equate to the cost of hiring a contractor to undertake the development from start to finish, including the cost of labor, materials, equipment and facility usage, transportation and contractor overhead and profit. The fair market value of the development shall include the fair market value of any donated, contributed or found labor, equipment or materials.

"Floating home" means a structure designed substantially as a permanently located structure by means of permanent utilities, anchoring design, and lack of adequate self-propulsion to operate as a vessel OR as described in RCW 90.58.270 as amended from time to time.

"Fill" (landfill) means the addition of soil, sand, rock, gravel, sediment, earth-retaining

structure, or other material to an area waterward of the OHWM, in wetlands, or on shorelands in a manner that raises the ground elevation or creates dry land.

"Habitat" means the place or type of site in which a plant or animal naturally or normally lives and grows.

"Height" is a measure from average grade level to the highest point of a structure: Provided that television antennas, chimneys and similar appurtenances shall not be used in calculating height, except where it obstructs the view of the Local Shoreline from a substantial number of residences.

"Historic Preservation Professional" means those individuals who hold a graduate degree in architectural history, art history, historic preservation, or closely related field, with coursework in American architectural history, or a bachelor's degree in architectural history, art history, historic preservation or closely related field plus on of the following:

- a) At least two years of full-time experience in research, writing, or teaching in American architectural history or restoration architecture with an academic institution, historical organization or agency, museum, or other professional institution; or
- b) Substantial contribution through research and publication to the body of scholarly knowledge in the field of American architectural history.

"Historic Site" means those sites that are eligible or listed on the Washington Heritage Register, National Register of Historic Places or any locally developed historic registry formally adopted by the [jurisdiction] Council.

"Houseboat" means a vessel used as a residence but designed substantially as a mobile structure by means of detachable self-contained utilities or facilities, anchoring, and the presence of adequate self-propulsion to operate as a vessel.

"Littoral drift" (or longshore drift) means the natural movement of sediments along shorelines as a result of wave and wind action.

"Live-aboard vessel" means a vessel on which one(1) or more people live for more than ninety (90) days, whether consecutive or not, in any calendar year.

"Local Shoreline" means the Shorelands located within the Town of Friday Harbor and all of the salt water areas lying within the Town's jurisdiction.

Mean lower low water" or "MLLW" means the 0.0 tidal elevation. It is determined by averaging each day's lowest tide at a particular location over a period of nineteen years. It is the tidal datum for vertical tidal references in the saltwater area.

"Natural system" means a group of related objects and/or forces existing in nature.

"No Net Loss". No net loss of ecological function shall be measured based on the data submitted with a shoreline application, and SEPA checklist if applicable.

"Nonconforming structure" means a structure which was lawfully designed and constructed prior to adoption of this Master Program, but which does not conform to the provisions of this Master Program.

"Nonconforming use" means a use which lawfully occupied a building, structure, or parcel of land prior to adoption of this Master Program, but which does not conform to the provisions of this Master Program.

"Ordinary high water mark" (OHWM) - On all lakes, streams, and tidal water is that mark that will be found by examining the bed and banks and ascertaining where the presence and action of waters are so common and usual, and so long continued in all ordinary years, as to mark upon the soil a character distinct from that of the abutting upland, in respect to vegetation as that condition exists on June 1, 1971, as it may naturally change thereafter, or as it may change thereafter in accordance with permits issued by a local government or the department: PROVIDED, That in any area where the ordinary high water mark cannot be found, the ordinary high water mark adjoining salt water shall be the line of mean high tide and the ordinary high water mark adjoining freshwater shall be the line of mean high water.

"Professional archaeologist" means a person with qualifications meeting the federal secretary of the interior's standards for a professional archaeologist. Archaeologists not meeting this standard may be conditionally employed by working under the supervision of a professional archaeologist for a period of four years provided the employee is pursuing qualifications necessary to meet the federal secretary of the interior's standards for a professional archaeologist. During this four-year period, the professional archaeologist is responsible for all findings. The four-year period is not subject to renewal.

"Public access" is an unobstructed access available to the general public to enjoy the Local Shoreline. Primary public access is a means of physical approach to and along the water's edge. Views to the water are considered a secondary type of public access. Public access may combine visual and physical elements in a variety of ways and generally means access without charge or cost to the public. Whenever public access is made available only in exchange for payment of some cost or charge, whether direct or indirect, it shall not be deemed to satisfy the public access requirements of this Program unless, under all of the circumstances, it is clear that large numbers of the public will be likely to enjoy the access on a regular basis at a cost that would not be unreasonable, or prohibitive to any segment of the public.

"Public Shoreline View" means a view of the Local Shoreline and all saltwater and all territorial views beyond the salt water, or any significant portion thereof, which is consistently available to general members of the public from any street, park, or other publicly owned area, or any such view that is consistently available to substantial numbers of people from privately owned property that is open to use by general members of the public on a regular basis.

"Recreational Development" means commercial and public facilities designed and used to provide recreational opportunities to the public.

"Residential agriculture" means the limited production of non-animal foodstuffs for personal consumption.

"Residential Development" means development or redevelopment of single family residences, multifamily residences, appurtenant structures thereto, and creation of residential lots wholly or partly within the Local Shoreline.

"Shall" means a mandate; the action must be done.

"Shoreline Sedimentation" means the process by which material is transported and deposited by water or wind.

"Shorelands" or "shoreland areas" means those lands extending landward for two hundred feet in all directions as measured on a horizontal plane from the ordinary high water mark; floodways and contiguous floodplain areas landward two hundred feet from such floodways; and all wetlands and river deltas associated with the streams, lakes, and tidal waters which are subject to the provisions of this chapter; the same to be designated as to location by the department of ecology.

"Shoreline Administrator" means the Administrator of the Town of Friday Harbor or his or her designated representative.

"Shorelines" means all of the water areas of the state, including reservoirs, and their associated shorelands, together with the lands underlying them; except (i) shorelines of statewide significance; (ii) shorelines on segments of streams upstream of a point where the mean annual flow is twenty cubic feet per second or less and the wetlands associated with such upstream segments; and (iii) shorelines on lakes less than twenty acres in size and wetlands associated with such small lakes.

"Shorelines of Statewide Significance" for San Juan County means those areas of Puget Sound and the Strait of Juan de Fuca and adjacent salt water north to the Canadian line and lying seaward from the line of extreme low tide.

"Shoreline permit" means a substantial development permit, conditional use permit, variance permit, or any combination thereof.

"Shoreline setback" means the distance landward from the ordinary high water mark that development, shoreline modifications and uses are required to be located as established in each shoreline environment.

"Shoreline Stabilization" means structural and nonstructural methods to address erosion impacts to property and dwellings, businesses, or structures caused by natural processes, such as current, flood, tides, wind, or wave action.

"Should" means that the particular action is required unless there is a demonstrated, compelling reason, based on policy of the Shoreline Management Act and this chapter, against taking the action.

"Significant tree" means a tree that is at least 10 inches in diameter measured at 4 feet from the ground.

"Stabilization Measures" means new or any enlargement of existing stabilization structures.

"Slip" means the developed space, in the aquatic environment, occupied or capable of being occupied by one vessel, regardless of length.

"Substantial development" means any development of which the total cost or fair market value, whichever is higher, exceeds \$6,416.00 (or as updated per RCW 90.58.030(3)(e)) or any development which materially interferes with normal public use of the water or shorelines of the state, except as provided in Section 2.06, above.

"Vessel" means a ship, boat, barge, or any other floating craft which is designed and used for navigation and which does not interfere with the normal public use of the water.

"Water-Dependent Use" means a use or portion of a use that is dependent on the water due to the intrinsic nature of its operation and which cannot function other than in a waterfront location.

"Water-Enjoyment Use" means a recreational use such as a park, pier, or other use facilitating public access as a primary character of the use; or, a use that provides for passive and active interaction of a large number of people with the water or shoreline for leisure and enjoyment as a general character of the use and which, through location, design and operation assure the public's ability to interact with the water or shoreline. In order to qualify as a Water-Enjoyment Use, the use must be open to the public and most if not all of the water or shoreline oriented space in the facility must be devoted to the specific aspects of the use that foster shoreline or water interaction.

"Waterfront" means those portions of the shoreline area that are not separated from the water by a public street or road.

"Water-Oriented Use" means any one or a combination of water-dependent, water-related or Water-Enjoyment Uses.

"Water-Related Use" means a use that is not intrinsically dependent on a shoreline location but whose economic viability is dependent upon a shoreline location because of a functional requirement for a shoreline location, such as the arrival or shipment of materials by water, or because the use provides a necessary service supportive of a Water Dependent commercial activity.

"Wetlands" or "wetland areas" means areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas. Wetlands do not include those artificial wetlands intentionally created from non-wetland sites, including, but not limited to, irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities, or those wetlands created after July 1, 1990, that were unintentionally created as a result of the construction of a road, street, or highway. Wetlands may include those artificial wetlands intentionally created from non-wetland areas to mitigate the conversion of wetlands.

SECTION 14. SEVERABILITY

If any provision of this Master Program, or its application to any person, is held invalid, the remainder of this Master Program and the application of said provision to any other person shall remain valid unless otherwise decreed by law.

SECTION 15. REPEALER

Ordinances No. 1538 is hereby repealed in its entirety.

SECTION 16. EFFECTIVE DATE

This Master Program shall be effective immediately upon final approval by the Department of Ecology, as provided in RCW 90.58.090, and upon publication as required by state law.

ADOPTED this 5th day of November 2015.

Town Clerk

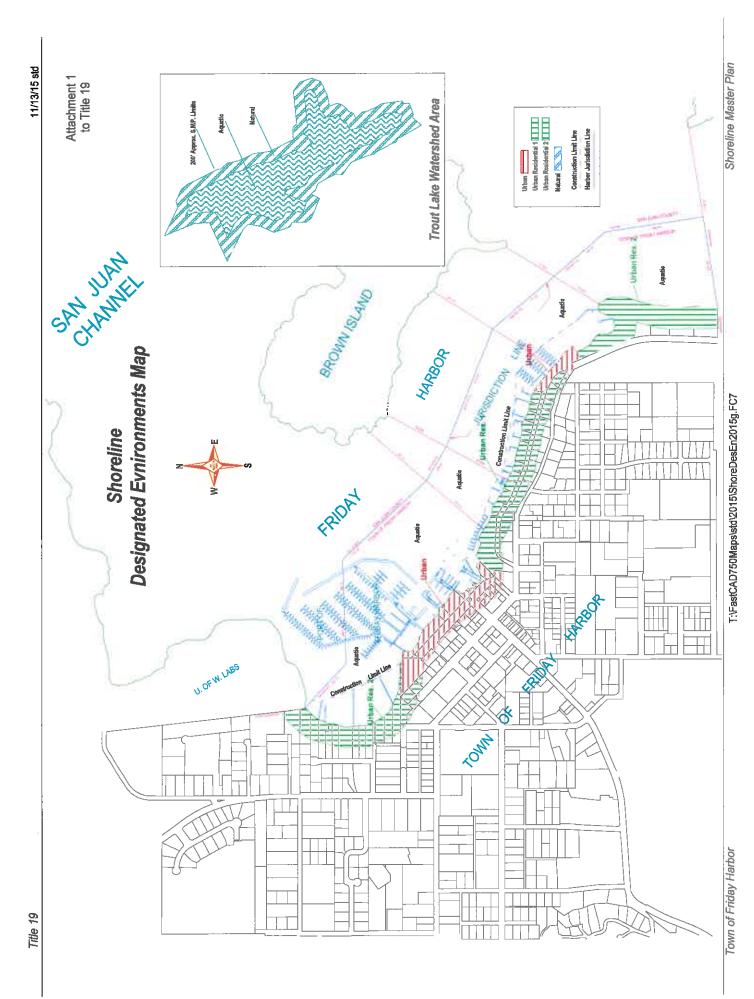
TOWN OF FRIDAY HARBOR

Carrie Lacher, Mayor

SEAL of the

Town of Friday Harbor

ATTEST:



RESTORATION AND PROTECTION PLAN TOWN OF FRIDAY HARBOR SHORELINE MASTER PROGRAM

Grant No. G1100002

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List of Acronyms and Abbreviations

ALEA Aquatic Lands Enhancement Account

GIS Geographic Information System

OHW Ordinary High Water

MRC San Juan County Marine Resources Committee

FOSJ Friends of the San Juans

NOAA National Oceanic and Atmospheric Administration

PSNERP Puget Sound Nearshore Ecosystem Restoration Project

Plan Restoration and Protection Plan

RCW Revised Code of Washington

SMA Washington State Shoreline Management Act

SMP Town of Friday Harbor Shoreline Master Program

SRFB Salmon Recovery Funding Board

WAC Washington Administrative Code

Glossary

The following terms will have these definitions in the context of this Restoration and Protection Plan, in alphabetical order:

Ecological function: the influences of the living and nonliving environment on organisms; functions provide for the growth and survival of organisms.

Impairment: habitat degradation; in this document, refers to the loss of ecological function of shorelines.

Impervious surface: a hard surface area which either prevents or retards the entry of water into the soil mantle as under natural conditions prior to development. Also refers to a hard surface area that causes water to run off the surface in greater quantity or at an increased rate of flow from the flow present under natural conditions prior to development.

Applicable Restoration Actions: a list of the actions on which to focus effort and funding for restoration.

Project: a site-specific set of habitat activities.

Reach: for the purposes of this report a reach is a contiguous area within the shoreline jurisdiction that has somewhat consistent physical and biological conditions.

Restoration: "the reestablishment or upgrading of impaired ecological shoreline processes or functions. This may be accomplished through measures including but not limited to revegetation, removal of intrusive shoreline structures and removal or treatment of toxic materials. Restoration does not imply a requirement for returning the shoreline area to aboriginal or pre-European settlement conditions" (Washington Administrative Code [WAC] 173-26-020).

Restoration Strategy: refers to whether the restoration prescribed supports habitat forming processes sustainably or substitutes a habitat sustaining process with constructed habitat structure. Strategies include protection, process restoration, rehabilitation, or creation.

Shorelands: means those lands extending landward for 200 feet in all directions as measured on a horizontal plane from the ordinary high water mark; and all wetlands and river deltas associated with the streams, lakes, and tidal waters.

Stormwater: the runoff from residential, commercial, and other urban areas. As rain falls and runs off of urban surfaces, pollutants associated with the urban environment are transported to

surface waters where they may damage aquatic organisms and reduce the aesthetic value of the water body.

Watershed processes: the dynamic physical and chemical interactions that form and maintain the landscape at the geographic scales of watersheds to basins (hundreds to thousands of square miles; Stanley et al. 2005). These processes include the delivery, movement, and loss of water, large woody debris, sediment, phosphorus, nitrogen, toxins, and pathogens, as well as wave energy, tidal influences, and light energy.

1: Introduction

The Shoreline Area of the Town of Friday Harbor is noted for its scenic beauty in a highly developed and yet charming residential and commercial environment. The Town strives to maintain this character that invites tourists and residents year-round. The ecological value of this area has decreased from human development, and will likely never be fully restored to presettlement conditions; however there are areas where restoration is quite feasible. This restoration plan will provide details of specific areas and techniques that could be employed to improve water quality, enhance wildlife habitat, and improve ecological function, while enhancing the aesthetic values that define Friday Harbor.

Development of a comprehensive restoration plan is required as a component of the Shoreline Master Program update and provides strategic direction to achieve overall improvement in ecological function of the Town of Friday Harbor's shoreline area. It builds upon the Shoreline Characterization and Analysis, the Cumulative Impact Analysis, and the SMP Ordinance created as part of the SMP update process. This report follows Ecology's guidance for Restoration Planning, based on WACs 173-26-186(8)(c) and 173-26-201(2)(f) as described below.

WAC 173-26-186 (8)(c) requires that counties and cities containing any shorelines with impaired ecological functions include goals and policies that provide for restoration of such impaired ecological functions in their Shoreline Master Program. "These master program provisions shall identify existing policies and programs that contribute to planned restoration goals and identify any additional policies and programs that local government will implement to achieve its goals. These master program elements regarding restoration should make real and meaningful use of established or funded nonregulatory policies and programs that contribute to restoration of ecological functions, and should appropriately consider the direct or indirect effects of other regulatory or nonregulatory programs under other local, state, and federal laws, as well as any restoration effects that may flow indirectly from shoreline development regulations and mitigation standards."

WAC 173-26-201 (2)(f) Clearly outlines the parameters of shoreline restoration planning. "Consistent with principle WAC 173-26-186 (8)(c), master programs shall include goals, policies and actions for restoration of impaired shoreline ecological functions. These master program provisions should be designed to achieve overall improvements in shoreline ecological functions over time, when compared to the status upon adoption of the master program. The approach to restoration planning may vary significantly among local jurisdictions, depending on:

- The size of the jurisdiction;
- The extent and condition of shorelines in the jurisdiction;
- The availability of grants, volunteer programs or other tools for restoration; and
- The nature of the ecological functions to be addressed by restoration planning.

Master program restoration plans shall consider and address the following subjects:

- i. Identify degraded areas, impaired ecological functions, and sites with potential for ecological restoration;
- ii. Establish overall goals and priorities for restoration of degraded areas and impaired ecological functions;
- iii. Identify existing and ongoing projects and programs that are currently being implemented, or are reasonably assured of being implemented (based on an evaluation of funding likely in the foreseeable future), which are designed to contribute to local restoration goals;
- iv. Identify additional projects and programs needed to achieve local restoration goals, and implementation strategies including identifying prospective funding sources for those projects and programs;
- v. Identify timelines and benchmarks for implementing restoration projects and programs and achieving local restoration goals;
- vi. Provide for mechanisms or strategies to ensure that restoration projects and programs will be implemented according to plans and to appropriately review the effectiveness of the projects and programs in meeting the overall restoration goals.

No Net Loss of Ecological Function

In addition to the requirements above, the state's SMP policies also require no net loss of ecological functions. The Washington State Department of Ecology (Ecology) defines this as using protection, restoration, and mitigation to achieve a "final result that is no worse than maintaining the current level of environmental resource productivity" (Ecology 2004). No net loss means that the existing condition of shoreline ecological functions should remain the same and no new impacts to shoreline ecological functions resulting from development should occur.

Achieving no net loss is required of local governments under RCW 90.58.020. The challenge for local governments is maintaining or improving shoreline ecological functions while allowing new development to occur. The goals and policies developed in the draft SMP Ordinance attempt to meet this challenge. This restoration plan is an integral part of the overall strategy to achieve no net loss. Both protection and restoration are needed to achieve no net loss. Meeting the no net loss requirement and achieving restoration of ecological conditions is the intent of the Town's draft SMP, inclusive of this plan.

This restoration and protection plan addresses the shoreline master program requirements to protect and restore the Town's marine shoreline, which includes designated Critical Chinook Salmon, Southern Resident Killer Whale Habitat, and is a Biological Preserve within the entire marine Aquatic Environment. It provides details of specific goals and policies designed to meet these requirements and describes how and where shoreline ecological functions can be restored within the Town's boundaries.

The following section summarizes the goals and policies established in the SMP Ordinance relating to restoration of degraded areas and impaired ecological functions, and protection of existing habitat and ecological functions. Section 3 provides a summary of degraded areas and impaired ecological functions. Section 4 identifies potential restoration sites. Section 5 discusses existing and currently planned restoration projects, additional projects and programs planned to achieve restoration goals, prospective funding sources, and timelines and benchmarks for achieving restoration goals. Section 6 provides an implementation and evaluation strategy to ensure that restoration projects and programs will be implemented effectively.

2: Protection and Restoration Goals and Policies

Statement of Purpose

The purpose of the Urban, Natural, and Aquatic Environment designations is partially to provide for habitat protection and restoration. The Urban Environment designation requires pursuit of protection of existing ecological functions and restoration of ecological functions in areas that have been previously degraded. The Natural Environment designation requires that only very low intensity uses be allowed in order to maintain the ecological functions and ecosystem-wide processes. The Aquatic Environment designation is designed to protect the quality and quantity of surface water and marine waters, to preserve critical habitats for threatened and endangered species, and to preserve natural features and resources of Friday Harbor from unnecessary degradation. The following goals and polices, included in the Town of Friday Harbor's draft Shoreline Master Program Ordinance, are designed to guide these protection and restoration requirements.

Goals

- To assure preservation of scenic and nonrenewable natural resources, including habitats for threatened and endangered species, and to assure conservation of renewable natural resources for the benefit of existing and future generations. 4.03
- To develop sure, safe, economical transportation systems to assure efficient movement of people with minimum disruption of the shoreline environment and minimum conflict between different types of users. 4.05
- To acknowledge the presence of identified Critical Areas within and adjacent to the shoreline jurisdiction and provide appropriate protective policy and regulation. 4.09

Policies Governing the Use of Shorelines of Statewide Significance 3.03

The overarching policies for the Town of Friday Harbor, and for all of San Juan County, are the policies established to govern the use of Shorelines of Statewide Significance (WAC 173-26). All proposed activities within Shorelines of Statewide Significance must be consistent with these

policies. Uses which are not generally consistent with the following policies should not be permitted on Shorelines of Statewide Significance:

- The natural character of Shorelines of Statewide Significance should be preserved.
- Actions that would commit resources to irreversible uses or would detrimentally alter natural conditions characteristic of such shorelines should be severely limited.
- The short-term economic gain or convenience associated with a proposed development should be evaluated in relationship to long-term and potentially costly impairments to the natural environment.
- The natural resources and natural systems of Shorelines of Statewide Significance should be protected. Areas containing unusual or fragile natural resources or natural systems should be left undeveloped.

Additional Protection and Restoration Policies

- Where the land is scarred or stripped of natural cover it should be replanted with native species or landscaped. 4.03
- Aesthetic and ecological qualities of the Local Shoreline should be recognized as valuable resources and preserved. 4.07
- Habitats for threatened and endangered species should be preserved and where possible restored. 4.07
- The natural, dynamic processes of shoreline formation and change should not be interfered with except for urgent reasons of public necessity or benefit. 4.07
- There should be no net loss of the ecological functions and values of the shoreline as a result of actions permitted under this Master Program. 4.07
- Natural vegetation on shorelines should be retained or increased to the extent possible in new shoreline development. 4.07
- Sand, gravel and mineral extraction is incompatible with existing and planned shoreline
 use and should not be permitted. When grading and/or excavation are necessary for site
 preparation for development, all available practical methods to control ecological
 degradation, erosion, siltation and other impacts on adjoining properties and water quality
 should be provided. 4.07
- Commercial harvesting of timber is incompatible with existing and planned use of the shoreline and should not be permitted. When noncommercial timber cutting occurs on shorelines, in conjunction with other development, aesthetic effects and protection against ecological degradation, erosion and siltation should be considered. 4.07
- Appropriate conservation easements may be accepted by the Town. 4.07

- All development in the vicinity of the wetland should provide protective buffers, where no development or landscaping can occur. 4.09
- The WRIA 2 Salmon Recovery Plan notes the importance of providing a vegetated riparian buffer and overhanging riparian vegetation to improve the habitat for juvenile Chinook salmon. As a result, when substantial new upland development or redevelopment occurs, the on-site landscaping should be designed to incorporate or increase native plant buffers along the shoreline. 4.09
- Critical areas within the shoreline area should be conserved, protected, and restored from loss or degradation. 4.09
- All urban shoreline development should be regulated in a manner designed to minimize cumulative adverse impacts on critical habitats, adjacent shoreline, upland areas, and ensure no net loss of the ecological functions and values of the shoreline. 5.03
- Natural areas should be kept free of all development which would adversely affect their character and scenic value. 5.05
- Only those alterations which would not be detrimental to the forces which created and now maintain a Natural area should be permitted. 5.05
- Limited access to Natural areas should be permitted for scientific, historic, educational and low-intensity recreational purposes, provided that no significant adverse impact on the area will result. 5.05
- Uses which consume physical and biological resources should be prohibited. 5.05
- Allow new over-water structures only for water-dependent uses, public access, or ecological restoration. 5.06
- In order to reduce the impacts of shoreline development and increase effective use of water resources, multiple uses of over-water facilities should be encouraged. 5.06
- The size of new over-water structures should be limited to the minimum necessary to support the structure's intended use. 5.06
- Development in the Aquatic Environment should not degrade critical habitats for threatened and endangered species. 5.06
- Development in the Aquatic Environment should be compatible with the adjacent upland environment designation; provided that, in the event Aquatic development is adjacent to two different upland environments the most restrictive shall apply unless the Shoreline Administrator determines that application of the less restrictive would not compromise the public interest. 5.06

- The natural circulation and volume of water should be maintained to the greatest extent possible. 5.06
- Uses which are not water-dependent should be prohibited, provided that Water-Enjoyment Uses at or near the OHWM, which provide public access to the Local Shoreline, may be considered as a conditional use subject to applicable use policies and regulations. 5.06
- The Aquatic environment should be managed in a manner that will result in no net loss of the ecological functions and values. Activities and uses which will degrade the ecological or aesthetic values of the area should be prohibited. 5.06
- Developments and activities using Aquatic areas should be located and designed to minimize interference with navigation, minimize adverse visual impacts, allow for passage of fish and other aquatic animals, and minimize adverse effects on water quality, geohydraulic shoreline processes, and biological resources. 5.06
- Land-based motor vehicles should not be permitted on tidelands except when necessary for emergency vehicles or when authorized in permitted construction or repair or for boat launchings. 5.06

These goals and polices provide a clear and comprehensive foundation for protection and restoration regulations and activities within the Town of Friday Harbor's shoreline areas. The following section will identify the areas and ecological functions most severely degraded and will help focus restoration and protection efforts.

3: Degraded Areas and Impaired Ecological Functions

The Town of Friday Harbor's shoreline jurisdiction includes Trout Lake and approximately 1.2 linear miles of marine shoreline. The current zoning designates Trout Lake as Natural and the marine shoreline as approximately 40 percent Shoreline Residential and 60 percent Urban. The Shorezone Inventory classifies the marine shorelines of Friday Harbor as protected mud flat, mixed-fine beaches (marine), open rocky shores (estuarine), and protected rocky shores (marine) (Washington Department of Natural Resources).

Trout Lake is a protected area of high ecological value. There are no current restoration priorities in this area. The highest concerns for ecological restoration are marine water quality and marine nearshore habitat. Impacts from climate change, such as sea level rise and ocean acidification are a fairly new consideration for habitat protection and restoration and there is not much guidance on how to plan for this occurrence. Nevertheless, the Town recognizes the importance of this concern and will address it briefly in this document, with the intention of providing a more detailed plan during the next scheduled SMP update when guidance is likely to be available.

Marine Water Quality

A priority ecological concern for the Town of Friday Harbor is degraded marine water quality. Numerous pollutants enter the water through untreated stormwater and non-point pollution from the upland urban environment, as well as from boater traffic. In addition, the Wastewater Treatment Plant outfall runs under the Port of Friday Harbor Marina and discharges out into the bay.

The Spring Street outfall is the primary outfall for municipal storm water. There is a second stormwater outfall pipe located approximately 1500 feet north of the Spring Street outfall. The Town of Friday Harbor separated its storm water flow from the sanitary sewer system in 1969. While it is likely that some cross connections still exist the Town sewer plant is no longer overwhelmed by storm events.

Documented water quality problems include low dissolved oxygen and elevated fecal coliform bacteria concentrations. Friday Harbor is on the Department of Ecology's 2008 303(d) list for dissolved oxygen and the 1996 and 1998 lists for fecal coliform bacteria (Ecology 2011). Friday Harbor is currently classified as Category 2: Waters of Concern for fecal coliform bacteria and Sediments of Concern for exceeding Sediment Management Standards for Trichlorobenzene, Dichlorobenzene, and Hexachlorobutadiene (Ecology 2011).

The Town of Friday Harbor's Stormwater Management Plan identifies the major sources of nonpoint pollution as urban development and transportation-related activities. These sources may include illicit connections to the storm drain system, on-site sewage systems, and improper waste storage and disposal practices. The general impacts of non-point stormwater runoff on beneficial uses include bacterial viruses, sediment and suspended solids, metals, and toxic organic

chemicals. With projected increases in population, future commercial and residential development and conversion of existing open space will likely further degrade the water quality in Friday Harbor (TFH Stormwater Management Plan, 2005).

This degradation may result in part from erosion and increase from sediment loading from the construction-related activities of land clearing and site preparation. General increases in vehicular traffic over time will also increase pollutants in storm water from streets. In addition stormwater runoff usually increases as vegetative cover is removed and impervious surface is created carrying other pollutants such as pesticides, fertilizers, petroleum products, cleaning solvents, paints, asphalt by-products, acids, and salts into water bodies.

In addition to stormwater and sewer outfalls, the extensive boater traffic within Friday Harbor can be a significant source of pollutants entering the marine waters. Surveys completed in Friday Harbor and adjacent San Juan Channel concluded that high fecal coliform concentrations were attributable to the Town of Friday Harbor's Wastewater Treatment Plant (WWTP) and boater wastes. The WWTP has since been upgraded with newer technology and the plant and operations were expanded to provide secondary treatment and to increase flow capacity in 2001. A follow-up survey completed after improvements to the treatment plan operations, concluded that boater wastes were the significant contributor to the fecal coliform counts in Friday Harbor (SJC Health and Community Services, 2001).

While water quality is an on-going concern, recent marine water quality data show some signs of improvement. Data collected by the San Juan County Marine Resources Committee (MRC) and Friends of the San Juans (FOSJ) indicate that water quality has improved. The MRC/FOSJ marine water quality monitoring program is ongoing and data is provided to the Town as it is collected and processed. The University of Washington Friday Harbor Labs Science Outreach Program is also collecting marine water quality data (FHL 2011). Students take measurements five times a year at six sites to test for fecal coliform with results categorized as extraordinary, good, or below standards. The most recent aggregate test results from 3/08 – 5/11 show that out of six sites, four were categorized as extraordinary and two were categorized as good.

The Town also has its own storm water monitoring program. At this time all of the data is in paper form. The data is currently being converted to digital form so that it can be analyzed. The digital form and the analysis will be returned to the town when it is completed.

The Port of Friday Harbor has undertaken numerous efforts to minimize pollutants from boaters. In 2007 the Port of Friday Harbor received the Clean Marina Award with a Five Star rating – the highest available – for meeting requirements to manage hazardous wastes and educate boaters on clean boating practices (Port of Friday Harbor, 2008).

Marine Nearshore Habitat

Approximately 85 percent of the Friday Harbor marine shoreline has been modified from its original state primarily from ongoing human activities. Shoreline modifications include overwater structures, riprap, bulkheading and fill, marinas, and a ferry landing. The most significant shoreline modifications are the numerous large overwater structures located downtown including the Port of Friday Harbor marina, Spring Street Landing multimodal transportation facility, Cannery Landing retail center, and the ferry landing. Nearly continuous bulkheading, other armoring, and filling exist along the downtown shoreline. Bulkheading, armoring, filling and overwater structures are also prevalent within the segments of shoreline extending north and south from the downtown. Upland shoreline vegetation is limited.

While there is significant degraded habitat and impaired functions, some functional areas remain. One of these areas is Segment 10 with a documented eelgrass bed, rockweed, barnacles, and potential clam habitat (DNR Shorezone 2001, FOSJ Eelgrass Survey Mapping Project, 2004). Table 1 below provides specific details of habitat degradation and potential restoration opportunities.

Sea Level Rise

Global Projected Sea Level Rise is expected to be somewhere in the range of 7.1 to 59 inches by the year 2100 (IPCC, 2007; USACE, 2009). Local projected sea level rise is expected to be somewhere between 6.3 and 50.3 inches by the year 2100 (Mote et al., 2008). While there is considerable variation in the projections from different studies, they all agree that sea level rise is occurring and will continue to do so. Consequently, the Town of Friday Harbor will need to consider this for future restoration, protection, and development.

"The Shoreline Management Act (SMA) and the Shoreline Master Program (SMP) Guidelines currently contain no explicit references to climate change or sea level rise. However, they require local jurisdictions to take into account scientific and technical information pertinent to shoreline management issues. The Guidelines require local governments use "the most current, accurate and complete scientific and technical information available" (WAC 173-26-201(2)(a)" (Ecology, 2010).

In a recent study of sea level rise vulnerability in the San Juans, Friday Harbor shorelines were rated as one of the most at risk and least resilient habitat areas (MacLennan, et al. 2011). To address sea level concerns, this restoration plan will consider projects that would increase the ecological resiliency of the Town's shoreline areas.

4: Applicable Restoration Activities

Given the built-out urbanized nature of most of the Town of Friday Harbor shoreline area, the two primary areas of restoration potential are improving water quality and increasing function of nearshore habitat. This section will outline general strategies for achieving both of these goals, as well as specific examples of where and how these might be achieved.

Water Quality Improvement

Pollutants in Friday Harbor waters come from numerous sources. Consequently, a comprehensive water quality protection program will include a multi-faceted approach. Recommended additions to the existing programs and regulations that would serve to protect Friday Harbor's water quality include the following:

- Adopting Low Impact Development code that requires all new development and redevelopment to minimize clearing and grading, retain native vegetation and soils, and utilize on-site stormwater management techniques.
- Develop a program to convert an annual percentage of impervious surface within the Town to pervious surface, with a goal of 50 percent pervious surface by 2030. This would include installation of pervious concrete, pavers, and vegetated areas with permeable soils.
- Install additional rain gardens to slow and filter stormwater runoff and to disconnect impervious surfaces.
- Provide educational workshops and materials to all shoreline residents about basic shoreline stewardship practices and encourage them to participate in the Greenshores rating system.
- Onsite residential stormwater retention and buffering.

Habitat Restoration

Barriers to habitat restoration include funding and landowner willingness. To address funding challenges, potential funding sources have been identified in Section 5. A Landowner Willingness Assessment was conducted throughout San Juan County and found that one of the sites that surfaced as the most feasible to pursue restoration at included the central modified sections in West Friday Harbor. This includes segments 9 and 10 in Table 1. Another high priority area for potential restoration is approximately 800 feet of shoreline fringing the mudflats behind the Port of Friday Harbor. This area has been identified as potential forage fish spawn habitat (WDFW, FOSJ, San Juan County MRC 2004). Table 1 provides detail of habitat degradation in each shoreline segment and potential restoration actions.

Table 1: Degraded Habitat and Potential Restoration Actions

Town of Friday Harbor Marine Shoreline Area					
	oreline Environmental Level of impairment to processes and gment Designation functions and causes		Solutions and Actions: Recommended restoration		
Segment 1	Designation				
Segment 1	Residential	Status: Impaired	Solutions and actions:		
		Causes of impairment:	Soften shoreline armoring,		
		Upland development, bulkhead, creosote	enhance riparian vegetation,		
		pilings, docks and floats, derelict vessels.	replace creosote pilings, add		
			grating to docks and floats.		
Segment 2	Urban,	Status: Impaired	Solutions and actions:		
	Commercial	Causes of impairment:	Replace creosote pilings, add		
		Port facilities, public park, creosote	grating to docks and floats,		
		pilings, docks and floats	improve existing and potential		
	_		public parks.		
Segment 3	Urban,	Status: Impaired	Solutions and actions:		
	Commercial	Causes of impairment: Streets, ferry	No restoration potential.		
		terminal, public park, stormwater outfall.			
Segment 4	Residential	Status: Impaired	Solutions and actions:		
		Causes of impairment: Residential	Replace creosote pilings, add		
		development, streets, potable water	grating to docks and floats.		
		piping, sanitary sewer piping, creosote			
		pilings, docks, and floats.			
Segment 5	Residential	Status: Impaired	Solutions and actions:		
		Causes of impairment: Residential	Replace creosote pilings, add		
		development, streets, potable water	grating to docks and floats.		
		piping, sanitary sewer piping, creosote			
		pilings, docks, and floats.			
Segment 6	Residential	Status: Impaired	Solutions and actions:		
		Causes of impairment: Residential	Replace creosote pilings, add		
		development, streets, potable water	grating to docks and floats.		
		piping, sanitary sewer piping, creosote			
		pilings, docks, and floats.			
Segment 7	Urban	Status: Impaired	Solutions and actions:		
_		Causes of impairment: Marina facilities,	Replace creosote pilings, add		
		docks, ramps, landscaping, bulkheads,	grating to docks and floats.		
		large overwater structures.			
Segment 8	Urban	Status: Impaired	Solutions and actions:		
-		Causes of impairment: Marina facilities,	Removal of two degraded		
		residential development, streets, potable	bulkheads, enhance riparian		
		water piping, sanitary sewer piping,	vegetation, replace creosote piling,		
		bulkheads.	add grating to docks and floats.		
Segment 9	Residential	Status: Impaired	Solutions and actions:		
Ç		Causes of impairment: Residential	Remove degraded bulkheads,		
		development, creosote pilings, docks,	enhance riparian vegetation		
		floats, bulkheads.	replace creosote piling, add grating		
		,	to docks and floats.		
Segment 10	Residential	Status: Impaired	Solutions and actions:		
- 50		Causes of impairment: Residential	Remove degraded bulkhead,		
		development, derelict vessels.	enhance riparian vegetation.		

Ecological Functions

WAC 173-26-201 requires that SMP restoration plans consider the following ecological processes in restoration planning:

- Ecosystem-wide processes such as those associated with the flow and movement of water, sediment and organic materials; the presence and movement of fish and wildlife and the maintenance of water quality.
- Individual components and localized processes such as those associated with shoreline vegetation, soils, water movement through the soil and across the land surface and the composition and configuration of the beds and banks of water bodies.

These ecological functions are addressed in Table 2.

Restoration Methods

The most feasible types and methods of restoration that will occur in Friday Harbor are as follows:

- **Soften Shoreline Armoring** Some existing areas of shoreline armoring can be softened utilizing the following techniques:
 - Bulkhead removal
 - Reducing shoreline slope
 - Installing native berm vegetation and drift logs
 - Beach nourishment
- Replace Creosote Pilings Replacing creosote pilings with non-toxic materials. The
 Department of Natural Resources has developed extensive protocols for the safe removal
 of toxic creosote pilings.
- Enhance Riparian Vegetation Planting native plants along the shoreline is a relatively easy and cost effective method of restoring ecological function.
- Add Grating for Docks and Floats Adding grating to docks and floats can allow light to permeate the water and assist in photosynthesis and growth for eelgrass and other aquatic vegetation.
- **Preserve Remaining Natural Areas** Preservation of remaining natural areas through acquisition or easement.
- **Build Stewardship Ethic** Educate shoreline property owners on ways to restore and protect shoreline areas and assist landowners in locating resources.

Table 2. Restoration Opportunities and Improvement of Ecological Functions

	Shoreline Segments

Opportunities	Functions Improved	1	2	3	4	5	6	7	8	9	10
Restoration of armored shorelines by softening shoreline or removing bulkhead.	Allow natural sediment movement from upland areas to shorelines Improve conditions for growth of riparian vegetation Improve nearshore foraging, migration, and refuge habitat for salmon	х							x	X	X
Replace creosote pilings	Remove toxic substances from the environment		Х		Х	Х	Х	Х	X	X	
Add grating to docks and floats	Increase light filtration for aquatic vegetation.	Х	Х		Х	Х		Х	Х	X	
Enhance Riparian Vegetation	Increased input of detritus and insects from shoreline vegetation; Improved wildlife habitat; Reduction of invasive plant species Improve retention and filtering of stormwater	Х							X	X	Х
Preserve remaining natural areas through acquisition or easement	Potential for incremental improvement in all the functions										Х
Educate shoreline property owners on ways to restore and protect shoreline areas; assist landowners in locating resources	Potential for incremental improvement in all functions in the marine shoreline.	X	X	Х	X	X	Х	Х	Х	X	Х

5: Existing Restoration and Protection Programs and Projects

There are several on-going efforts from numerous interested and engaged organizations to monitor and improve Friday Harbor's water quality. San Juan County Public Works, Health and Community Services, and Marine Resources Committee; Town of Friday Harbor; Port of Friday Harbor; University of Washington's Friday Harbor Labs; Friends of the San Juans; and Kwiaht have all participated in monitoring or strategies to implement water quality improvements. Nearshore habitat restoration and protection programs are implemented by the Town of Friday Harbor and Friends of the San Juans. The current programs in place are detailed below.

Stormwater Runoff Prevention

Town of Friday Harbor's Stormwater Management Plan

The Town's Stormwater Management Plan includes the use of non-structural alternatives to control stormwater quantity and quality. These alternatives include maintenance programs,

changes to the municipal codes or regulations, enforcement actions for non-compliance with stormwater regulations, public education, and Stormwater Best Management Practices. One of these Best Management Practices is to use source control measures to minimize or eliminate release of stormwater and pollutants at the site of origin, such as a grass lined swale or rain garden.

Other source control methods include education of the public to prevent disposal of yard wastes, household chemicals, and motor oil into drainage facilities. The plan encourages public involvement and education related to the public's role in surface water problems and what can be done about them. Recommended public education programs in Friday Harbor are:

- Voluntary ditch maintenance
- Catch basin stenciling
- Citizen hotline
- Oil recycling center
- Newsletter articles

Town of Friday Harbor's Stormwater Technical Manual (TFH, 2007)

- Minimize water quality degradation and sedimentation in streams, ponds, lakes, wetlands, Puget Sound and other water bodies.
- Minimize the impact of increased runoff, erosion and sedimentation caused by land development and maintenance practices.
- Maintain and protect groundwater resources;
- Minimize adverse impacts of alterations on ground and surface water quantities, locations and flow patterns;
- Decrease potential landslide, flood and erosion damage to public and private property;
- Promote site planning and construction practices that are consistent with natural topographical, vegetational and hydrologic conditions;
- Maintain and protect the Town's stormwater management infrastructure and those downstream;
- Provide a means of regulating clearing and grading of private and public land while minimizing water quality impacts in order to protect public health and safety; and
- Provide minimum development regulations and construction procedures which will preserve, replace or enhance, to the maximum extent practicable, existing vegetation to preserve and enhance the natural quality of lands, wetlands and water bodies.

Spring Street Rain Garden

The Spring Street Rain Garden Demonstration Project was initiated in 2010 by the San Juan County Marine Resources Committee in response to concerns about pollutants in the stormwater runoff entering Friday Harbor. The rain garden was installed in the spring of 2011 through a grant from the Department of Ecology and is currently being monitored and modified as needed.

The project was developed in partnership with the Town of Friday Harbor, San Juan County, Boundary Waters Inc., 2020 Engineering, Mike Carlson Enterprises, Island Gardens Company, LOEA Design, Atlantis Construction, Banyon Tree, the Friday Harbor Marine Health Observatory, and Crystal Seas Kayaking. Ownership and maintenance of the project will shift from the county to the town in 2013.

Boater Pollution Prevention

Port of Friday Harbor

The Port of Friday Harbor provides education materials and facilities for boaters to encourage stewardship of the waters and islands. Their program provides the following facilities:

- **Pump-out boat:** The Port and Town of Friday Harbor purchased a state-of-the-art sewage pump-out boat to provide boaters with pump-out service. They also provide a portable pump-out cart and dockside pump-out at the end of B dock.
- Garbage and recycling: We provide facilities on our main pier for both garbage and recycling collection. Help us keep garbage out of the water! Plastics, especially, can look like food to fish, and can be deadly.
- **Re-use center:** Speaking of recycling, maybe you have some stuff aboard that you don't need but is too good to throw away. On the main pier we have a "Marine Re-Use Center", where you can drop off boat items for someone else to use. Check to see if there's anything you need!
- Oil recycling: Check at the office for the location of our oil recycle tank. We have oilspill absorbent pads for sale, too. You should keep a few of these on board for emergency cleanups in the bilge, or for use at fuel docks that may not provide them. Even a little fuel in the water makes it tough for the creatures that live there.

The Port's educational materials provide information about the following boater best management practices:

- **Wash-downs:** Use a nozzle on your hose when washing boats to prevent overuse of water, and use a minimal amount of environment-friendly soap.
- **Bilges:** Don't pump in the marina, and don't ever pump if there's fuel in your bilge. Ask at the marina office if you have fuel or oil in your bilge water.
- **Gray-water:** Use as little water as possible while onboard.
- **Fueling practices:** The Port strives for zero spills at the fuel pier. The most difficult thing to control in most vessel fueling is that bubble of fuel that spills out the vent as the tank gets full. Go slow and be careful! (Port of Friday Harbor, 2012a).

They also post Best Management Practices for maintenance at the top of each ramp. These BMPs include the following guidance:

- No more than 25% of a vessel's above water surface can be worked on in the marina.
- Larger projects belong in a boat yard.
- Plan your project so that no debris, sanding dust or spills go into the water.
- Use a tarp suspended between the boat and float.

- A small vacuum cleaner and vacuum sanders are essential equipment for refinishing work.
- Mix paint on a tarp or on shore.
- Have rags and absorbents ready.
- Limit open paint cans to one gallon or less.

San Juan County Watershed Management Action Plan

The County's Watershed Action Management Plan provides an implementation strategy to decrease pollutants coming from boaters. The key strategies within this plan are as follows:

- Facilitate boater survey to determine numbers, overnight activity, and pump-out use
- Disseminate educational material to boaters on the effects of illegal discharges
- Pursue obtaining or developing additional pump-out facilities. The cost of this strategy is a barrier to implementation.

Derelict Vessel Recovery Program

The Derelict Vessel Recovery Program is sponsored by the San Juan County Auditor. It addresses the on-going problem of unregistered, derelict or abandoned vessels moored illegally in state-owned aquatic lands. Sewage, oil, and fuel from these vessels are a threat to marine water quality. The volunteer program monitors and documents vessel and moorage violations and provides assistance to the Sheriff and the Department of Natural Resources (DNR) with tagging and enforcement efforts.

Water Quality Monitoring

The Friday Harbor Marina Water Quality Sampling Project is conducted by Friday Harbor Labs five times a year at six sites to test for fecal coliform. These data are recorded, graphed and shared with the Port of Friday Harbor.

Another data collection project is the Friday Harbor Marine Health Observatory that is measuring the health of the Port of Friday Harbor by counting marine invertebrates throughout the year and noting changes in populations, diversity, location, and seasonality. Volunteers also collect data on water quality, water visibility, temperature, depth and weather. This is a collaborative effort through the Port of Friday Harbor, Kwiaht, and the WSU Beach Watchers.

6: Implementation Strategy and Timeline

Restoration planning is a long-term effort. The following section will outline the specific projects and programs that the Town will intend to implement, the mechanisms for implementing them, and the approximate timeline for implementation.

The timeline is categorized by short and long-term projects. Short-term projects are those to be completed or started prior to the next round of SMP updates for the Town. Long-term projects are those that will be evaluated for landowner willingness and funding opportunities in the future, prior to the next round of SMP updates. These are detailed in Table 3.

Table 3. Potential Prioritization of Restoration Projects

Projects	Comments
Short-term	
Improvement of water quality: green infrastructure	Construction of the Spring Street Rain Garden was completed in 2010 but a recent study shows that it is not yet fully functional and needs improvement or augmentation. The Marine Resources Committee, which initiated the effort, is planning to complete improvement strategies in 2013.
Improvement of water quality: adoption of LID regulations	The Town of Friday Harbor will consider adoption of LID regulations by 2015.
Improvement of water quality: implementation of Stormwater Management Plan Build stewardship ethic: educate shoreline landowners about restoration and protection options and assist in providing resources.	These projects and programs will be implemented or initiated by 2020 as funding becomes available. Shoreline landowner education materials will be developed and distributed by 2015.
Long-term	
Restoration of armored shorelines by softening shoreline or removing bulkhead.	Work with willing landowners to develop a long- term plan.
Replace creosote pilings	Work with DNR to develop plan.
Add grating to docks and floats	Develop program to work with landowners.
Enhance Riparian Vegetation	Develop program to work with landowners.
Preserve remaining natural areas through acquisition or easement	Partner with Friends of the San Juans.

The primary barriers to implementation of the recommendations within this plan are funding, lack of understanding of the issues of concern, and landowner willingness. To address the funding barrier, we have compiled a list of potential funding sources from which the Town can seek grants to implement programs and projects.

Potential Funding Sources

Grant Name	Allocating Entity
Aquatic Lands Enhancement Account	Washington Recreation and Conservation Office
Bring Back the Natives	National Fish and Wildlife Foundation
Coastal and Estuarine Conservation	National Oceanic and Atmospheric Administration
Estuarine and Salmon Restoration Program	Washington Recreation and Conservation Office; Puget Sound Nearshore Partnership
Five-Star Restoration Program	National Fish and Wildlife Foundation

Land and Water Conservation Fund Washington Recreation and Conservation Office

Salmon Recovery Funding Board Washington Recreation and Conservation Office

SRFB Community Salmon Fund National Fish and Wildlife Foundation

Water Quality Grants and Loans Washington Department of Ecology

Washington Wildlife and Recreation Washington Recreation and Conservation Office

Wildlife and Habitat Conservation Fund National Fish and Wildlife Foundation

State Wildlife Action Project National Wildlife Federation

7: References

Ecology, 2010. SMP Handbook Appendix A: Addressing Sea Level Rise in Shoreline Master Programs.

http://www.ecy.wa.gov/programs/sea/shorelines/smp/handbook/sea_level_guidance.pdf

Ecology 2011. Water Quality Assessment for Washington (WQA).

http://apps.ecy.wa.gov/wqawa2008/viewer.htm

Friends of San Juans, 2004. Eelgrass Survey Mapping Project

Friday Harbor Labs Science Outreach Program

http://depts.washington.edu/fhlk12/monitor/fhmarina/fhmarina.html#overview

IPCC, 2007: Summary for Policymakers. In: Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor and H.L. Miller (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

MacLennan, Andrea, and Stephanie Williams, 2011. Resilient and At Risk Priority Nearshore Habitats of San Juan County. Coastal Geologic Services, Inc. (CGS)

Mote, P., A. Petersen, S. Reeder, H. Shipman, and L.W. Binder. 2008. Sea Level Rise in the Coastal Waters of Washington State. UW Climate Impacts Group and Washington State Department of Ecology. January 2008.

Port of Friday Harbor, 2008. http://www.portfridayharbor.org/environment/awards education/

Port of Friday Harbor, 2012, http://www.portfridayharbor.org/environment/

San Juan County Health and Community Services, 2001. Watershed Management Action Plan and Characterization Report, PART 2: San Juan County Characterization Report, Chapter 5: Water Quality. http://www.co.san-juan.wa.us/health/wtrshdpln/part2chap5.html

San Juan County, 2000. Watershed Management Action Plan

Town of Friday Harbor, 2007. Stormwater Technical Manual. http://www.fridayharbor.org/town%20documents/StormwaterManagementPlan/stormwaterTechmanual.htm

Town of Friday Harbor 5-9 Stormwater Management Plan September 2005 Gray & Osborne, Inc., Consulting Engineers www.fridayharbor.org/town%20documents/StormwaterManagementPlan/Chapter%205.pdf

US Army Corps of Engineers. 2009. Water Resource Policies and Authorities Incorporating Sea-Level Change Considerations in Civil Works Programs. EC 1165-2-211. July 2009.

Washington Department of Natural Resources, Shorezone Inventory

Johannessen, Jim and Andrea MacLennan, 2006. Soft Shore Protection/Structure Removal Blueprint for San Juan County Forage Fish Beaches, Friends of the San Juans. http://www.sanjuans.org/pdf_document/Soft_Shore_Restoration_Blueprint.pdf