Chapter 6 GENERAL GOALS POLICIES AND REGULATIONS

The following goals, policies and regulations apply to all shoreline development, modifications and uses.

6.1 Shoreline Use

It is the goal of the City of Gig Harbor to give preference to water-dependent and other water-oriented uses for shorelines within the jurisdiction of the City of Gig Harbor while preserving the unique mix of waterfront uses in Gig Harbor Bay and Purdy.

6.1.1 Policies

A. Preferred uses on Gig Harbor shorelines

Give preference to shoreline uses that are water-oriented (water-dependent, water-related, or water-enjoyment); provide public access and recreational opportunity; or are single-family residential uses, consistent with state policy (RCW 90.58.020). Such uses should be located, designed, and maintained in a manner that minimizes adverse impacts to shoreline ecological functions and/or processes. Non-water-oriented development should be allowed provided the development supports the objectives of the Gig Harbor Comprehensive Plan and the Shoreline Master Program.

B. Open space, recreation and view corridors on Gig Harbor shorelines

Integrate multiple-use concepts including open space, recreation, and view preservation with commercial, multifamily, and new residential development.

C. Waterfront uses in Gig Harbor Bay

Retain a mixed use waterfront in Gig Harbor Bay including those commercial endeavors such as commercial fishing, boating, marine shops and services, restaurants and retail shops, as well as residential uses which provide the bay's unique appeal. Continue to develop and enhance the recreation and tourism industry along Gig Harbor Bay, as an economic asset, in a manner that will enhance the public enjoyment of, and public access to the bay.

D. Restoration of degraded shoreline areas along Gig Harbor shorelines

Encourage restoration of shoreline areas that are degraded as a result of past activities or events.

E. Protection of rights

Ensure that proposed shoreline uses do not unreasonably infringe upon the rights of others or the rights of private ownership, that uses do not create undue risk or harm to others (e.g., landslide and erosion hazards to adjacent properties), and that existing water-side access to properties is not impacted.

F. Resource-based uses on Gig Harbor shorelines

Prohibit those resource-based uses and industries that are inappropriate for the City's shoreline, including agriculture, forest management practices, and mining.

6.1.2 **Regulations**

Shoreline regulations for specific uses and associated shoreline modifications (e.g., commercial, residential, recreational development, dredging, bulkheads, etc.) are in Chapter 7, Shoreline Use and Modification Policies and Regulations.

6.2 Marine Shorelines, Vegetation Conservation and Critical Areas Protection

It is the goal of the City of Gig Harbor to protect ecological processes and functions existing in the shoreline and nearshore area. It is also the goal of the City of Gig Harbor to protect and restore shoreline vegetation, recognizing the multiple benefits native vegetation provides, including reduction in the need for structural stabilization; ecological functions and habitat; coastal bluff stability, safety, and protection of human life and property; and visual and aesthetic qualities.

6.2.1 General Policies

A. Level of protection

Provide a level of protection to designated critical areas that are located within the shoreline that assures no net loss of shoreline ecological functions necessary to sustain shoreline natural resources.

B. No net loss

Assure no net loss of shoreline ecological functions and processes. This means all shoreline use and development should be carried out in a manner that avoids and minimizes adverse impacts so that the resulting ecological condition does not become worse than the current condition. Natural features of the shoreline and nearshore environment that provide ecological functions and that should be protected include marine riparian habitat, banks and bluffs, beaches and backshore, critical saltwater habitat, wetlands and streams. Shoreline processes that should be protected include erosion and accretion; sediment delivery, transport and storage; and large woody debris recruitment.

C. Mitigation measures

Require shoreline development to ensure no net loss of shoreline ecological functions by mitigating for unavoidable environmental impacts. Compensatory mitigation measures should be considered both in the immediate vicinity and within the broader watershed or nearshore environment as identified in applicable comprehensive resource management or shoreline restoration plans.

D. Habitat

Preserve and protect habitat which provides the shoreline's unique value, including the Crescent Creek and Donkey Creek estuaries, and McCormick Creek, and critical saltwater habitats which include kelp beds, eelgrass beds, spawning and holding areas for forage fish such as surf smelt and sand lance, sand spits, mud flats, and areas with which priority species have a primary association.

E. Wetlands

Preserve, protect, and/or restore wetlands associated with the City's shorelines to achieve no net loss of wetland area and wetland functions.

F. Development in critical areas

Developments or creation of new lots in shoreline areas that are identified as critical areas or pose a foreseeable risk to people and improvements during the life of the development should not be allowed.

G. Cumulative impacts

Consider both direct impacts and cumulative impacts in assessing the potential for net loss of ecological functions from proposed projects.

H. Protect critical areas

Protect critical areas and the functions they perform by the careful and considerate regulation of development.

I. Landslide and erosion

Minimize damage to life, limb and property due to landslides and erosion on steep or unstable slopes, seismic hazard areas and areas subject to subsidence.

J. Wetland functions and values

Protect wetlands and their functions and values.

K. Streams

Protect and maintain stream flows and water quality within the streams.

L. Gig Harbor Bay

Minimize or prevent siltation to the receiving waters of Gig Harbor Bay for the maintenance of marine water quality and the maintenance and preservation of marine fish and shellfish.

M. Drainage and stream flow

Preserve natural forms of flood control and stormwater storage from alterations to drainage or stream flow patterns.

N. Aquifer recharge areas

Protect aquifer recharge areas from undesirable or harmful development.

O. Wildlife

Protect, maintain and enhance areas suitable for wildlife, including rare, threatened or endangered species.

P. Fish and wildlife habitat conservation areas

Protect, maintain and enhance fish and wildlife habitat conservation areas within their natural geographic distribution so as to avoid the creation of subpopulations.

Q. Functions of shoreline vegetation

Conserve or restore native shoreline vegetation where new development and/or uses are proposed in order to maintain shoreline ecological functions and processes provided by native vegetation.

R. Erosion control projects

Integrate native shoreline vegetation with proposals for bioengineering, or "softshore" bank stabilization and erosion control projects.

S. Vegetation conservation

Develop measures to conserve native vegetation along shorelines. Vegetation conservation may include avoidance or minimization of clearing or grading, restoration of areas of native vegetation, and/or control of invasive or non-native vegetation.

T. Vegetation management for views of the water

Maintaining well-vegetated shorelines is preferred over clearing vegetation to create views or provide lawns. Limited and selective clearing for views and lawns should be allowed when slope stability and ecological functions are not compromised. Trimming and pruning are generally preferred over removal of native vegetation.

6.2.2 Regulations - No Net Loss and Mitigation

1) Uses and developments that cause a net loss of ecological functions and processes shall be prohibited. All uses and development shall provide a report to the Shoreline Administrator that addresses no net loss of ecological function associated with a development proposal in a format approved by the City.

2) All shoreline use and development, including preferred uses and uses that are exempt from permit requirements, shall be located, designed, constructed, conducted, and maintained in a manner that maintains shoreline ecological processes and functions.

3) Mitigation measures shall be applied in the following sequence of steps listed in order of priority.

    a) Avoiding the impact altogether by not taking a certain action or parts of an action, or altering the action to avoid impacts;

    b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation by using appropriate technology and engineering or by taking affirmative steps to avoid or reduce impacts;

    c) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;

d) Reducing or eliminating the impact over time by preservation and maintenance operations; and

e) Compensating for the impact by replacing, enhancing, or providing similar substitute resources or environments and monitoring the impact and the mitigation project and taking appropriate corrective measures.

4) Mitigation actions shall not have a significant adverse impact on other shoreline ecological functions.

5) When compensatory mitigation measures are required, all of the following shall apply:

a) The quality and quantity of the replaced, enhanced, or substituted resources shall be the same or better than the affected resources; and

b) The mitigation site and associated vegetative planting shall be nurtured and maintained such that healthy native plant communities can grow and mature over time; and

c) The mitigation shall be informed by pertinent scientific and technical studies, including, but not limited to, the Shoreline Inventory and Characterization Report, the Shoreline Restoration Plan and other background studies prepared in support of this Program; and

d) The mitigation shall replace the functions as quickly as possible following the impacts to ensure no net loss; and

e) The mitigation activity shall be monitored and maintained to ensure that it achieves its intended functions and values; and

f) The City shall require the applicant/proponent to post a bond or provide other financial surety equal to the estimated cost of the mitigation in order to ensure the mitigation is carried out successfully. The bond/surety shall be refunded to the applicant/proponent upon completion of the mitigation activity and any required monitoring.

6) When compensatory measures are appropriate pursuant to the mitigation priority sequence (Section 6.2.2 Regulation #3 above), preferential consideration shall be given to measures that replace the impacted functions directly and in the immediate vicinity of the impact. However, off-site compensatory mitigation provided within the same watershed or appropriate section of marine shoreline (e.g., reach or drift cell) is allowed when it provides greater and more sustainable benefits. When determining whether offsite

mitigation provides greater and more sustainable benefits, the City shall consider limiting factors, critical habitat needs, and other factors identified by the Gig Harbor shoreline restoration plan, or an approved watershed or comprehensive resource management plan. Authorization of off-site compensatory mitigation measures may require appropriate safeguards, terms or conditions as necessary to ensure no net loss of ecological functions. Compliance with off-site mitigation requirements in Section 6.2.4 is required.

7) To encourage shoreline property owners to remove bulkheads and perform other beneficial shoreline restoration actions in advance of shoreline development or redevelopment, as of November 25, 2013, the City may give mitigation credit to any beneficial restoration action that occurred on a proposed development site within 5 years of the proposed development/redevelopment activity provided that:

   a) The applicant/property owner can provide conclusive evidence of the pre- and post-restoration conditions using photographs, reports, plans, affidavits, permits, or similar evidence;

   b) The City can confirm via site inspection, photographs, affidavits or other evidence that the restoration actions have improved shoreline conditions;

   c) The applicant/property owner protects the restoration area by complying with Section 6.2.4 Regulations #6 and 7;

   d) A habitat management plan is prepared that describes the appropriate amount and type of development that the mitigation credits can be applied towards; and

   e) The habitat management plan and mitigation credit shall be formalized by a covenant recorded with the Pierce County Auditor that runs with the land for the life of the project, and includes a statement that the mitigation credit cannot be sold or transferred to the owner of another parcel.

6.2.3 Regulations – Marine Shorelines

6.2.3.1 Marine – Classification

1) Marine shorelines include all marine “shorelines of the state”, including Colvos Passage, Gig Harbor Bay, Tacoma Narrows, Henderson Bay and the portions upstream to the marine ordinary high water marks within freshwater streams which flow into Gig Harbor Bay and Henderson Bay.

6.2.3.2 Marine – Vegetation Conservation Strip

1) Vegetation conservation strips shall consist of an undisturbed area of native vegetation established to protect the integrity, functions and processes of the shoreline. See Section 6.2.4 for standards regarding vegetation conservation.

2) A vegetation conservation strip shall be maintained on all marine shorelines for all non-water dependent uses and associated structures adjacent to the marine shoreline to protect and maintain the integrity, functions and processes of the shoreline and to minimize risks to human health and safety. The vegetation conservation strip shall be measured horizontally from the site's OHWM or top of bluff, whichever is applicable, to the building line of the structure (see definition for "building line" in Chapter 2). The vegetation conservation strip requirement shall not apply to water-dependent uses as addressed in Table 6-1.

3) The depth of the vegetation conservation strip shall equal the *minimum structure setback*, as established below in Table 6-1; or the depth of a critical area buffer, as established in Section 6.2.5, whichever is greater.

4) The *minimum structure setback* may be reduced pursuant to Section 6.2.3.3, Regulations #1-4 provided:

   a) The reduced setback does not conflict with a required critical area buffer;

   b) The reduced setback meets or exceeds the *minimum nonconforming structure setback*, except for those circumstances described under Section 6.2.3.3, Regulation #2*;* and

   c) Within the Urban Conservancy, Low Intensity, and Natural environment designations, there is no net increase in impervious surface within the *minimum structure setback* except when:

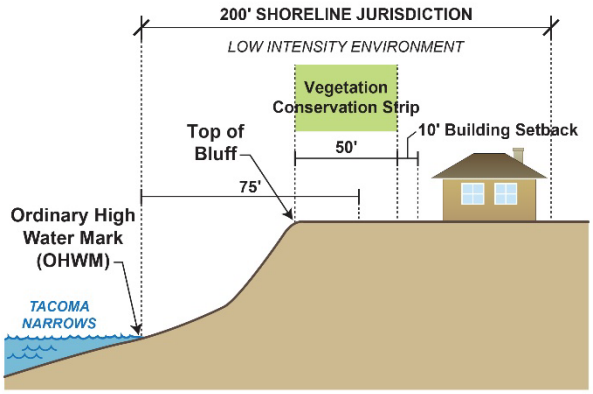
      i) The net increase is 1 percent or less of the property's shoreline jurisdiction area or 50 square feet, whichever is greater; or

      ii) Low impact development techniques in compliance with the Gig Harbor Stormwater Management and Site Development Manual are used to offset impacts from the additional impervious surface area.

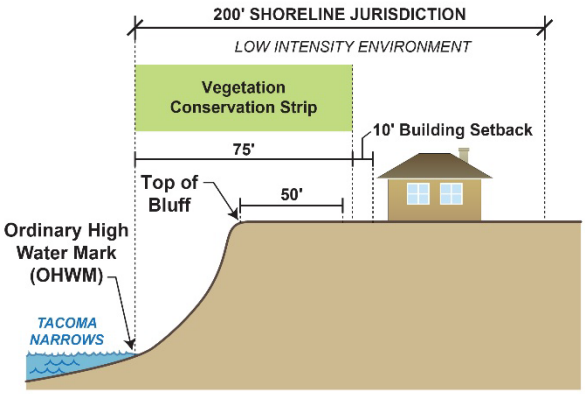
5) A building setback from the upland edge of the vegetation conservation strip shall be established to limit construction impacts unless development exceptions are utilized pursuant to Section 6.2.3.3, Regulations #1-3.

6) Figure 6-1 illustrates the approach to determining the applicable vegetation conservation strip when both a top-of-bluff setback and setback from the OHWM is required per Table 6-1.

Figure 6-1. OHWM and Top-of-Bluff Setbacks (Example in Low Intensity SED)[1]



In this example, the 50-foot from top-of-bluff measurement is the required vegetation conservation strip.



In this example, the 75' from OHWM measurement is the required vegetation conservation strip.

[1] See Table 6-1, subsection 6.2.3.2 for Colvos Passage and Tacoma Narrows Low Intensity Shoreline Environment Designation vegetation conservation strip requirements.

Table 6-1 – Vegetation Conservation Strip Setbacks for Marine Shorelines

Note: The vegetation conservation strip and minimum setback requirements are not applicable to water-dependent uses pursuant to Subsection 6.2.3.2.2.

Waterbody	***Vegetation Conservation Strip***	***Minimum Structure Setback from OHWM/Top-of-Bluff for Non-water Dependent Uses[1 & 5] (Minimum Structure Setback)***	***Building setback from Vegetation Conservation Strip[2]***	***Minimum Nonconforming Structure Setback from OHWM or Top-of–Bluff [3 & 5] (Minimum Nonconforming Structure Setback)***
City Waterfront				
Gig Harbor Bay	Same as critical area buffer or *Minimum Structure Setback from OHWM*, whichever is greater	25 feet	10 feet	10 feet
Historic Working Waterfront				
Gig Harbor Bay	Same as critical area buffer or *Minimum Structure Setback from OHWM*, whichever is greater	25 feet	10 feet	10 feet
Low Intensity				
Colvos Passage	Same as critical area buffer or *Minimum Structure Setback* from OHWM, whichever is greater	50 feet	10 feet	20 feet
Gig Harbor Bay (UGA)	Same as above	50 feet	10 feet	20 feet
Gig Harbor Bay	Same as above	35 feet	10 feet	15 feet
Tacoma Narrows North (south line of City Waterfront designation south to Old Ferry landing-south line of parcel #0221085019)	Same as above	35 feet	10 feet	15 feet
Tacoma Narrows South (south line of parcel #0221085019 to south line parcel #0221084059)	Same as above	75 feet or 50 feet from top of bluff whichever is greater	10 feet	20 feet from top of bluff
Henderson Bay	Same as above	75 feet	10 feet	25 feet

Waterbody	***Vegetation Conservation Strip***	***Minimum Structure Setback from OHWM/Top-of-Bluff for Non-water Dependent Uses[1 & 5] (Minimum Structure Setback)***	***Building setback from Vegetation Conservation Strip[2]***	***Minimum Nonconforming Structure Setback from OHWM or Top-of–Bluff [3 & 5] (Minimum Nonconforming Structure Setback)***
Urban Conservancy				
Colvos Passage	Same as critical area buffer (a buffer equal to the height of the bluff from the top, toe and sides of the bluff) or *Minimum Structure Setback from OHWM*, whichever is greater	75 feet or 50 feet from top of bluff, whichever is greater	10 feet	20 feet from top of bluff
Gig Harbor Bay (UGA)	Same as critical area buffer or *Minimum Structure Setback from OHWM*, whichever is greater	100 feet	10 feet	25 feet
Gig Harbor Bay	Same as above	100 feet	10 feet	25 feet
Henderson Bay	Same as above	100 feet	10 feet	25 feet
Natural				
Gig Harbor Spit[4]	N/A	N/A	N/A	N/A
Tacoma Narrows	Same as critical area buffer (a buffer equal to the height of the bluff from the top, toe and sides of the bluff) or *Minimum Structure Setback from OHWM*, whichever is greater	150 feet or 50 feet from top of bluff whichever is greater	10 feet	20 feet from top of bluff

[1] May be reduced per Section 6.2.3.3
[2] May be waived per Section 6.2.3.3, Regulations #1-4
[3] Minimum required structure setback when utilizing exceptions per Section 6.2.3.3, Regulations #1-3
[4] Vegetation conservation standards and building setbacks are waived in recognition of Federal preemption
[5] Refer to subsection 8.11.8 for requirements that apply to nonconforming structures

6.2.3.3 Marine – Vegetation Conservation Strip Modifications

1) Exception for existing nonconforming structures in all shoreline environment designations except for the Natural designation:

   a) As provided in Chapter 8, section 8.11.8.1.c, intentional reconstruction, including reconfiguration of the building footprint, of existing, legally nonconforming, principal structures located within the *minimum structure setback* is permitted provided the following standards are met:

      i) A *minimum nonconforming structure setback* is maintained as a vegetation conservation strip per requirements of Section 6.2.4;

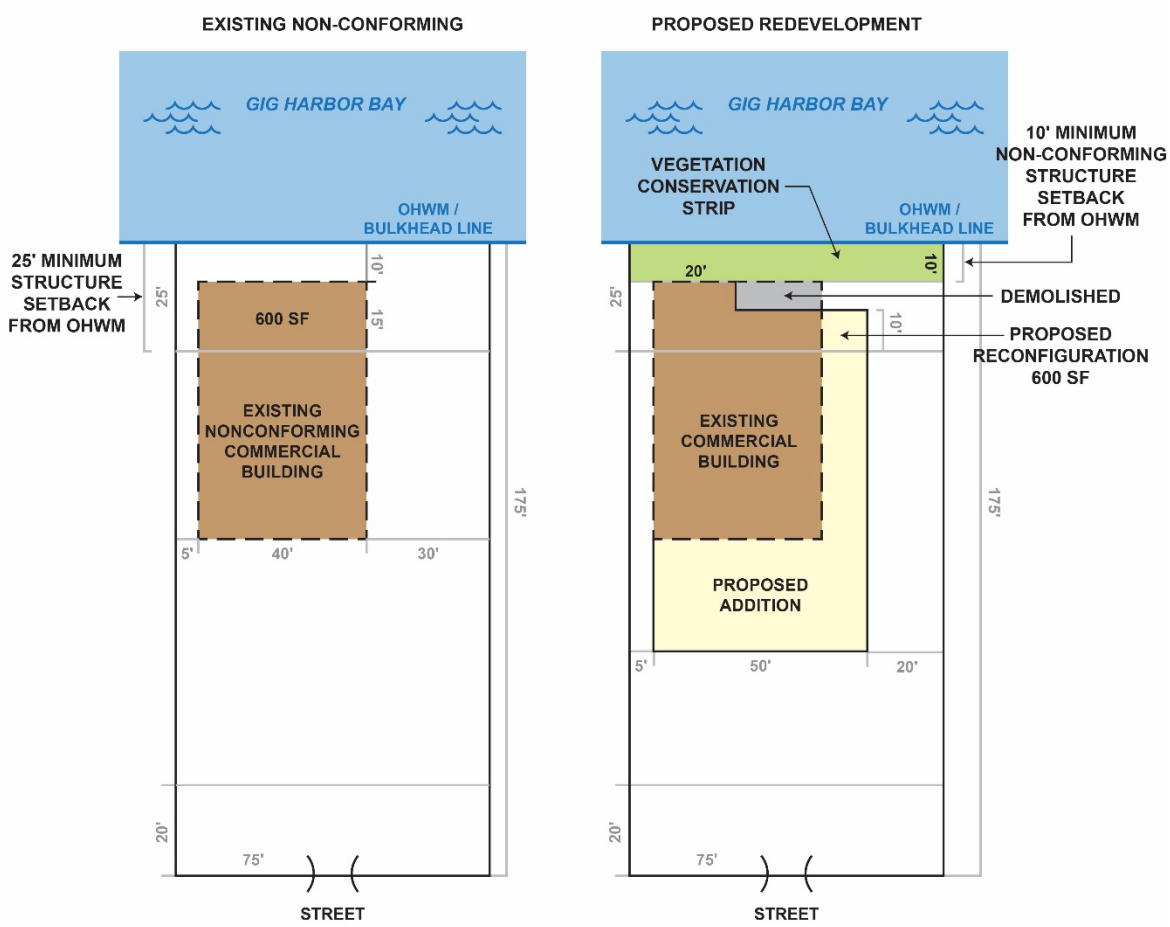
      ii) No increase in building footprint square footage within the *minimum structure setback* occurs; and

      iii) The setback between the existing, legally nonconforming, principal structure and the OHWM is not decreased.

   b) The required 10-foot building setback from the upland edge of the vegetation conservation strip is waived under this provision. See Figure 6-2 for illustrative purposes.

   c) The exception addressed in subsection 6.2.3.3.1.a above, shall not apply to structures that are located between the *minimum nonconforming structure setback* and the OHWM as set forth in Table 6-1.

Figure 6-2. Reconstruction/Additions of Existing Nonconforming Structures (Example in City Waterfront SED)



2) Exception for properties affected by hardship associated with unique conditions:

a) In instances where the subject property is affected by a hardship specifically related to the property that is the result of unique conditions such as irregular lot shape, size or natural features, that would preclude the reconstruction of a structure that meets the *minimum nonconforming structure setback*, structures that are located between the *minimum nonconforming structure setback* and the OHWM may be intentionally reconstructed on the same or smaller footprint provided the new structure maintains the same or an increased building setback from the OHWM as provided by the former structure. In instances where multiple structures on the same parcel are located between the *minimum nonconforming structure setback* and the OHWM, each structure may be reconstructed on the same or smaller footprint, or the sum of the square footage contained within the structures may be combined into one structure provided the structure does

not exceed the maximum gross floor area requirements for the site established by GHMC Title 17. In such instances the existing building setback from the OHWM maintained by the former structure(s) shall be maintained or increased.

In all instances, the project proponent must demonstrate to the satisfaction of the Administrator that the subject site is affected by a qualifying hardship condition. In instances where the hardship involves steep or unstable slopes, the Administrator may require that a Geotechnical Report be prepared by a licensed engineer to address the hardship condition. In all instances, the project proponent shall demonstrate through a Habitat Assessment Report that the reconstruction of the structure(s) shall not adversely affect the existing ecological functions of the site. The required report shall be prepared by a qualified wildlife biologist.

b) The required 10-foot building setback from the upland edge of the vegetation conservation strip is waived under this provision.

3) Exceptions for new infill developments:

a) In instances where a vacant parcel is located between two parcels, each of which is developed with a legal, nonconforming principal structure located within the required *minimum structure setback*, the setback for the vacant parcel shall be calculated as follows:

i) Determine the existing setback of the principal structure of each of the adjacent parcels;

ii) Add existing setbacks distances of each parcel and divide by two.

Results of the averaging will determine the setback for the proposed principal structure for the vacant parcel. In no case shall the average setback be reduced to less than the minim*um nonconforming structure setback*. This average structure setback shall be maintained as a vegetation conservation strip per the requirements of Section 6.2.4. The required 10-foot building setback from the vegetation conservation strip is waived under this provision. See Figure 6-3 for illustrative purposes.

b) Development of a vacant, infill corner parcel which abuts a parcel on the interior side that has an existing, legal, nonconforming principal structure located within the *minimum structure setback* may utilize an average structure setback in place of the *minimum structure setback*. Averaging shall be determined by calculating the average of the following two values:

i) The distance (in feet) from the OHWM to the building line of the existing principal structure on the interior lot abutting the subject property.

ii) *Minimum structure setback* per Table 6-1.

The resulting value shall be the average structure setback from the OHWM, provided it is no less than the *minimum nonconforming structure setback*. This minimum average structure setback shall be maintained as a vegetation conservation strip per the requirements of Section 6.2.4. The required 10-foot building setback from the vegetation conservation strip is waived under this provision. See Figure 6-4 for illustrative purposes.

Figure 6-3. Setback Averaging for Vacant Infill Parcel (Example in City Waterfront SED)

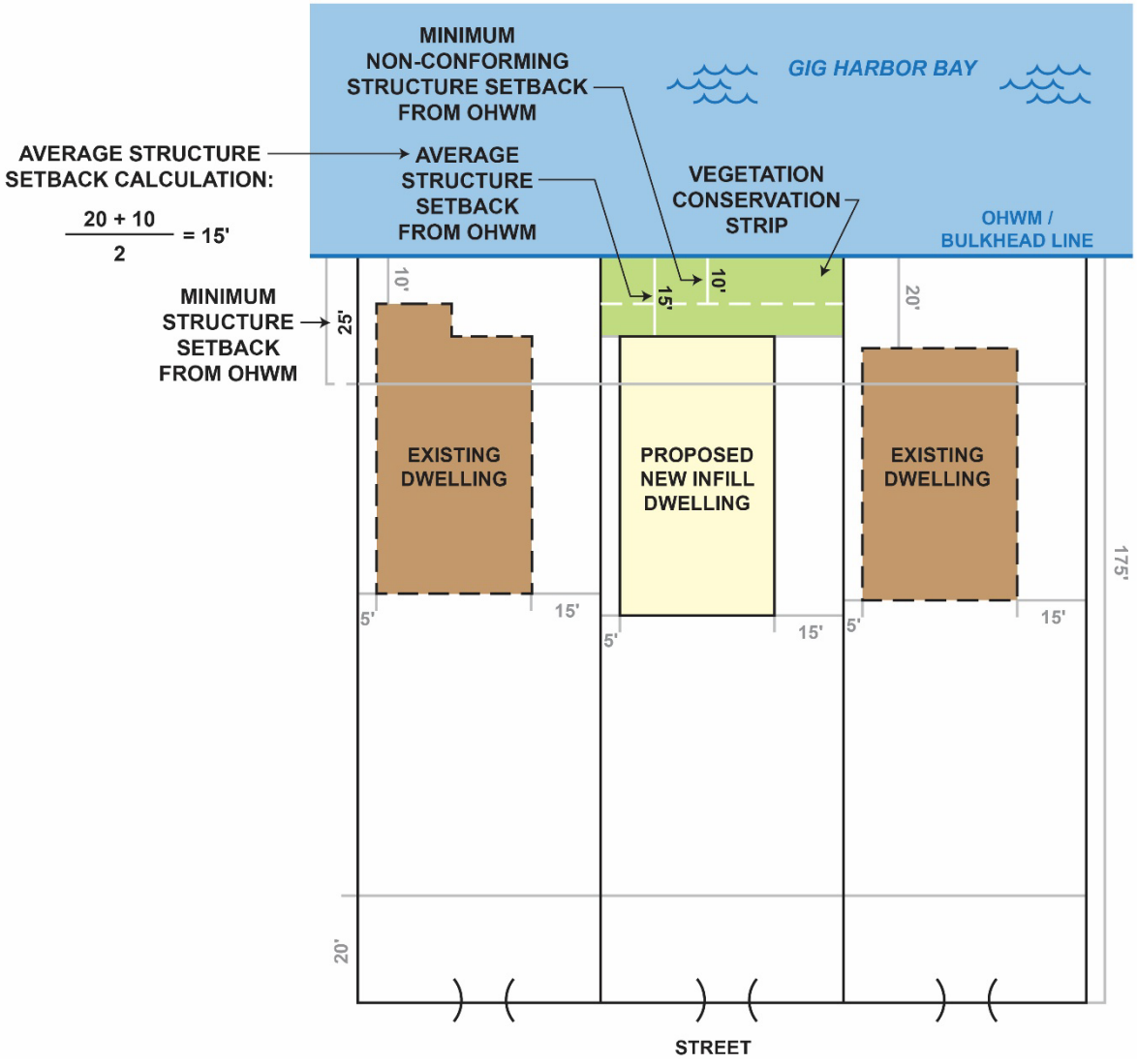
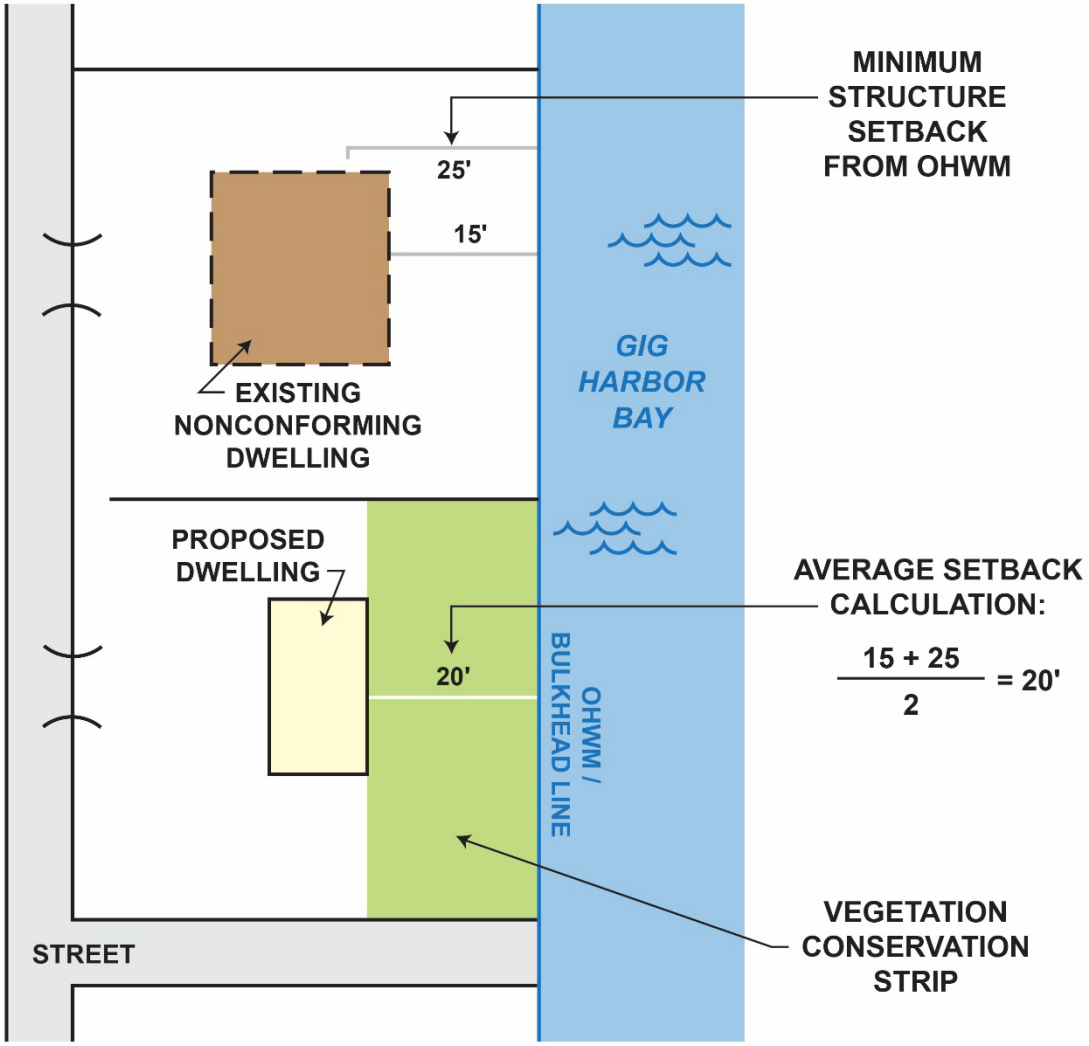


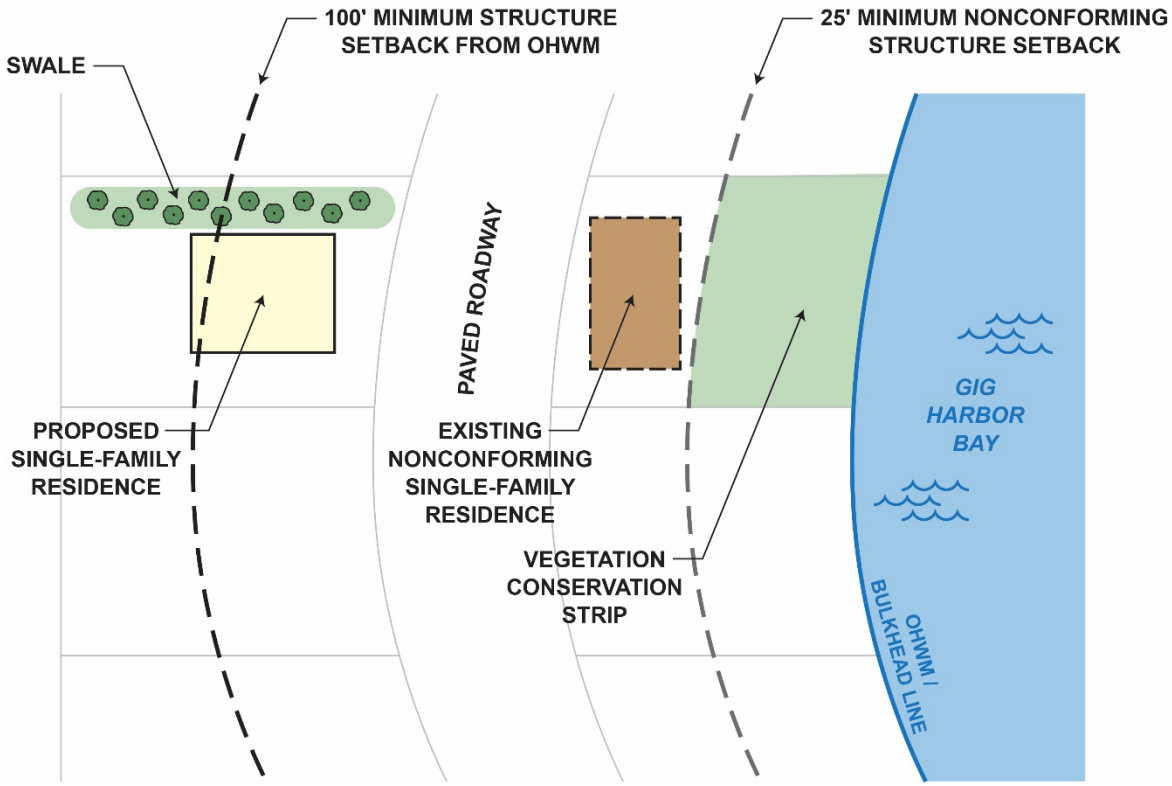
Figure 6-4 Setback Averaging on Corner Lot (Example in City Waterfront SED)



4) Exception when roadway transects *minimum structure setback*:

a) Where a legally established developed roadway transects the *minimum structure setback* the Administrator may approve a modification of the standard to the edge of the roadway if the part of the *minimum structure setback* on the landward side of the road does not provide any functions to protect the shoreline. The modification of the standard shall not conflict with a required critical area buffer. The required 10-foot building setback from the vegetation conservation strip is waived under this provision. See Figure 6-5 for illustrative purposes.

Figure 6-5. Roadway Transects Minimum Structure Setback (Example in Urban Conservancy SED)



6.2.4 Regulations – Vegetation Conservation Strip

Areas containing existing native plant communities located within the marine vegetation conservation strip or critical area buffer shall be protected, maintained, or enhanced. Invasive species shall be removed and replaced with native vegetation to maintain or enhance ecological functions on the property where practical.

Proposed development in the shoreline jurisdiction shall provide a landscape plan with information appropriate to identify the required marine vegetation conservation strip required pursuant to section 6.2.3.2, or critical area buffer required pursuant to section 6.2.5.

Landscape plans shall include the location, species, diameter or size of materials using both botanical and common names. Plans shall reflect the ultimate size of the plant materials. In drier months, temporary surface irrigation or temporary installation of intermediate plantings may be required until weather or seasonal

conditions permit installation of the permanent plantings. When required by the Administrator, landscape plans shall establish a staged vegetation removal and replacement program that keeps the amount of exposed soil during and after clearing and grading activities to a minimum.

The following applies to minimally disturbed areas containing existing native plant communities located within the marine vegetation conservation strip or critical area buffer:

No more than 15 percent of the area with native shoreline vegetation shall be cleared within the marine vegetation conservation strip or critical area buffer. All native trees in the vegetation conservation area over 6 inches in diameter at 54 inches above grade shall be retained. Lawn grass, pervious surfaces which provide opportunities for outdoor furniture arrangements, and fire-pits are allowed within the disturbed portion of vegetation conservation strip area. Trees determined by a certified arborist to be hazardous or diseased may be removed upon approval by the City. Removal of trees greater than six-inches in diameter at 54 inches above grade shall be replaced at a 2:1 ratio with deciduous trees of a minimum two-inch caliper as measured one (1) foot above grade or evergreen trees a minimum of five-feet in height. Buffers and setbacks from the OHWM that have been previously disturbed shall be re-vegetated as part of the development pursuant to an approved landscape plan. See Figure 6-6 for illustrative purposes.

In the Natural, Urban Conservancy and Low Intensity Shoreline Environment Designations, where the vegetation conservation strip and building setbacks for marine shorelines are measured from the "top-of-bluff" pursuant to the requirements of Section 6.2.3.2, Table 6-1, no more than 15 percent of the area within the native shoreline vegetation conservation strip or buffer area at the top of bluff shall be cleared. The minimum required vegetation conservation strip or buffer area may be reduced to a minimum width of twenty-five (25) feet provided the project proponent demonstrates through a Geotechnical Report prepared by a licensed engineer that such a reduced area will not adversely impact the stability of adjacent steep slopes. All native trees in the minimum required vegetation conservation strip or buffer area greater than 6 inches in diameter at 54 inches above grade shall be retained. 100 percent of the native vegetation within adjacent steep slope areas shall be retained, except as necessary to provide for private and public access to the shoreline as set forth in subsection 6.2.4.8 below. Lawn grass, pervious surfaces which provide opportunities for outdoor furniture arrangements, and fire-pits are allowed within the disturbed portion of vegetation conservation strip or buffer area, between the top of bluff and the upland edge of the required area. Structures are not allowed within the reduced vegetation conservation strip or buffer area, per requirements of Section 6.2.3 and other provisions of the Master Program. See Figure 6-7 for illustrative purposes.

The allowance to clear up to 15 percent of the area within the native vegetation conservation strip or critical area buffer shall not be allowed for properties that established a vegetation conservation strip equal to the *minimum nonconforming structure setback* per Section 6.2.3.2, Table 6-1.

Figure 6-6. Minimally Disturbed Areas (Example in Low Intensity SED)

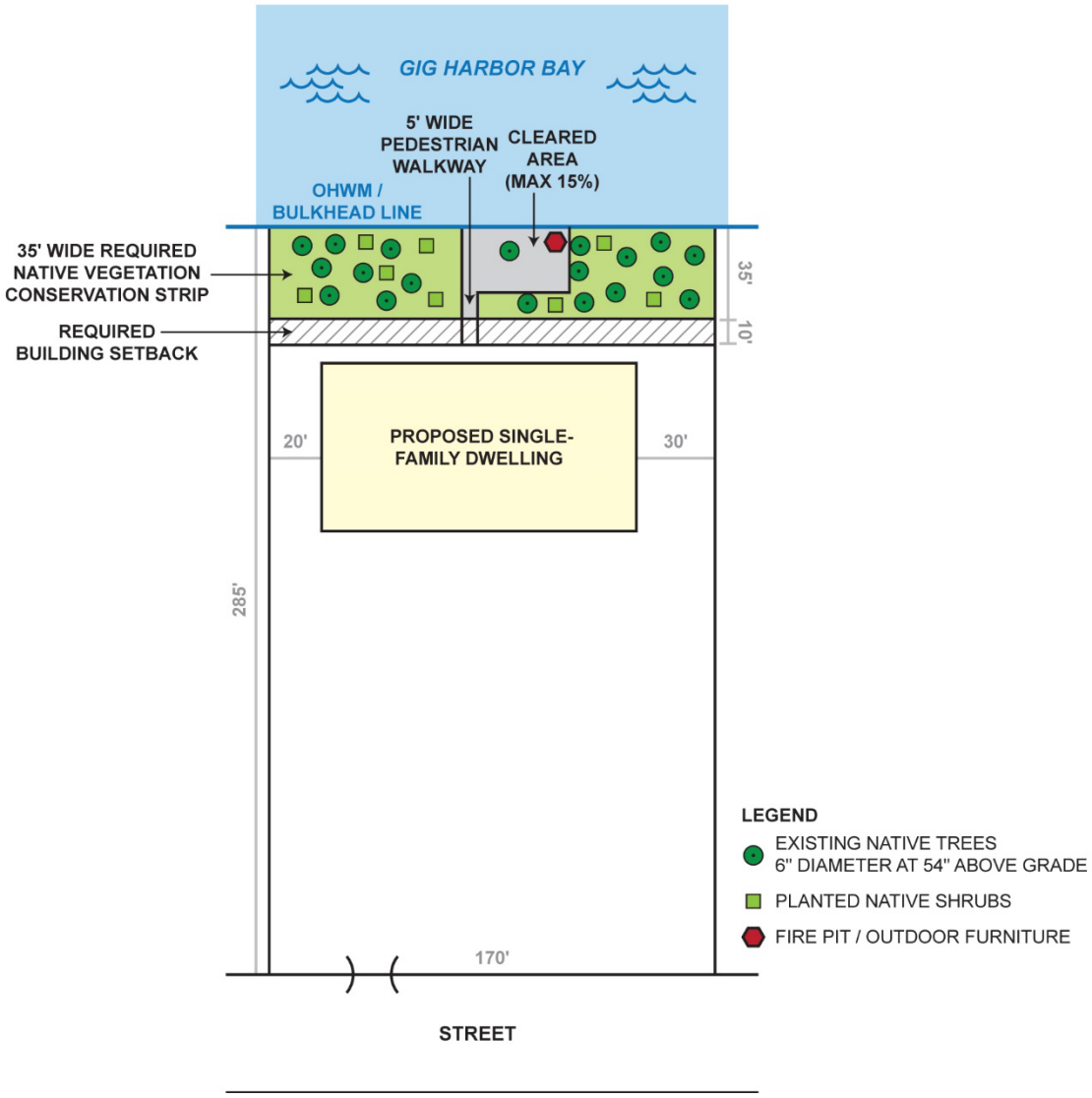
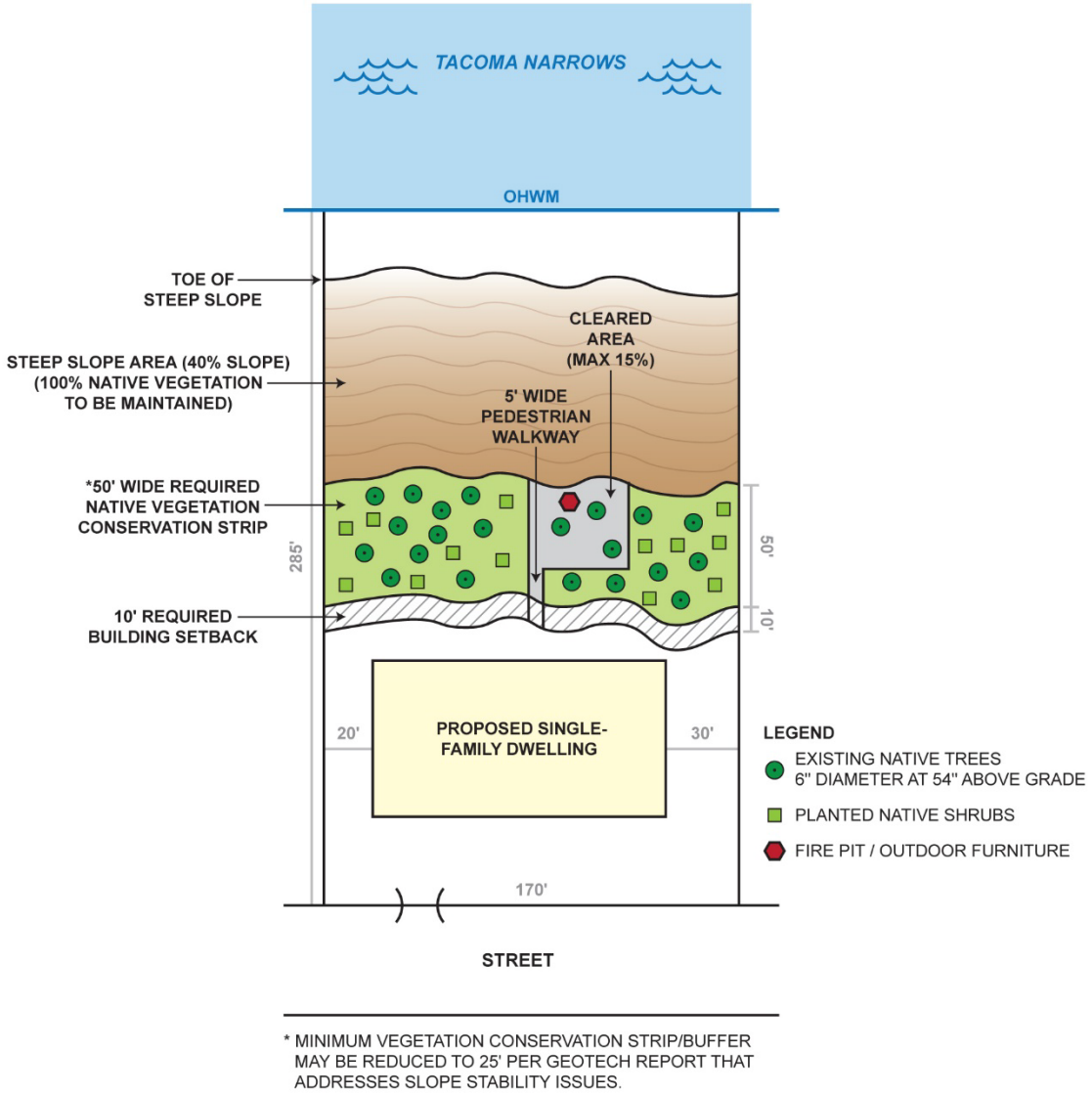


Figure 6-7. Minimally Disturbed Areas (Example in Low Intensity SED with top-of-bluff measurement)



In extensively disturbed areas, when re-vegetation of the required vegetation conservation strip area is required, the vegetation conservation strip or critical area buffer shall be planted to meet the following standards:

At the time of planting, deciduous trees shall be a least two (2) inches in caliper as measured one (1) foot above grade, and coniferous trees must be at least five (5) feet in height. A minimum of three (3) trees per 100 linear feet of shoreline frontage shall be required, with portions of a tree rounded up to the next required tree. The

required trees may be grouped within the required vegetation conservation strip or critical area buffer to preserve views of the shoreline.

At the time of planting, shrubs must be at least eighteen (18) inches high. Shrubs should be planted such that within two years the shrubs will cover at least sixty percent (60%) of the area that would be covered when the shrubs have attained mature size. In instances where no hard armoring retains the site's shoreline frontage, log and rock placement, shoreline plantings and beach coves may be used in the landscape plan consistent with the requirements of Section 7.9 Shoreline Stabilization. Other types of vegetation, including ornamentals, may be used to supplement the native plantings if a greater coverage is desired.

A maximum of thirty percent (30%) of the required vegetation conservation strip or critical area buffer may be maintained as a view preservation corridor oriented perpendicular to the site's shoreline frontage. The permitted view preservation corridor may be divided into one or more corridors. Within the view preservation corridor, existing native trees greater than 6-inches in diameter at 54-inches above grade shall be retained. A minimum ten (10) foot wide planting area measured landward from the site's OHWM shall be planted with shrubs per the requirements of subsection 6.7.2.4.b above and existing native trees greater than 6 inches in diameter at 54-inches above grade shall be retained. Within the required vegetation conservation strip or critical area buffer, trees determined by a certified arborist to be hazardous or diseased may be removed upon approval by the City. Removal of trees greater than six-inches in diameter at 54 inches above grade shall be replaced at a 2:1 ratio with deciduous trees of a minimum two-inch caliper as measured one (1) foot above grade or evergreen trees a minimum of five-feet in height. Lawn grass, pervious surfaces which provide opportunities for outdoor furniture arrangements, fire-pits, and annual gardens are allowed within the view preservation corridor. See Figure 6-8 for illustrative purposes.

In the Natural, Urban Conservancy and Low Intensity Shoreline Environmental Designations, where the vegetation conservation strip and building setbacks for marine shorelines are measured from the "top-of-bluff" pursuant to the requirements of Section 6.2.3.2, Table 6-1, the minimum vegetation conservation strip or buffer may be reduced to a minimum width of twenty-five (25) feet provided the project proponent demonstrates to the Administrator through a Geotechnical Report prepared by a licensed engineer that such a planting area will not adversely impact the stability of adjacent steep slope areas. Structures are not allowed within the reduced vegetation conservation strip or buffer area, per requirements of Section 6.2.3 and other provisions of the Master Program. Native plantings shall be installed within the twenty-five-foot wide vegetation conservation strip area with a minimum of three trees provided for every 100 linear feet of shoreline frontage, with portions of a tree rounded up to the next required tree.

Shrubs must be at least eighteen (18) inches high, and planted such that within two years the shrubs will cover at least sixty percent (60%) of the area that would be covered when the shrubs have attained mature size. 100 percent of the native vegetation within adjacent steep slope areas shall be retained, except as necessary to provide for private and public access to the shoreline as set forth in subsection 6.2.4.8 below. See Figure 6-9 for illustrative purposes.

Figure 6-8. Extensively Disturbed Areas (Example in Low Intensity SED)

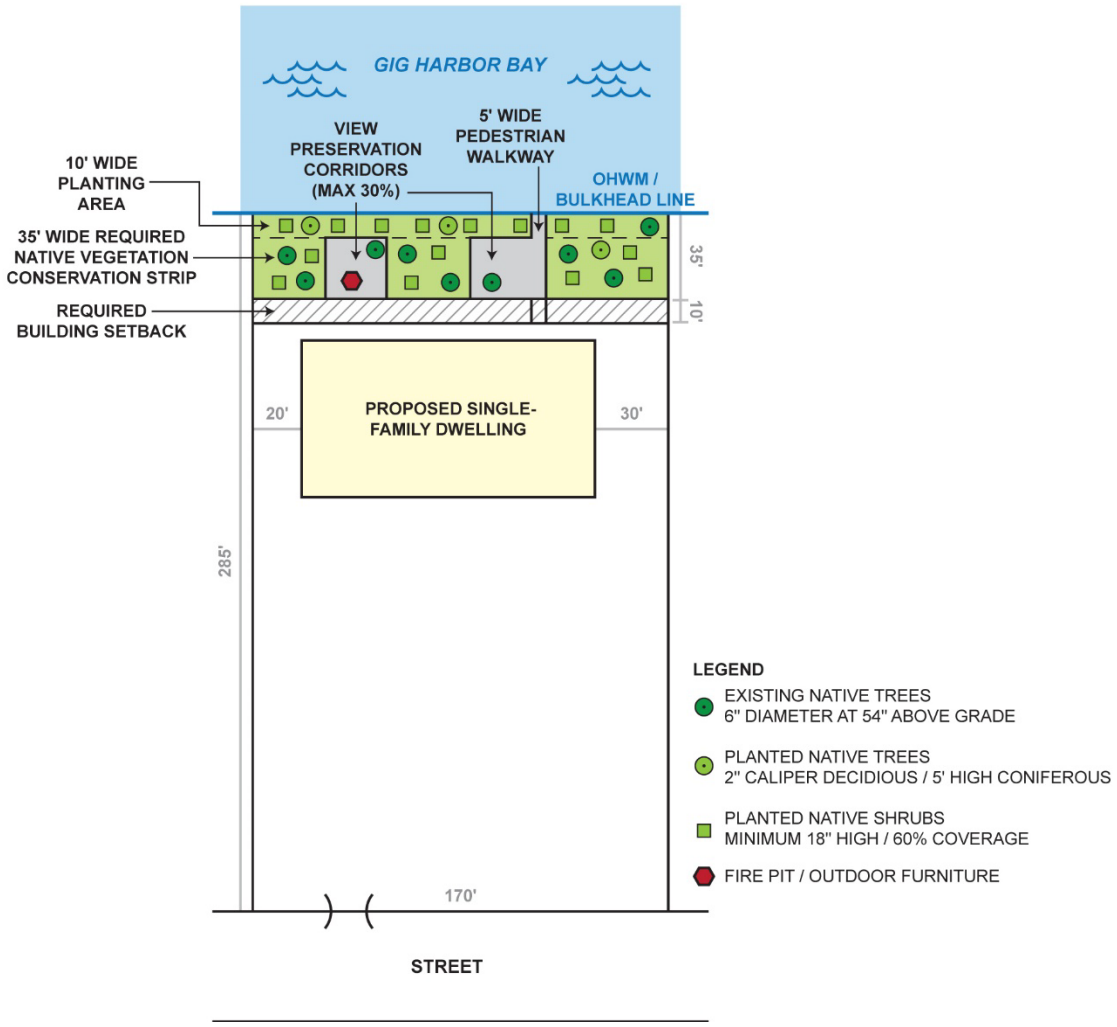
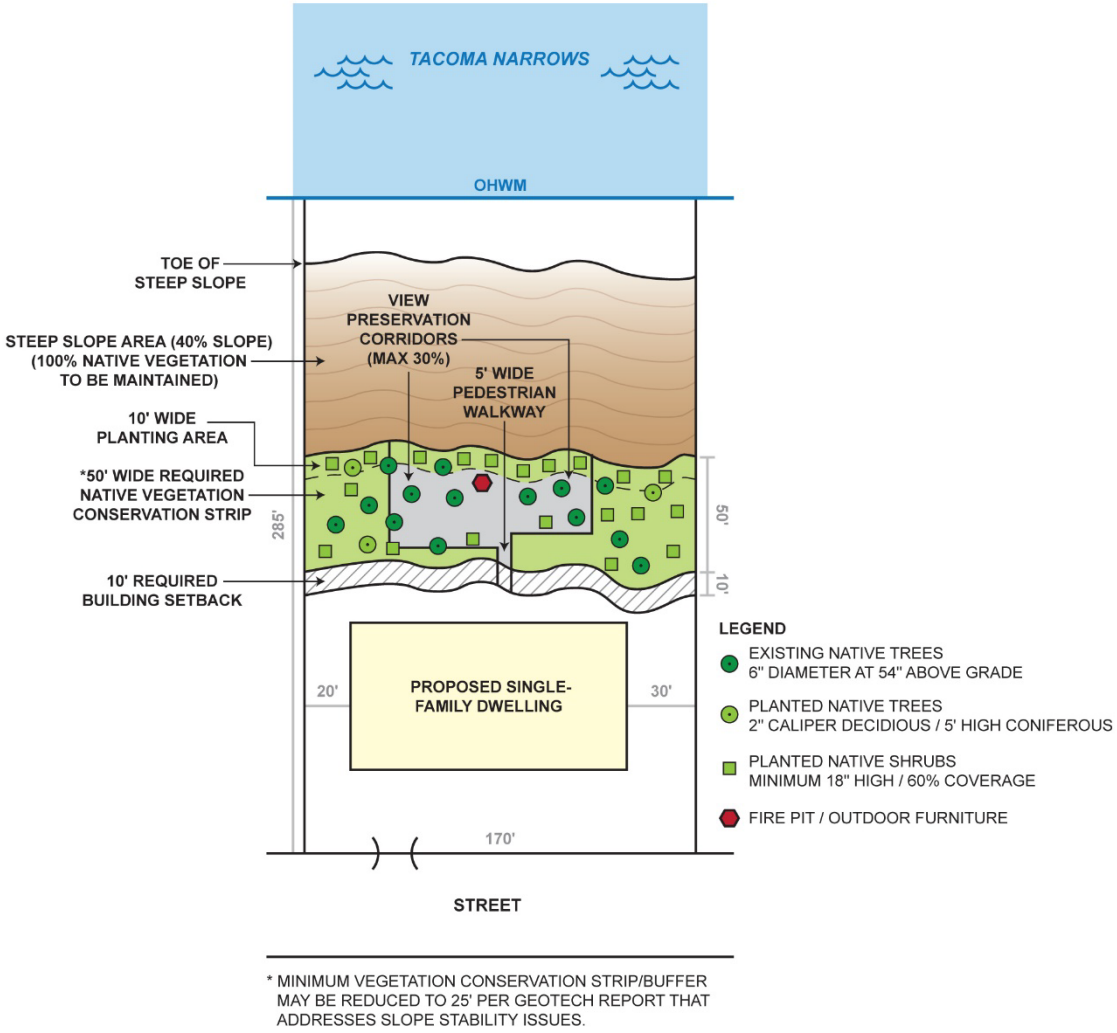


Figure 6-9. Extensively Disturbed Areas (Example in Low Intensity SED with top-of-bluff measurement)



For a period of two (2) years after initial planting, the property owner shall replace any unhealthy or dead vegetation planted as part of an approved landscape plan for the required vegetation conservation strip or critical area buffer.

When restoring or enhancing shoreline vegetation within the required marine vegetation conservation strip or critical area buffer, proponents shall use plant species native to western Washington and of a similar diversity and type to that occurring in the general vicinity of the site prior to any shoreline alteration. The Washington Native Plant Society Native Plants for Western Washington Gardens and Restoration Projects tree, shrub and plant list, *or other certified listings,* shall serve as a guide for shoreline restoration and enhancement projects.

Private pedestrian walkways and related beach access structures, and required public access walkways and related beach access structures, that are a maximum of five (5) feet in width may bisect the required vegetation conservation strip or critical area buffer to provide access from the uplands of a site to the shoreline frontage of the site, including the beach. One private pedestrian walkway and/or beach access structure that is a maximum of five (5) feet in width may be installed within the required vegetation conservation strip or critical area buffer to provide access to the beach. The area required for private pedestrian walkways and related beach access structures shall be applied to the maximum 15% clearing allowed within the marine vegetation conservation strip or critical area buffer as set forth in subsection 6.2.4.4 above. If public access is required pursuant to Section 6.5-Public Access, pedestrian walkways shall be setback a minimum of 10 feet from and oriented parallel to the site's OHWM. The area devoted to public access walkways and related public beach access structures that are required pursuant to Section 6.5-Public Access, shall not be applied to the maximum 15% clearing allowance.

Public art consistent with Section 7.22 of this Program may be located in the required vegetation conservation strip or critical area buffer. The area required for installation of the public art shall be applied to the maximum 15% clearing allowed for the marine vegetation conservation strip or critical area buffer as set forth in Subsection 6.2.4.4 above.

Should a development create unavoidable impacts adverse to native shoreline vegetation located within the required marine vegetation conservation strip, mitigation shall be required. Mitigation shall ensure that there will be no net loss in the amount of vegetated area or the ecological functions performed by the disturbed vegetation. The Administrator shall rely on the Gig Harbor Shoreline Inventory and Characterization Report as a general guide for restoring ecological functions. Pursuant to Section 6.2.2 Regulation #3, on-site and in-kind mitigation is preferred. Mitigation plans shall be completed before initiation of other permitted activities unless a phased or concurrent schedule that assures completion prior to building occupancy has been approved by the Administrator.

Should a development create unavoidable impacts adverse to native shoreline vegetation located within the required critical area buffer, mitigation shall be required. Mitigation shall ensure that there will be no net loss in the amount of vegetated area or the ecological functions performed by the disturbed vegetation. The Administrator shall rely on the applicant's critical areas report to provide specific description of the ecological functions, while also relying on the Gig Harbor Shoreline Inventory and Characterization Report as a general guide. Pursuant to Section 6.2.2 Regulation #3, on-site and in-kind mitigation is preferred. Mitigation plans shall be completed before initiation of other permitted activities unless a

phased or concurrent schedule that assures completion prior to building occupancy has been approved by the Administrator.

In addition to the requirements set forth above for marine vegetation conservation strips and critical area buffers, properties that are located in the Low Intensity Shoreline Environment Designation in Gig Harbor Bay (UGA) and Colvos Passage shall retain trees that are 12 inches or more in diameter outside of required marine vegetation conservation strip areas or critical area buffers. Trees determined by a certified arborist to be hazardous or diseased may be removed upon approval by the City. If healthy or non-hazardous trees are removed, each removed tree must be replaced with at least three (3) six-foot trees or one (1) 18-foot tree or one (1) 12-foot plus one (1) six-foot tree of the same species or equivalent native tree species . Ten percent of the replaced trees must be located within the required vegetation conservation area.

All feasible techniques to maximize retention of existing native shoreline vegetation shall be used while allowing for shoreline views. Techniques shall include selective pruning, windowing and other measures that preserve native plant composition and structure. Limbing and crown thinning may be appropriate if sufficient crown is retained to preserve the trees fullness, health, and function. Tree topping is prohibited.

The owner of any property containing an ecological restoration project approved in conjunction with a development proposal, or as an independent project, shall file for record with the Pierce County Auditor a notice approved by the Administrator in a form substantially as set forth below. Such notice shall provide notice in the public record of the presence of an ecological restoration project on the subject property, the application of the City's Shoreline Master Program to the property, and that limitations on actions in or affecting such ecological restoration project may exist. The notice shall be notarized and shall be recorded prior to approval of any development proposal for such site. The notice shall run with the land and shall be in the following form:

Ecological Restoration Project:

Legal Description:

_____

_____

_____

Present Owner: _____

NOTICE: This property contains an ecological restoration project as identified on the attached project plans. Restrictions exist on the use or alteration of the ecological restoration project. Contact the City of Gig Harbor Planning Department for additional information on the restrictions prior to commencing any activity within this area.

_____ _____
Date Signature Owner

6.2.5 Regulations - Critical Areas

A. Applicability

1) The shoreline critical area regulations set forth in this subsection apply to all lands regulated under the City's Shoreline Master Program and the State Shoreline Management Act. All areas outside of the shoreline jurisdiction are regulated pursuant to GHMC Chapter 18.08. All development proposals in shoreline critical areas, whether on public or private property, shall comply with the requirements of this section. The Administrator or his/her designee shall utilize the procedures and rules established in the City of Gig Harbor environmental policy ordinance, GHMC Chapter 18.04 Environmental Review (SEPA), and the applicable provisions of GHMC Title 19, Administration of Development Regulations to implement the provisions of this section. Development proposals include any development project which would require any of the following:

   a) Building permit for any construction;

   b) Clearing and grading permit;

   c) Any shoreline management permit as authorized under Chapter 90.58 RCW and this master program;

   d) Site plan review;

   e) Subdivision, short subdivision or planned unit development; or

   f) Zoning variance or conditional use permit.

2) Special Studies Required. When an applicant submits an application for any development proposal, the application shall indicate whether any critical area is located on the site. The Administrator shall visit the site, and in conjunction with the review of the information provided by the applicant and any other suitable information, shall make a determination as to whether or not sufficient

information is available to evaluate the proposal. If it is determined that the information presented is not sufficient to adequately evaluate a proposal, the Administrator shall notify the applicant that additional studies as specified herein shall be provided. Land that is regulated by critical areas and/or buffers shall not be subdivided to create parcels that would only be buildable through a shoreline variance process.

6.2.5.1 Notice and Title

1. Notice. Upon submission of a complete application for a development approval, notice shall be provided in accordance with the city zoning code for site plan review for notification of property owners within 300 feet of the subject property in accordance with the requirements of GHMC Section 19.03.001 and/or GHMC Section 18.04.160 as required..

2. Notice on Title. The owner of any property with field-verified presence of critical areas and/or critical area buffers on which a development proposal is submitted shall file for record with the Pierce County Auditor a notice approved by the department in a form substantially as set forth below. Such notice shall provide notice in the public record of the presence of a critical area or critical area buffer, the application of this chapter to the property, and that limitations on actions in or affecting such critical areas and their buffers may exist. The notice shall be notarized and shall be recorded prior to approval of any development proposal for such site. The notice shall run with the land and shall be in the following form:

CRITICAL AREA AND/OR CRITICAL AREA BUFFER NOTICE

Legal Description:

_____

_____

_____

Present Owner:_____

NOTICE: This property contains critical areas or their buffers as defined by Gig Harbor Municipal Code Chapter 18.08. Restrictions on use or alteration of the critical areas or their buffers may exist due to natural conditions of the property and resulting regulations.

_____ _____

Date Signature Owner

6.2.5.2 Maintenance of Existing Structures and Developments

1) The requirements of Chapter 8, Section 8.11, Nonconforming Uses and Structures, shall apply.

6.2.5.3 Mitigation Conservation Easement

1) If mitigation is performed on-site and/or off-site, a conservation easement, deed restriction or other legal document must be provided to the City that:

   a) Ensures that the party responsible for the maintenance and monitoring of the mitigation has access and the right to perform these activities; and

   b) Permanently protects the critical area functions and values in perpetuity.

6.2.5.4 Critical Area Buffer Activity Allowance

1) Public access pursuant to subsection 6.2.4, and water-dependent activities or development pursuant to subsection 6.2.5 are allowed within the regulated vegetation conservation strip and are also allowed in the regulated critical area buffer provided the mitigation sequence has been followed and any remaining impacts have been mitigated to ensure there is no net loss of shoreline ecological functions.

2) Public art, consistent with Section 7.22 and subsection 6.2.4, is allowed within the regulated vegetation conservation strip and the regulated critical area buffer provided the mitigation sequence has been followed and any remaining impacts have been mitigated to ensure there is no net loss of shoreline ecological functions. Encroachment into a Category I wetland buffer must be consistent with 6.2.5.14.2.

6.2.5.5 Variance from Critical Area Regulations

1) A variance may be granted to provide relief from the requirements of Section 6.2.5. 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 circumstances relating to the physical character or configuration of property such that the strict implementation of this Master Program will impose unnecessary hardships on the applicant or prevent the implementation of the policies set forth in RCW 90.58.020. An application for a variance shall be reviewed in accordance with the variance criteria set forth in

WAC 173-27-170 and Section 8.2.5.E, and as a Type III application under the permitting procedures of GHMC Title 19. The burden of proof is upon the applicant to demonstrate consistency with the variance criteria set forth in WAC 173-27-170 and Section 8.2.5.E.

6.2.5.6 Wetlands – Designation and Mapping

1) Pursuant to WAC 197-11-908, the City designates wetlands as critical areas defined in Chapter 2 of this Master Program.

2) The approximate location and extent of critical areas are shown on the City's critical area map. These maps are to be used as a guide and may be updated as new critical areas are identified. They are a reference and do not provide final critical area designations. Mapping sources include:

   a) Areas designated on the National Wetland Inventory maps;

   b) Areas which have been designated as wetlands on the Pierce County wetland atlas.

6.2.5.7 Wetlands – Delineation Guidelines/Ratings

1) Wetland rating and classification shall be established based upon the completion of a delineation report to determine boundary, size, function and value.

2) Wetland delineation shall be conducted by a qualified wetland specialist using the guidelines found in the most recent version of the approved federal wetland delineation manual and applicable regional supplements.

3) Wetland Ratings. Wetlands shall be rated according to the Washington State Department of Ecology wetland rating system found in the most recent version of Washington State Wetland Rating System for Western Washington. This document contains the definitions and methods for determining if the criteria below are met.

   a) Wetland Rating Categories.

   i) Category I. Category I wetlands are: (1) relatively undisturbed estuarine wetlands larger than 1 acre; (2) wetlands of high conservation value that are identified by scientists of the Washington Natural Heritage Program/DNR; (3) bogs; (4) mature and old-growth forested wetlands larger than 1 acre; (5) wetlands in coastal lagoons; (6) interdunal wetlands that score 8 or 9 habitat

points and are larger than 1 acre; and (7) wetlands that perform many functions well (scoring 23 points or more). These wetlands: (1) represent unique or rare wetland types; (2) are more sensitive to disturbance than most wetlands; (3) are relatively undisturbed and contain ecological attributes that are impossible to replace within a human lifetime; or (4) provide a high level of functions.

ii) Category II. Category II wetlands are: (1) estuarine wetlands smaller than 1 acre, or disturbed estuarine wetlands larger than 1 acre; (2) interdunal wetlands larger than 1 acre or those found in a mosaic of wetlands; or (3) wetlands with a moderately high level of functions (scoring between 20 and 22 points).

iii) Category III. Category III wetlands are: (1) wetlands with a moderate level of functions (scoring between 16 and 19 points); (2) can often be adequately replaced with a well-planned mitigation project; and (3) interdunal wetlands between 0.1 and 1 acre. Wetlands scoring between 16 and 19 points generally have been disturbed in some ways and are often less diverse or more isolated from other natural resources in the landscape than Category II wetlands.

iv) Category IV. Category IV wetlands have the lowest levels of functions (scoring fewer than 16 points) and are often heavily disturbed. These are wetlands that we should be able to replace, or in some cases to improve. However, experience has shown that replacement cannot be guaranteed in any specific case. These wetlands may provide some important functions, and should be protected to some degree.

6.2.5.8 Wetlands – Regulated Activities

1) The following activities in a wetland and/or its associated buffer shall be regulated pursuant to the requirements of Section 6.2.5. The regulated activities are as follows:

   a) Removing, excavating, disturbing or dredging soil, sand, gravel, minerals, organic matter or materials of any kind;

   b) Dumping, discharging or filling with any material;

   c) Draining, flooding or disturbing the water level or water table;

   d) Constructing, reconstructing, demolishing or altering the size of any structure or infrastructure, except repair of an existing structure or infrastructure, where the existing square footage or foundation footprint is not altered;

e) Destroying or altering vegetation through clearing, harvesting, cutting, intentional burning, shading or planting vegetation that would alter the character of a wetland;

f) Activities from construction or development that result in significant, adverse changes in water temperature, physical or chemical characteristics of wetland water sources, including quantity and pollutants.

2) Activities listed in Section 6.2.5.3 Regulation #1 which do not result in alteration in a wetland and/or its associated buffer may require fencing along the outside perimeter of the buffer or erosion control measures.

6.2.5.9 Wetlands – Permitting Process

1) Overview. Inquiries regarding conduct of a regulated activity in a wetland can be made to the Administrator. The Administrator shall utilize the National Wetlands Inventory (NWI) maps and the Pierce County wetland atlas to establish general location of wetland sites. If the maps indicate the presence of a wetland, a wetland delineation report shall be filed, unless the Administrator determines that a wetland is not on or within the site. This determination may be based on information provided by the applicant and from other sources. If the map does not indicate the presence of a wetland or wetland buffer zone within the site, but there are other indications that a wetland may be present, the Administrator shall determine whether a wetland analysis report is required.

2) Permit Requirements. No separate application or permit is required to conduct regulated activities within a wetland or its associated buffer. Review of regulated activities within a wetland and buffers is subject to the permit processing procedure for the required permit type as defined under GHMC Title 19. The Administrator shall utilize existing environmental review procedures, the City SEPA ordinance, Chapter 18.04 GHMC, to assess impacts to wetlands and impose required mitigation. The Administrator's review of proposed alterations to wetlands and buffer areas and a wetland mitigation plan may be required prior to issuance of a SEPA determination by the City's responsible official.

3) Prior to submittal of a wetland delineation report, recommendation on wetland category, proposed alterations to wetlands and buffer areas, or wetland mitigation plan, the applicant may request a pre-application conference in accordance with the procedures established in GHMC 19.02.001 Optional preapplication conference.

4) Request for Official Determination. A request for an official determination of whether a proposed use or activity at a site is subject to Chapter 6, Section 6.2.5 must be in writing and made to the Administrator. The request can be accompanied by a SEPA environmental checklist. The request shall contain plans, data and other information in sufficient detail to allow for determination, including a wetland delineation report. The applicant shall be responsible for providing plans and the wetland delineation report to the Administrator.

5) A wetland analysis report shall be submitted to the Administrator for review of a proposal for activity which lies within a wetland, or within 300 feet of a wetland. The purpose of the wetland analysis report is to determine the extent and function of wetlands to be impacted by the proposal.

6) Preliminary Site Inspection. Prior to conducting a wetland analysis report, the applicant may request that the Administrator conduct a preliminary site inspection to determine if a wetland may be present on the proposal site. Upon receipt of the appropriate fee, the Administrator shall make a site inspection. If the Administrator determines that a wetland is not on the site, this shall be indicated to the applicant in writing, and a wetland analysis report shall not be required.

7) Prior to submittal of the wetland analysis report or the development of a lot which has a classified wetland, boundaries of wetlands shall be staked and flagged in the field by a qualified wetland specialist and surveyed by a licensed professional surveyor registered in the state. Field flagging shall be distinguishable from other survey flagging on the site.

8) If alteration of a wetland or buffer is proposed, a wetland mitigation plan shall be submitted pursuant to requirements of this chapter, subsequent to staff review of the wetland analysis report. In no event will a wetland mitigation plan be required prior to a determination of whether a designated wetland is present on a site.

6.2.5.10 Wetlands – Administration

1) Filing Fees. A wetland regulatory processing fee in an amount established under the City's development fee ordinance, GHMC Title 3 Revenue and Finance, shall be paid at the time of a request for official determination of whether a proposed use or activity at a site is subject to Chapter 6, Section 6.2.5. The fee shall be paid prior to administrative review, including environmental review. It shall include all costs of administrative and environmental review, including the preliminary site inspection, and review

and approval of a wetland analysis report. It shall be in addition to any other fees for environmental assessment and environmental impact review, provided by the City environmental policy ordinance, GHMC Chapter 18.04.

2) Other Laws and Regulations. No approval granted pursuant to Chapter 6, Section 6.2.5 shall remove an obligation to comply with the applicable provisions of any other federal, state or local law or regulation.

3) Atlas. As part of its review, the Administrator shall include the appropriately designated wetland in the Pierce County wetlands atlas or in the City wetland atlas, as may be adopted.

6.2.5.11 Wetlands – Analysis Report Requirements

1) A wetland analysis report shall be prepared by a qualified wetland specialist and submitted to the Administrator. A wetlands analysis report is required with all annexation petitions and land use applications for properties which do not have wetlands mapped and classified per the City of Gig Harbor wetlands map.

2) If development is proposed within an area of special flood hazard, the analysis report must include the elevations of the 10-, 50-, and 100-year floods, where such data are available, consistent with the requirements of GHMC Chapter 18.10, the city's Flood Hazard Construction Standards ordinance.

3) The wetland analysis report shall be prepared in accordance with the methods outlined in Ecology Publication #10-06-002 *Wetlands and CAO Updates-Guidance for Small Cities* (Western Washington) or a more recent version, and submitted to the Administrator for review for any proposals that are within 300 feet of a wetland.

4) After review of the wetland analysis report and other information by the department, the Administrator shall determine the appropriate wetland category, buffering requirement, and required mitigation. The report shall be accorded substantial weight and the Administrator shall approve the report's findings and approvals, unless specific, written reasons are provided which justify not doing so. Once accepted, the report shall control future decision-making related to designated wetlands unless new information is found demonstrating the report is in error.

6.2.5.12 Wetlands – Buffer Areas

1) Following the Administrator's determination of the category for a wetland associated with a proposal, the Administrator shall determine appropriate buffer

widths. Wetland buffer zones shall be evaluated for all development proposals and activities adjacent to wetlands to determine their need to protect the integrity, functions and values of the wetland. Wetland buffer widths are determined by the category of wetland, the intensity of impacts of a land use and the functions or special characteristics of the wetland that need to be protected as determined by the rating system. All wetland buffer zones are measured perpendicular from the wetland boundary as surveyed in the field. Except as otherwise permitted by Section 6.2.5, wetland buffers shall consist of a relatively intact native vegetation community adequate to protect the wetland functions and values at the time of proposed activity. If the vegetation is inadequate then the buffer width shall be planted to maintain the buffer width.

2) Impact of Land Use. Different uses of land can result in a high, moderate or low level of impact to adjacent wetlands. Types of land use are categorized into impact levels as shown in Table 6-2.

Table 6-2. Land Use Types and Associated Levels of Impact

Level of Impact from Land Use	***Types of Land Uses Based on Common Use Categories***
High	Residential uses (greater than one unit per acre); schools; churches; public facilities, public/private services and government administrative uses (excluding parks, rights-of-way and utilities); lodging uses; personal, professional, product and automotive services; health care services; commercial and sales uses; animal clinics and kennels; marine-related uses; industrial uses; restaurant uses; museum, club and recreation hall uses; high-intensity parks, outdoor and indoor recreation (golf courses, ball fields, tennis clubs, swimming pools, etc.); conversion to high-intensity agriculture (dairies, nurseries, greenhouses, growing and harvesting crops requiring annual tilling and raising and maintaining animals, etc.); hobby farms.
Moderate	Residential uses (less than one unit per acre); moderate-intensity parks and outdoor recreation (parks with biking, jogging, etc.); conversion to moderate-intensity agriculture (orchards, hay fields, etc.) and paved trails; building of logging roads; utility corridor or right-of-way shared by several utilities and including access/maintenance road.
Low	Forestry (cutting of trees only); low-intensity parks and open space (hiking, bird-watching, preservation of natural resources, etc.) and unpaved trails; utility corridor without a maintenance road and little or no vegetation management.

3) If a wetland meets more than one of the wetland characteristics listed in the tables in subsection 6 of this section, the buffer width required to protect the wetland is the widest buffer width.

4) Category I Wetlands. The following buffer widths for Category I wetlands per Table 6-3 are required:

Table 6-3. Category I Wetland Buffers

Wetland Characteristics	*Buffer Widths by Impact of Land Use*	*Other Protection Measures Required*
Natural Heritage Wetlands	Low – 125 feet Moderate – 190 feet High – 250 feet	No additional surface discharges to wetland or its tributaries No septic systems within 300 feet of wetland Restore degraded parts of buffer
Bogs	Low – 125 feet Moderate – 190 feet High – 250 feet	No additional surface discharges to wetland or its tributaries Restore degraded parts of buffer
Forested	Buffer width to be based on score for habitat functions or water quality functions	If forested wetland scores high for habitat, need to maintain connections to other habitat areas Restore degraded parts of buffer
Estuarine	Low – 100 feet Moderate – 150 feet High – 200 feet	None required
Wetlands in coastal lagoons	Low – 100 feet Moderate – 150 feet High – 200 feet	None required
High level of function for habitat (score for habitat 8-9 points)	Low – 150 feet Moderate – 225 feet High – 300 feet	Maintain connections to other habitat areas Restore degraded parts of buffer

Wetland Characteristics	*Buffer Widths by Impact of Land Use*	*Other Protection Measures Required*
Moderate level of function for habitat (score for habitat 6-7 points)	Low – 75 feet Moderate – 110 feet High – 150 feet	None required
High level of function for water quality improvement (8-9 points) and low for habitat (3-5 points)	Low – 50 feet Moderate – 75 feet High – 100 feet	No additional surface discharges of untreated runoff
Not meeting any of the above characteristics	Low – 50 feet Moderate – 75 feet High – 100 feet	N/A

*A 15-foot building setback shall be provided from the land ward edge of all regulated category 1-4 critical area buffers to the "building line" as defined in Chapter 2 of this master program.

5) Category II Wetlands. The following buffer widths for Category II wetlands per Table 6-4 are required:

Table 6-4. Category II Wetland Buffers

Wetland Characteristics	*Buffer Widths by Impact of Land Use*	*Other Protection Measures Required*
High level of function for habitat (score for habitat 8-9 points)	Low – 150 feet Moderate – 225 feet High – 300 feet	Maintain connections to other habitat areas
Moderate level of function for habitat (score for habitat 6-7 points)	Low – 75 feet Moderate – 110 feet High – 150 feet	None required
High level of function for water quality improvement and low for habitat (score for water quality 8-9 points; habitat less than 3-5 points)	Low – 50 feet Moderate – 75 feet High – 100 feet	No additional surface discharges of untreated runoff

Wetland Characteristics	*Buffer Widths by Impact of Land Use*	*Other Protection Measures Required*
Estuarine	Low – 75 feet Moderate – 110 feet High – 150 feet	None required
Interdunal	Low – 75 feet Moderate – 110 feet High – 150 feet	None required
Not meeting above characteristics	Low – 50 feet Moderate – 75 feet High – 100 feet	None required

*A 15-foot building setback shall be provided from the land ward edge of all regulated category 1-4 critical area buffers to the "building line" as defined in Chapter 2 of this master program.

6) Category III Wetlands. The following buffer widths for Category III wetlands per Table 6-5 are required:

Table 6-5. Category III Wetland Buffers

Wetland Characteristics	*Buffer Widths by Impact of Land Use*	*Other Protection Measures Required*
Moderate to high level of function for habitat (score for habitat 6-7 points) Note: If wetland scores 8-9 habitat points, use Table 6-4 for Category II buffers.	Low – 75 feet Moderate – 110 feet High – 150 feet	None required
Not meeting above characteristic	Low – 40 feet Moderate – 60 feet High – 80 feet	None required

*A 15-foot building setback shall be provided from the land ward edge of all regulated category 1-4 critical area buffers to the "building line" as defined in Chapter 2 of this master program.

7) Category IV Wetlands. The following buffer widths for Category IV wetlands per Table 6-6 are required:

Table 6-6. Category IV Wetland Buffers

Wetland Characteristics	*Buffer Widths by Impact of Land Use*	*Other Protection Measures Required*
Score for all three basic functions is 9-15 points	Low – 25 feet Moderate – 40 feet High – 50 feet	None required

*A 15-foot building setback shall be provided from the land ward edge of all regulated category 1-4 critical area buffers to the "building line" as defined in Chapter 2 of this master program.

8) Where a legally established developed roadway transects a wetland buffer, the director may approve a modification of the minimum required buffer width to the edge of the roadway if the part of the buffer on the other side of the road does not provide any buffer functions to protect the wetland in question.

9) Where a legally established bulkhead transects a wetland buffer, the Administrator may approve a modification of the minimum required buffer width as long as the biologic, hydrologic and water quality functions of the wetland are protected. This modification would be evaluated on a case-by-case basis and rely upon a sensitive areas study provided by a qualified biologist where it can be demonstrated that an equal or greater protection of the wetland would occur. Measures may include bioengineering of shoreline protection, revegetation with native species, or other shoreline or buffer enhancement measures.

6.2.5.13 Wetlands – Alteration of Buffers

1) Wetland Buffer Width Averaging. Buffer width averaging to improve wetland function shall be considered on a case-by-case basis when the proposed averaging is in accordance with an approved wetland mitigation plan and best available science. Averaging of buffer widths may only be allowed where a qualified wetland specialist demonstrates that:

   a) It will not reduce wetland functions or values;

b) The wetland contains variations in sensitivity due to existing physical characteristics or the character of the buffer varies in slope, soils, or vegetation, and the wetland would benefit from a wider buffer in places and would not be adversely impacted by a narrower buffer in other places;

c) The buffer is increased adjacent to the higher-functioning area of habitat or more sensitive portion of the wetland and decreased adjacent to the lower-functioning or less sensitive portion;

d) The total area contained in the buffer area after averaging is no less than that which would be contained within the standard buffer; and

e) The buffer at its narrowest point is never less than either ¾ of the required width or 75 feet for a Category I and II, 50 feet for a Category III, and 25 feet for a category IV, whichever is greater.

2) Wetland Buffer Increases. The Administrator may require increased buffer widths in accordance with the recommendations of a qualified wetland specialist and the best available science on a case-by-case basis when a larger buffer is necessary to protect wetland functions and values based on site-specific characteristics. This determination shall be reasonably related to protection of the functions and values of the regulated wetland. Such determination shall demonstrate that:

a) A larger buffer is necessary to maintain viable populations of existing species; or

b) The wetland is used by species listed by the federal government or the state as endangered, threatened, sensitive or as documented priority species or habitats, or essential or outstanding potential sites such as heron rookeries or raptor nesting areas; or

c) The adjacent land is susceptible to severe erosion and erosion control measures will not effectively prevent adverse wetland impact; or

d) The adjacent land has minimum vegetative cover or slopes greater than 30 percent.

3) Buffer Mitigation Ratios: Impacts to buffers shall be mitigated at a 1:1 ratio. Compensatory buffer mitigation shall replace those buffer functions lost from development.

6.2.5.14 Wetlands – Permitted Uses in Buffer Areas

1) The following activities are permitted within the wetland buffer; provided, that no other location is feasible; the location of such facilities will not degrade the functions and values of the wetland; any impacts are mitigated through the requirements of Section 6.2.5:

   a) Wells and necessary appurtenances associated with single-family dwellings, including a pump and appropriately sized pump house, including a storage tank, may be allowed on each site in a wetland buffer if all the following conditions are met:

      i) The well is either an individual well (serving only one residence) or a Class B well (a maximum of 15 connections including necessary storage tanks);

      ii) For Category I and II wetlands, the minimum distance from the well and appurtenances to the wetland edge is not less than 75 percent of the buffer widths established in Section 6.2.5.12. A decrease in the required buffer width through buffer reduction or buffer width averaging or other means does not indicate a corresponding decreased distance is allowed from the wetland edge to the well and appurtenances;

      iii) Access to the well and pump house shall be allowed.

   b) Pervious trails and associated viewing platforms; provided, that in the case of Category I wetlands, the minimum distance from the wetland edge is not less than 75 percent of the Category I buffer width established in Section 6.2.5.12. A decrease in the required buffer width through buffer width averaging or other means does not indicate a corresponding decreased distance from a Category I wetland edge for trails and viewing platforms.

   c) The placement of underground utility lines, on-site septic drainfields meeting the requirements of the Pierce County health code.

   d) In the case of Category I and II wetland buffers, the development of new "city utility activities" as defined in Chapter 2 of this master program shall be a conditional use subject to the requirements of WAC 173-27-160 and the mitigation requirements of Section 6.2.5.

   e) In the case of Category III and IV wetland buffers only grass-lined swales and detention/retention facilities for water treated by biofiltration or other processes prior to discharge, provided the minimum distance from the

wetland edge is not less than 75 percent of the buffer widths established in Section 6.2.5.12.

f) Drilling for utilities/utility corridors under a buffer, with entrance/exit portals located completely outside the wetland buffer boundary, provided the drilling does not interrupt the ground water connection to the wetland or percolation of surface water down through the soil column. The Shoreline Administrator may require specific studies as necessary from a hydrologist to determine whether the ground water connection to the wetland or percolation of surface water down through the soil column would be affected by the drilling activity authorized under this provision.

g) Placement of access roads and utilities across Category III and IV wetland buffers, if the Administrator determines that there is no alternative location for providing access and/or utilities to a site and mitigation is provided as designated in Section 6.2.5.

h) Alterations of native shoreline vegetation and placement of outdoor furniture arrangements and fire pits in Category II wetland buffers as provided in Subsection 6.2.4.4 and 5 provided the minimum distance from the wetland edge is not less than 75 percent of the buffer widths established in Subsection 6.2.5.12. Alteration of native shoreline vegetation and placement of outdoor furniture arrangements and fire pits in Category III and IV wetland buffers provided the minimum distance from the wetland edge is not less than 25 percent of the buffer widths established in Subsection 6.2.

i) Educational and scientific research activities.

2) Public art is permitted within the wetland buffer; provided, that the location of such public art will not degrade the functions and values of the wetland, and any impacts are mitigated through the requirements of Section 6.2.5. In the case of Category I wetlands, the minimum distance from the wetland edge is not less than 75 percent of the Category I buffer width established in Section 6.2.5.12. Public art subject to this provision is permitted only when consistent with Chapter 7.22.

6.2.5.15 Wetlands – Alteration of Wetlands and Sequence of Mitigation Actions

1) Alteration of Category I wetlands is prohibited.

2) Alteration of Category II, III and IV wetlands may be allowed when all adverse impacts to wetland functions and values can be shown to be fully mitigated. Criteria to be considered by the applicant or the property owner are:

   a) Avoiding the impact altogether by not taking a certain action or parts of actions;

   b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation, by using appropriate technology, or by taking affirmative steps to avoid or reduce impacts;

   c) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;

   d) Compensating for the impact by replacing or providing substitute resources or environments.

3) Mitigation may include a combination of the above measures and may occur concurrently, unless a phased schedule is agreed.

6.2.5.16 Wetlands – Mitigation Plan Submittal Requirements

1) Following submittal of any proposed alterations to wetland and buffer areas, the applicant shall submit to the Administrator a wetland mitigation plan substantially in the following form:

   a) Conceptual Phase. A conceptual wetland mitigation plan shall be submitted to the Administrator. In cases in which environmental review is required, a threshold determination may not be made prior to the Administrator's review of the conceptual wetland mitigation plan. The conceptual wetland mitigation plan shall include:

      i) General goals of the wetland mitigation plan, including an overall goal of no net loss of wetland function and acreage, and to strive for a net resource gain in wetlands over present conditions;

      ii) A review of literature or experience to date in restoring or creating the type of wetland proposed;

      iii) Approximate site topography following construction;

      iv) Location of proposed wetland compensation area;

v) General hydrologic patterns on the site following construction;

vi) Nature of compensation, including wetland types (in-kind and out-of-kind), general plant selection and justification, approximate project sequencing and schedule, and approximate size of the new wetland buffer;

vii) A conceptual maintenance plan;

viii) Conceptual monitoring and contingency plan.

b) Detailed Phase. Following approval of the conceptual wetland mitigation plan by the Administrator, a detailed wetland mitigation plan shall be submitted to the Administrator. The detailed wetland mitigation plan shall contain, at a minimum, the following components, and shall be consistent with the standards in Section 6.2.5.15 and 6.2.5.17:

i) Text and map of the existing condition of the proposed compensation area, including:

(1) Existing vegetation community analysis;

(2) Hydrological analysis, including topography, of existing surface and significant subsurface flows into and out of the area in question;

(3) Soils analysis providing both Soil Conservation Service mapping and data provided by on-site verified determinations;

(4) Detailed description of flora and fauna existing on the site;

(5) Description of existing site conditions in relation to historic conditions for those sites which have been recently altered or degraded;

ii) Text and map of the proposed alterations to the compensation area, including:

(1) Relationship of the project to the watershed and existing water bodies;

(2) Topography of site using one-foot contour intervals;

(3) Water level data, including depth and duration of seasonally high water table;

(4) Water flow patterns;

(5) Grading, filling and excavation, including a description of imported soils;

(6) Irrigation requirements, if any;

(7) Water pollution mitigation measures during construction;

(8) Aerial coverage of planted areas to open water areas (if any open water is to be present);

(9) Appropriate buffers;

The wetland mitigation plan shall include detailed site diagrams, scaled cross-sectional drawings, topographic maps showing slope percentage and final grade elevations, and any other drawings appropriate to show construction techniques or anticipated final outcome. The wetland mitigation plan shall provide for elevations which are appropriate for the desired habitat type(s) and which provide sufficient tidal prism and circulation data;

iii) As part of the wetland mitigation plan, a landscaping plan shall be designed by a registered landscape architect or contractor working with a qualified wetland specialist, describing what will be planted where and when. The landscape plan shall include the following:

(1) Soils and substrate characteristics;

(2) Specification of substrate stockpiling techniques;

(3) Planting instructions, including species, stock type and size, density or spacing of plants, and water and nutrient requirement;

(4) Specification of where plant materials will be procured. Documentation shall be provided which guarantees plant materials are to be procured from licensed regional nurseries, or from wetlands on-site which are part of the wetland mitigation plan;

iv) A schedule shall be provided showing dates for beginning and completing the mitigation project, including a sequence of construction activities;

v) A monitoring and maintenance plan, consistent with Section 6.2.5.17. The plan shall include all the following:

(1) Specification of procedures for monitoring and site maintenance;

(2) A schedule for submitting monitoring reports to the Administrator;

vi) A contingency plan, consistent with Section 6.2.5.17;

vii) A detailed budget for implementation of the wetland mitigation plan, including monitoring, maintenance and contingency phases;

viii) A guarantee that the work will be performed as planned and approved, consistent with Section 6.2.5.17;

ix) The wetland mitigation plan shall be signed by the qualified wetland specialist to indicate that the plan is according to specifications determined by the qualified wetland specialist. A signed original wetland mitigation plan shall be submitted to the Administrator.

c) Following the approval of the detailed wetland mitigation plan by the Administrator, the plan shall be signed and notarized by the applicant and Administrator, and recorded with the Pierce County auditor.

d) Approval of the detailed wetland mitigation plan shall occur prior to the issuance of building permits or other development permits. No development activity shall occur on the site prior to approval. Required mitigation may also be required prior to issuance of permits or prior to commencing development activity. Timing of required mitigation shall be determined on a case-by-case basis.

6.2.5.17 Wetlands – Criteria for Compensatory Mitigation/Location and Timing of Compensatory Mitigation

1) The applicant shall develop a wetland mitigation plan that provides for construction, maintenance, monitoring and contingencies of the replacement wetland. In addition, the applicant and landowner shall meet the following criteria:

a) The created, rehabilitated, enhanced, or preserved wetland shall be as persistent as the wetland it replaces;

b) The applicant shall demonstrate sufficient capability to carry out the compensation project;

c) The compensation area shall be provided with permanent protection and management to avoid further development or degradation and to provide for the long-term persistence of the compensation area as designed.

2) Type and location of compensatory mitigation. Unless it is demonstrated that a higher level of ecological functioning would result from an alternative approach, compensatory mitigation for ecological functions shall be either in kind and on site, or in kind and within the same stream reach, sub-basin, or drift cell (if estuarine wetlands are impacted). Compensatory mitigation actions shall be conducted within the same sub-drainage basin and on the site of the alteration except when all of the following apply:

a) There are no reasonable opportunities on site or within the sub-drainage basin (e.g., on-site options would require elimination of high-functioning upland habitat), or opportunities on site or within the sub-drainage basin do not have a high likelihood of success based on a determination of the capacity of the site to compensate for the impacts. Considerations should include: anticipated replacement ratios for wetland mitigation, buffer conditions and proposed widths, available water to maintain anticipated hydrogeomorphic classes of wetlands when restored, proposed flood storage capacity, and potential to mitigate riparian fish and wildlife impacts (such as connectivity);

b) Off-site mitigation has a greater likelihood of providing equal or improved wetland functions than the impacted wetland; and

c) Off-site locations shall be in the same sub-drainage basin unless:

i) Established watershed goals for water quality, flood storage or conveyance, habitat, or other wetland functions have been established by the city and strongly justify location of mitigation at another site; or

ii) Credits from a state-certified wetland mitigation bank are used as compensation, and the use of credits is consistent with the terms of the bank's certification.

d) The design for the compensatory mitigation project needs to be appropriate for its location (i.e., position in the landscape). Therefore, compensatory mitigation should not result in the creation, restoration, or enhancement of an atypical wetland. An atypical wetland refers to a compensation wetland (e.g., created or enhanced) that does not match the type of existing wetland that would be found in the geomorphic setting of the site (i.e., the water source(s) and hydroperiod proposed for the mitigation site are not typical for the geomorphic setting). Likewise, it should not provide exaggerated morphology or require a berm or other engineered structures to hold back

water. For example, excavating a permanently inundated pond in an existing seasonally saturated or inundated wetland is one example of an enhancement project that could result in an atypical wetland. Another example would be excavating depressions in an existing wetland on a slope, which would require the construction of berms to hold the water.

6.2.5.18 Wetlands – Replacement Criteria

1) Where wetlands are altered, the applicant shall meet the minimum requirements of this section.

2) When it is proposed to alter or eliminate a wetland and the Administrator is considering the alteration or elimination, the applicant shall be required to replace or enhance the functions and values of the affected wetland. The wetland values will be based on an approved evaluation procedure. The recommended wetland mitigation ratios for replacement/compensation are as established in Table 6-7:

Table 6-7. Wetland Mitigation Ratios

Category and Type of Wetland	*Creation or Re-establishment*	*Rehabilitation*	*Enhancement*	*Preservation*
Category I: Bog, Natural Heritage site	Not considered possible	6:1	Case by case	10:1
Category I: Mature Forested	6:1	12:1	24:1	24:1
Category I: Based on functions	4:1	8:1	16:1	20:1
Category II	3:1	6:1	12:1	20:1
Category III	2:1	4:1	8:1	15:1
Category IV	1.5:1	3:1	6:1	10:1

3) Ratios provided are for proposed projects with on-site, in-kind replacement, or off-site as provided herein, which occurs prior to development of the site. Replacement ratio for unauthorized wetland impact requires replacement at a

ratio two times that listed for the wetland categorical type. The increased ratio is based on the uncertainty of probable success of proposed replacement, projected losses of wetland functions and values, or significant period of time between elimination and replacement of wetland. Such required increases in replacement ratios will be made by the Administrator after review of all pertinent data relating to the proposed or committed alteration.

4) The Administrator will allow the ratios to be decreased if the applicant provides findings of special studies coordinated with agencies with expertise which demonstrate to the satisfaction of the Administrator that no net loss of wetland function or value is attained under the decreased ratio.

5) In instances where the mitigation is provided in advance of project impacts, the replacement ratio may be decreased to a ratio of 1:1, if the following criteria are met:

   a) The applicant shows to the satisfaction of the Administrator that a replacement ratio of greater than 1:1 is either not feasible on-site, would be likely to result in substantial degradation of other natural features or results in an increase of wetland function and values; and

   b) The applicant submits to the Administrator a wetland mitigation plan according to the requirements of Section 6.2.5.14 and 6.2.5.15 which shows to the satisfaction of the Administrator that a net increase in wetland functions and values will result from the mitigation; and

   c) The mitigation is completed and monitored by the Administrator for three growing seasons after completion of the mitigation. After three growing seasons the Administrator shall make a determination of whether or not the mitigation has been successful.

      i) If the Administrator is satisfied that the mitigation will successfully meet the anticipated final outcome of the wetland mitigation plan, development permits may be issued and development activity on the site may begin.

      ii) If the Administrator is not satisfied that the mitigation will successfully meet the anticipated final outcome of the wetland mitigation plan, development permits shall not be issued and development activity on the site shall not begin. Modifications to the wetland mitigation plan and further monitoring may be required until the Administrator is satisfied that the mitigation will be successful.

6) In-kind compensation shall be provided except where the applicant can demonstrate to the satisfaction of the Administrator that:

   a) The wetland system is already significantly degraded and out-of-kind replacement will result in a wetland with greater functional value; or

   b) Scientific problems such as exotic vegetation and changes in watershed hydrology make implementation of in-kind compensation impossible; or

   c) Out-of-kind replacement will best meet identified regional goals (e.g., replacement of historically diminished wetland types); or

   d) Where out-of-kind replacement is accepted, greater acreage replacement ratios may be required to compensate for lost functions and values.

7) Site-specific quantifiable criteria shall be provided for evaluating whether or not the goals and objectives for the proposed compensation are being met. Such criteria include but are not limited to water quality standards, survival rates for planted vegetation, habitat diversity indices, species abundance or use patterns, hydrological standards including depths and durations of water patterns. Detailed performance standards for mitigation planning shall include the following criteria:

   a) Use only plants indigenous to Pierce County (not introduced or foreign species);

   b) Use plants appropriate to the depth of water at which they will be planted;

   c) Use plants available from local sources;

   d) Use plant species high in food and cover value for fish and wildlife;

   e) Plant mostly perennial species;

   f) Avoid committing significant areas of site to species that have questionable potential for successful establishment;

   g) Plant selection must be approved by a qualified wetland specialist;

   h) Water depth is not to exceed six and one-half feet (two meters);

   i) The grade or slope that water flows through the wetland is not to exceed six percent;

j) Slopes within the wetland basin and the buffer zone should not be steeper than 3:1 (horizontal to vertical);

k) The substrate should consist of a minimum of one foot, in depth, of clean (uncontaminated with chemicals, or solid/hazardous wastes) inorganic/organic materials;

l) Planting densities and placement of plants shall be determined by a qualified wetland specialist and shown on the design plans;

m) The wetland (excluding the buffer area) should not contain more than 60 percent open water as measured at the seasonal high water mark;

n) The planting plan must be approved by a qualified wetland specialist;

o) Stockpiling shall be confined to upland areas and contract specifications should limit stockpile durations to less than four weeks;

p) Planting instructions shall describe proper placement, diversity, and spacing of seeds, tubers, bulbs, rhizomes, sprigs, plugs, and transplanted stock;

q) Apply controlled release fertilizer at the time of planting and afterward only as plant conditions warrant (determined during the monitoring process), and only to the extent that the release would be conducted in an environmentally sound manner;

r) Install an irrigation system, if necessary, for initial establishment period;

s) Construction specifications and methods shall be approved by a qualified wetland specialist and the Administrator;

t) All mitigation shall be consistent with requirements of Chapter 18.10 GHMC and City storm drainage comprehensive plan;

u) As appropriate, and if impacts to natural wetland functions and values can be fully mitigated, capacity of the wetland to store surface water should be equal to or greater than surface water storage capacity prior to the proposed activity;

v) As appropriate, and if impacts to natural wetland functions and values can be fully mitigated, ability of the wetland to intercept surface water runoff on the site should be equal to or greater than such ability prior to the proposed activity;

w) As appropriate, and if impacts to natural wetland functions and values can be fully mitigated, the ability of the wetland to perform stormwater detention functions should be equal to or greater than such functions prior to the proposed activity.

8) Wetland mitigation shall occur according to the approved wetland mitigation plan, and shall be consistent with all provisions of this regulation.

9) On completion of construction required to mitigate for impacts to wetlands, the wetland mitigation project shall be signed off by an approved qualified wetland specialist and the City's environmental official. Signature will indicate that the construction has been completed as planned.

6.2.5.19 Wetlands – Monitoring Program and Contingency Plan

1) If the wetland mitigation plan includes compensatory mitigation, a monitoring program shall be implemented to determine the success of the compensatory mitigation project.

2) Specific criteria shall be provided for evaluating the mitigation proposal relative to the goals and objectives of the project and for beginning remedial action or contingency measures. Such criteria may include water quality standards, survival rates of planted vegetation, species abundance and diversity targets, habitat diversity indices, or other ecological, geological or hydrological criteria.

3) A contingency plan shall be established for compensation in the event that the mitigation project is inadequate or fails.

4) Requirements of the monitoring program and contingency plan are as follows:

   a) During monitoring, use scientific procedures for establishing the success or failure of the project;

   b) For vegetation determinations, permanent sampling points shall be established;

   c) Vegetative success equals: Year 1, 100% survival; Year 3, 35% aerial coverage and Year 5, 50% aerial coverage;

   d) Submit monitoring reports of the current status of the mitigation project to the Administrator. The reports are to be prepared by a qualified wetland specialist and shall include monitoring information on wildlife, vegetation,

water quality, water flow, stormwater storage and conveyance, and existing or potential degradation, and shall be produced on the following schedule:

i) At time of construction;

ii) Thirty days after planting;

iii) Early in the growing season of the first year;

iv) End of the growing season of first year;

v) Twice the second year;

vi) Annually;

e) Monitor a minimum of five (5) growing seasons, depending on the complexity of the wetland system. The time period will be determined and specified in writing prior to the implementation of the site plan;

f) If necessary, correct for failures in the mitigation project;

g) Replace dead or undesirable vegetation with appropriate plantings;

h) Repair damages caused by erosion, settling, or other geomorphological processes;

i) Redesign mitigation project (if necessary) and implement the new design;

j) Correction procedures shall be approved by a qualified wetland specialist and the City's environmental official.

6.2.5.20 Streams – Designation and Rating of Streams

1) Streams are waterbodies with a defined bed and banks and demonstrable flow of water as defined in Chapter 2. Streams are designated as environmentally critical areas.

2) Stream Classification. Streams shall be designated Type 1, Type 2, Type 3, and Type 4 according to the criteria in this subsection.

a) Type 1 streams are those streams identified as "shorelines of the state" under Chapter 90.58 RCW.

b) Type 2 streams are those streams which are:

i) Natural streams that have perennial (year-round) flow and are used by salmonid fish; or

ii) Natural streams that have intermittent flow and are used by salmonid fish.

c) Type 3 streams are those streams which are:

i) Natural streams that have perennial flow and are used by fish other than salmonids; or

ii) Natural streams that have intermittent flow and are used by fish other than salmonids.

d) Type 4 streams are those natural streams with perennial or intermittent flow that are not used by fish.

3) Ditches. Ditches are artificial drainage features created in uplands through purposeful human action, such as irrigation and drainage ditches, grass-lined swales, and canals. Purposeful creation must be demonstrated through documentation, photographs, statements and/or other evidence. Ditches are excluded from regulation as streams under this section. Artificial drainage features with documented fish usage are regulated as streams. Drainage setbacks are required as per the City's surface water manual.

6.2.5.21 Streams – Critical Areas Report

1) A stream analysis report shall be prepared by a qualified biologist and submitted to the Administrator as part of the SEPA review process established by the City of Gig Harbor environmental policy ordinance, Chapter 18.04 GHMC.

2) The stream analysis report shall be prepared in accordance with acceptable scientific method and submitted to the Administrator for review for any proposals that are within 200 feet of a stream. In addition to project impacts to species and habitat, the report shall address project impacts to water quality, water quantity, flood volume and flood velocities. If development is proposed with the area of special flood hazard, the applicant must also provide the elevations of the 10-, 50-, and 100-year floods, where such data are available, consistent with the requirements of GHMC Chapter 18.10, the city's Flood Hazard Construction Standards ordinance.

3) Within 30 days of receipt of the stream analysis report and other information, the Administrator shall determine the appropriate stream category, buffering requirement, and required mitigation. The report shall be accorded substantial weight and the Administrator shall approve the report's findings and approvals, unless specific, written reasons are provided which justify not doing so. Once accepted, the report shall control future decision-making related to designated streams unless new information is found demonstrating the report is in error.

6.2.5.22 Streams – Performance Standards – General

1) Establishment of Stream Buffers. The establishment of buffer areas shall be required for all development proposals and activities in or adjacent to streams. The purpose of the buffer shall be to protect the integrity, function, and value of the stream. Buffers shall be protected during construction by placement of a temporary barricade, on-site notice for construction crews of the presence of the stream, and implementation of appropriate erosion and sedimentation controls. Native vegetation removal or disturbance is not allowed in established buffers.

   Required buffer widths shall reflect the sensitivity of the stream or the risks associated with development and, in those circumstances permitted by these regulations, the type and intensity of human activity and site design proposed to be conducted on or near the sensitive area. Buffers or setbacks shall be measured as follows.

2) Stream Buffers.

   a) The following buffers per Table 6-8 are established for streams:

Table 6-8. Stream Buffers

Stream Type	*Buffer Width (Feet)*
Type 1	200
Type 2	100
Type 3	50
Type 4	25

b) Measurement of Stream Buffers. Stream buffers shall be measured perpendicularly from the ordinary high water mark.

c) Increased Stream Buffer Widths. The Administrator shall require increased buffer widths in accordance with the recommendations of a qualified biologist and the best available science on a case-by-case basis when a larger buffer is necessary to protect stream functions and values based on site-specific characteristics. This determination shall be based on one or more of the following criteria:

i) A larger buffer is needed to protect other critical areas;

ii) The buffer or adjacent uplands has a slope greater than 30 percent or is susceptible to erosion and standard erosion-control measures will not prevent adverse impacts to the wetland.

d) Buffer Conditions Shall Be Maintained. Except as otherwise specified or allowed in accordance with this title, stream buffers shall be retained in an undisturbed condition.

e) Degraded Buffers Shall Be Enhanced. Stream buffers vegetated with non-native species or otherwise degraded shall be enhanced with native plants, habitat features or other enhancements.

f) Buffer Uses. The following uses may be permitted within a stream buffer in accordance with the review procedures of this chapter, provided they are not prohibited by any other applicable law and they are conducted in a manner so as to minimize impacts to the buffer and adjacent stream:

i) Conservation and Restoration Activities. Conservation or restoration activities aimed at protecting the soil, water, vegetation, or wildlife;

ii) Passive Recreation. Passive recreation facilities designed in accordance with an approved critical area report, including:

(1) Walkways and trails; provided, that those pathways that are generally parallel to the perimeter of the stream shall be located in the outer 25 percent of the buffer area;

(2) Wildlife viewing structures; and

(3) Fishing access areas;

iii) Stormwater Management Facilities. Grass-lined swales and dispersal trenches may be located in the outer 25 percent of the buffer area. All

other surface water management facilities are not allowed within the buffer area.

3) Stream Crossings. Stream crossings may be allowed and may encroach on the otherwise required stream buffer if:

   a) All crossings use bridges or other construction techniques which do not disturb the stream bed or bank, except that bottomless culverts or other appropriate methods demonstrated to provide fisheries protection may be used for Type 2 or Type 3 streams if the applicant demonstrates that such methods and their implementation will pose no harm to the stream or inhibit migration of fish;

   b) All crossings are constructed during the summer low flow and are timed to avoid stream disturbance during periods when use is critical to salmonids;

   c) Crossings do not occur over salmonid spawning areas unless the City determines that no other possible crossing site exists;

   d) Bridge piers or abutments are not placed within the FEMA floodway or the ordinary high water mark;

   e) Crossings do not diminish the flood-carrying capacity of the stream;

   f) Underground utility crossings are laterally drilled and located at a depth of four feet below the maximum depth of scour for the base flood predicted by a civil engineer licensed by the state of Washington. Temporary bore pits to perform such crossings may be permitted within the stream buffer established in this title; and

   g) Crossings are minimized and serve multiple purposes and properties whenever possible; and

   h) If the stream crossing is located within a designated Special Flood Hazard Area, the crossing must meet the above requirements as well as the requirements of GHMC Chapter 18.10, the city's Flood Hazard Construction Standards ordinance.

4) Stream Relocations.

   a) Stream relocations may be allowed only for:

      i) All stream types as part of a public project for which a public agency and utility variance is granted pursuant to this title; or

ii) Type 3 or 4 streams for the purpose of enhancing resources in the stream if:

(1) Appropriate floodplain protection measures are used; and

(2) The relocation occurs on the site, except that relocation off the site may be allowed if the applicant demonstrates that any on-site relocation is impracticable, the applicant provides all necessary easements and waivers from affected property owners and the off-site location is in the same drainage sub-basin as the original stream.

b) For any relocation allowed by this section, the applicant shall demonstrate, based on information provided by a civil engineer and a qualified biologist, that:

i) The equivalent base flood storage volume and function will be maintained;

ii) There will be no adverse impact to local ground water;

iii) There will be no increase in velocity;

iv) There will be no interbasin transfer of water;

v) There will be no increase in the sediment load;

vi) Requirements set out in the mitigation plan are met;

vii) The relocation conforms to other applicable laws; and

viii) All work will be carried out under the direct supervision of a qualified biologist.

5) Stream Enhancement. Stream enhancement not associated with any other development proposal may be allowed if accomplished according to a plan for its design, implementation, maintenance and monitoring prepared by a civil engineer and a qualified biologist and carried out under the direction of a qualified biologist.

6) Minor Stream Restoration. A minor stream restoration project for fish habitat enhancement may be allowed if:

a) The project results in an increase in stream function and values;

b) The restoration is sponsored by a public agency with a mandate to do such work;

c) The restoration is not associated with mitigation of a specific development proposal;

d) The restoration is limited to removal and enhancement of riparian vegetation, placement of rock weirs, log controls, spawning gravel and other specific salmonid habitat improvements;

e) The restoration only involves the use of hand labor and light equipment; or the use of helicopters and cranes which deliver supplies to the project site; provided, that they have no contact with sensitive areas or their buffers; and

f) The restoration is performed under the direction of a qualified biologist.

7) Streambank Stabilization.

a) Bank stabilization along streams may be allowed if:

i) Bank stabilization is required to protect a legally-existing structure;

ii) No other alternative to structural stabilization is feasible, such as increasing setbacks or relocating structures;

iii) All bank stabilization measures requiring armoring utilize bioengineering per the Integrated Streambank Protection Guidelines 2003 or current Best Available Science;

iv) All bank stabilization measures are designed and implemented under the direction of a qualified engineer; and

v) Any adverse impacts to stream or buffer function are fully mitigated.

6.2.5.23 Streams – Mitigation Requirements

1) Stream Mitigation. Mitigation of adverse impacts to riparian habitat areas shall result in equivalent functions and values on a per function basis, be located as near the alteration as feasible, and be located in the same sub-drainage basin as the habitat impacted.

2) Alternative Mitigation for Stream Areas. The performance standards set forth in this subsection may be modified at the City's discretion if the applicant demonstrates that greater habitat functions, on a per function basis, can be

obtained in the affected sub-drainage basin as a result of alternative mitigation measures.

6.2.5.24 Critical Fish and Wildlife Habitat Areas

1) Critical fish and wildlife habitat areas are those areas identified as being of critical importance in the maintenance and preservation of fish, wildlife and natural vegetation. Areas which are identified or classified as fish and wildlife habitat areas subject to this section shall be subject to the requirements of this section.

2) General. Critical fish and wildlife habitat areas are identified as follows:

   a) Areas with which federal or state endangered, threatened and sensitive species of fish, wildlife and plants have a primary association and which, if altered, may reduce the likelihood that the species will maintain and reproduce over the long term;

   b) Habitats and species of local importance, including:

      i) Areas with which state-listed monitor or candidate species or federally listed candidate species have a primary association and which, if altered, may reduce the likelihood that the species will maintain and reproduce over the long term;

      ii) Special habitat areas which are infrequent in occurrence in the City of Gig Harbor and which provide specific habitats as follows:

         (1) Old-growth forests;

         (2) Snag-rich areas;

         (3) Category 2 wetland areas;

         (4) Significant stands of trees which provide roosting areas for endangered, threatened, rare or species of concern as identified by the Washington State Department of Wildlife;

   c) Commercial and public recreational shellfish areas;

   d) Kelp and eelgrass beds;

   e) Herring and smelt spawning areas;

f) Naturally occurring ponds under 20 acres and their submerged aquatic beds that provide fish or wildlife habitat;

g) Lakes, ponds and streams planted with fish by a governmental agency, and agency-sponsored group or tribal entity;

h) State natural area preserves and natural resource conservation areas.

3) Classification. Critical fish and wildlife habitat areas are identified in the following documents:

a) Puget Sound Environmental Atlas (Puget Sound Water Quality Authority);

b) Coastal Zone Atlas of Washington, Volume IV, Pierce County (Washington State Department of Ecology);

c) Commercial and Recreational Shellfish Areas in Puget Sound (Washington State Department of Health);

d) The Department of Natural Resources stream typing maps and natural heritage database;

e) The Washington State Department of Fish and Wildlife priority habitats and species program, the nongame database, and the Washington rivers information system.

4) Regulation.

a) Habitat Assessment and Management Plan. For all regulated activity proposed on a site which contains or is within 300 feet of critical fish and wildlife habitat, a habitat assessment and management plan (HAMP) shall be prepared by a qualified wildlife biologist. The HAMP shall include, at a minimum, the following:

i) An analysis and discussion of species or habitats known or suspected to be located within 300 feet of the site;

ii) An analysis of potential impacts to species, habitat, water quality, water quantity, flood volume and flood velocities;

iii) A site plan which clearly delineates the critical fish and wildlife habitats found on or within 300 feet of the site;

iv) Analysis and discussion on the project's effects on critical fish and wildlife habitat;

v) If compliance with the Endangered Species Act is required pursuant to GHMC 18.10.100 and 18.10.110, the HAMP shall also include, but may not be limited to, the analysis requirements found therein, as follows:

(1) A determination that the regulated activity meets the standards of "no effect" (NE) or "may affect, not likely to adversely affect" (NLAA) Endangered Species Act (ESA) listed species, unless the applicant submits a letter from the National Marine Fisheries Service or the Federal Emergency Management Agency stating that the activity complies with the requirements under the biological opinion and the ESA. If it is determined that the regulated activity is likely to adversely affect (LAA) ESA-listed species, then the city may not issue the development permit unless the development is redesigned to a point where the assessment is NLAA or NE. If a development cannot be redesigned to meet the standard of NLAA or NE, the development may only be permitted if the applicant submits a letter from the National Marine Fisheries Service or the Federal Emergency Management Agency demonstrating concurrence through a consultation under Section 7 or 4(d) of the ESA or issuance of an incidental take permit under Section 10 of the ESA;

vi) An assessment and discussion on special management recommendations which have been developed for species or habitat located on the site by any federal or state agency;

vii) Proposed mitigation measures which could minimize or avoid impacts;

viii) Assessment and evaluation of the effectiveness of mitigation measures proposed;

ix) Assessment and evaluation of ongoing management practices which will protect critical fish and wildlife habitat after development of the project site, including proposed monitoring and maintenance programs;

x) Assessment of project impact or effect on water quality and any proposed methods or practices to avoid or mitigate for such impacts or effects as provided in subsection 6.2.2.3. If it is determined that a project or proposal will result in the extirpation or isolation of a critical fish or wildlife species, including critical plant communities, the project or proposal may be denied.

5) Buffer Requirements. If it is determined by the Administrator or designee that a buffer would serve to mitigate impacts to a critical fish or wildlife habitat, a buffer shall be required on the development site. The width of the buffer shall be

based upon the review of scientific and technical information but, in no case, shall exceed 150 feet, nor be less than 25 feet.

6) Compensatory mitigation shall be provided to offset impacts to critical fish and wildlife habitat and to meet the requirements of no net loss of shoreline functions. The applicant shall demonstrate that the compensatory mitigation achieves no net loss.

7) Compensatory mitigation for impacts shall occur on-site, except where on-site mitigation is not scientifically feasible or practical due to physical features of the site and when off-site mitigation has a greater likelihood of providing equal or improved critical area functions than the impacted critical area. The burden of proof shall be on the applicant to demonstrate that these provisions can be met.

8) Off-site Mitigation. In cases in which it is determined that compensatory mitigation is allowed, the following shall apply:

   a) When compensatory mitigation cannot be provided on-site, off-site shoreline mitigation shall be provided in the following locations, listed in order of priority:

      i) In the shoreline jurisdiction associated with the same drift cell as the permitted activity. Impacts on sediment delivery such as shoreline armoring must be mitigated within the same drift cell as the permitted activity.

      ii) In the shoreline jurisdiction associated with the same body of water (i.e., Gig Harbor Bay and Gig Harbor Spit, Colvos Passage, Tacoma Narrows, and Henderson Bay, and freshwater streams) as the permitted activity; and

      iii) In the nearshore Puget Sound shoreline jurisdiction in the same sub-basin as the permitted activity.

   b) In determining appropriate areas for off-site mitigation, lower priority locations shall be applied only where higher priority locations are determined to be infeasible or inapplicable.

   c) Off-site mitigation ratios for in-water work shall be established in consultation with state and federal permitting agencies and approval of the Administrator.

   d) Off-site shoreline mitigation shall be provided with in-kind mitigation unless out-of-kind mitigation would provide greater ecological function than in-kind

mitigation, as determined by the Administrator. The burden of proof that out-of-kind mitigation provides greater function is on the applicant who must provide an analysis from a qualified scientific expert.

9) Specific Habitats – Anadromous Fish.

a) All activities, uses, and alterations proposed to be located in water bodies used by anadromous fish or in areas that affect such water bodies shall give special consideration to the preservation and enhancement of anadromous fish habitat, including, but not limited to, adhering to the following standards:

i) Activities shall be timed to occur only during the allowable work window as designated by the Washington State Department of Fish and Wildlife for the applicable species;

ii) An alternative alignment or location for the activity is not feasible;

iii) The activity is designed so that it will not degrade the functions or values of the fish habitat or other critical areas; and

iv) Any impacts to the functions or values of the habitat conservation area are mitigated in accordance with an approved habitat assessment and management plan.

b) Structures that prevent the migration of salmonids shall not be allowed in the portion of water bodies currently or historically used by anadromous fish. Fish bypass facilities shall be provided that allow the upstream migration of adult fish and shall prevent fry and juveniles migrating downstream from being trapped or harmed.

c) Fills, when authorized by the master program, SEPA review or clearing and grading, shall not adversely impact anadromous fish or their habitat and shall mitigate any unavoidable impacts. Fill shall only be allowed for a water-dependent use, restoration, City utility activities and public access.

d) Any fill or structure proposed within a Special Flood Hazard Area shall comply with the requirements of GHMC Chapter 18.10, the city's Flood Hazard Construction Standards.

6.2.5.25 Aquifer Recharge Areas

1) Aquifer recharge areas are particularly susceptible to contamination and degradation from land use activities. Areas which have a high potential for ground water resource degradation are identified as aquifer recharge areas under this section and shall be subject to the requirements herein.

2) Designation/Classification. For the purposes of this section, the boundaries of any aquifer recharge areas within the city shall consist of the two highest DRASTIC zones which are rated 180 and above on the DRASTIC index range. Any site located within these boundaries is included in the aquifer recharge area.

3) Regulation.

   a) Hydrogeologic Assessment Required. The following land uses shall require a hydrogeologic assessment of the proposed site if the site is located within an aquifer recharge area:

      i) Hazardous substance processing and handling;

      ii) Hazardous waste treatment and storage facility;

      iii) Wastewater treatment plant sludge disposal categorized as S-3, S-4 and S-5;

      iv) Solid waste disposal facility.

   b) Hydrogeologic Assessment Minimum Requirements. A hydrogeologic assessment shall be submitted by a firm, agent or individual with experience in hydrogeologic assessments and shall contain, at a minimum, and consider the following parameters:

      i) Documentable information sources;

      ii) Geologic data pertinent to well logs or borings used to identify information;

      iii) Ambient ground water quality;

      iv) Ground water elevation;

      v) Depth to perched water table, including mapped location;

      vi) Recharge potential of facility site, respective to permeability and transmissivity;

vii) Ground water flow vector and gradient;

viii) Currently available data on wells and any springs located within 1,000 feet of the facility site;

ix) Surface water location and recharge potential;

x) Water supply source for the facility;

xi) Analysis and discussion of the effects of the proposed project on the ground water resource;

xii) Proposed sampling schedules;

xiii) Any additional information that may be required or requested by the Pierce County environmental health department.

c) Review of Hydrogeologic Assessment. A hydrogeologic assessment prepared under this section shall be submitted to the Pierce County department of environmental health for review and comment. Comments received by the department of health within 60 days of submittal of the assessment shall be considered by the City in the approval, conditional approval or denial of a project.

d) Findings for Consideration of Approval. A hydrogeologic assessment must clearly demonstrate that the proposed use does not present a threat of contamination to the aquifer system, or provides a conclusive demonstration that application of new or improved technology will result in no greater threat to the ground water resource than the current undeveloped condition of the site. Successful demonstration of these findings warrants approval under this section.

6.2.5.26 Hillsides, Ravine, Sidewalls and Bluffs

1) Disturbance Limitations. If a hillside, ravine sidewall or bluff is located on or adjacent to a development site, all activities on the site shall be in compliance with the following requirements:

a) Ravine Sidewalls and Bluffs.

i) Buffers. An undisturbed buffer of natural vegetation equal to the height of the ravine sidewall or bluff shall be established and maintained from the top, toe and sides of all ravine sidewalls and bluffs. All buffers shall be measured on a horizontal plane.

ii) Buffer Delineation. The edge of a buffer shall be clearly staked, flagged and fenced prior to any site clearing or construction. Markers shall be clearly visible and weather-resistant. Site clearing shall not commence until such time that the project proponent or authorized agent for the project proponent has submitted written notice to the City that the buffer requirements of this section have been met. Field marking of the buffer shall remain in place until all phases of construction have been complete and an occupancy permit has been issued by the City.

iii) Buffer Reduction. A buffer may be reduced upon verification by a qualified professional and supporting environmental information to the satisfaction of the City that the proposed construction method will:

(1) Not adversely impact the stability of ravine sidewalls;

(2) Not increase erosion and mass movement potential of ravine sidewalls;

(3) Use construction techniques which minimize disruption of existing topography and vegetation;

(4) Includes measures to overcome any geological, soils and hydrologic constraints of the site. The buffer may be reduced to no less than the minimum vegetation conservation strip requirement as prescribed in Table 6-1 and as provided in subsection 6.2.3.3.

b) Hillsides of 15 Percent Slope and Greater – Studies Required. Developments on hillsides shall comply with the following requirements:

i) Site Analysis Reports Required. Table 6-9 below sets forth the level of site analysis report required to be developed based upon the range of the slope of the site and adjacent properties:

Table 6-9. Site Analysis Report Levels Based on Slope

Slope of Site and/or Adjacent Properties	*Length of Slope (Feet)*	*Parameters of Report (See Key)*	*Report Prepared By*
0% to 15%	No limit	Report not required	
15% to 25%	> 50	1, 2, 3	Building contractor or other technical consultant
25% to 40%	> 35	1, 2, 3, 4	Registered civil engineer
40% +	> 20	1, 2, 3, 4	Registered engineer or geotechnical engineer

Report Key Contents

(1) Recommended maximum site ground disturbance.

(2) Estimate of storm drainage (gpm) for pre-construction, during construction and post-construction.

(3) Recommended methods to minimize erosion and storm water runoff from site during construction and post-construction.

(4) Seismic stability of site, preconstruction, during construction and post-construction.

ii) Development Location. Structures and improvements shall be located to preserve the most sensitive portion of the site, its natural land forms and vegetation.

iii) Landscaping. The disturbed areas of a development site not used for buildings and other developments shall be landscaped according to the landscape standards of the zoning code (GHMC Chapter 17.78 Landscaping and Screening).

iv) Project construction shall be required to implement all recommended requirements of the report referenced in subsection (A)(2)(a) of this section, and any additional requirements as determined by City staff. In addition, should adjacent properties be adversely impacted by the implementation or construction, additional mitigation measures

necessary to minimize or eliminate these impacts shall be implemented by the applicant.

6.2.5.27 Landslide and Erosion Hazard Areas

1) Areas which are identified as landslide or erosion hazard areas shall be subject to the requirements established in this section.

2) Regulation. Applications for regulated activities proposed within designated landslide and erosion hazard areas shall be accompanied by a geotechnical report prepared by a geologist or geotechnical engineer licensed as a civil engineer with the state. If it is satisfactorily demonstrated to the Administrator that a landslide or erosion hazard potential does not exist on the site, the requirements of this section may be waived.

3) Geotechnical Report Requirements. A geotechnical report required under this section shall include, at a minimum, the following information:

   a) Topographic data at a minimum scale of 1:240 (1 inch equals 20 feet). Slope ranges shall be clearly delineated in increments of 15 percent to 25 percent, 25 percent to 40 percent and greater than 40 percent;

   b) Subsurface data, including boring logs and exploratory methods, soil and rock stratigraphy, ground water levels and any seasonal variations of ground water levels;

   c) Site history, including description of prior grading and clearing, soil instability or slope failure.

   If a geotechnical report has been prepared and accepted by the Administrator within the previous two years for a specific site and the proposed land use development and site conditions have not changed, the report may be utilized without the requirement for a new report.

4) Development Standards. Upon submission of a satisfactory geotechnical report or assessment, site development may be authorized by the Administrator subject to the following:

   a) Buffers shall comply with the requirements of Section 6.2.5.25, Regulation #1;

   b) Approved erosion control measures are in place prior to, or simultaneous with, site clearing or excavation;

c) Such other conditions as deemed appropriate by the Administrator to ensure compliance with the provisions of this chapter.

6.2.5.28 Seismic Hazard Areas

1) Designated seismic hazard areas shall be subject to the requirements of this section. At a minimum, seismic hazard areas shall include areas of alluvial and recessional outwash surficial geologic units as identified in "Water Resources and Geology of the Kitsap Peninsula and Certain Adjacent Lands, Water Supply Bulletin Number 18, Plate One," U.S. Department of the Interior, Geological Survey, Water Resources Division, and any lot, tract, site or parcel which has been modified by imported or excavated earthen fill material.

2) Regulation. Applications for regulated activities proposed within designated seismic hazard areas shall be accompanied by a geotechnical report prepared by a geologist or geotechnical engineer licensed as a civil engineer with the state. If it is satisfactorily demonstrated that a seismic hazard potential does not exist on the site, the requirements of this section may be waived.

3) Geotechnical Report Requirements. The required report shall evaluate the existing site conditions, including geologic, hydrologic and site capability to accommodate the proposed activity. At a minimum, the following shall be included:

   a) Analysis of subsurface conditions;

   b) Delineation of the site subject to seismic hazards;

   c) Analysis of mitigation measures which may be employed to reduce or eliminate seismic risks, including an evaluation of the effectiveness of mitigation measures.

   If a proposal is required to submit a seismic risk analysis pursuant to any requirements of the most recently adopted edition of the International Building Code by the City of Gig Harbor, the report requirements of this section may be waived by the Administrator.

6.2.5.29 Flood Hazard Areas

1) Areas which are prone to flooding and which are identified in the most current Federal Emergency Management Administration flood insurance rate maps for the City of Gig Harbor shall be subject to the requirements of this section.

2) Regulation. All development within flood hazard areas shall be subject to the requirements of the City of Gig Harbor flood hazard construction standards (Chapter 18.10 GHMC).

6.3 Flood Hazard Reduction

It is the goal of the City of Gig Harbor to limit development and shoreline modifications that may cause a significant flood hazard for people or property or result in a net loss of shoreline ecological functions. In achieving this goal, it is recognized that municipal surface water management activities may be necessary to address the City's obligations pursuant to its adopted Stormwater Comprehensive Plan and Stormwater Management and Site Development Manual or as the plan and manual may be amended in the future. When necessary, municipal surface water management activities shall be accomplished in a manner that results in no net loss of ecological functions and ecosystem-wide processes.

6.3.1 Policies

A. Structural and non-structural flood hazard reduction measures

With the exception of municipal surface water management activities, structural flood hazard reduction measures should be avoided if possible. Non-structural flood hazard reduction measures may be allowed provided they are accomplished in a manner that assures no net loss of ecological functions and ecosystem-wide processes. Non-structural measures include setbacks, land use controls prohibiting or limiting development in areas that are historically flooded, stormwater management plans, or soft-shore stabilization measures.

6.3.2 Regulations

1) If necessary, structural flood hazard reduction measures, such as, but not limited to, dikes, levees, revetments, floodwalls, channel re-alignment and elevation of structures must be designed and developed in accordance with the National Flood Insurance Program requirements and with the applicable requirements of GHMC 18.10. When necessary, flood hazard reduction measures shall be accomplished in a manner that assures no net loss of ecological functions and ecosystem-wide processes.
2) Municipal surface water management activities shall be accomplished in a manner that assures no net loss of ecological functions and ecosystem-wide process.
3) All shoreline uses and activities shall comply with GHMC 18.10.

6.4 Historic, Cultural, Scientific and Educational Resources

It is the goal of the City of Gig Harbor to preserve and prevent the destruction of or damage to any site having historic, cultural, scientific, or educational value as identified by the City, affected Native American Tribes, the State Department of Archaeology and Historic Preservation, and other appropriate authorities.

6.4.1 Policies

A. Resource inventories and registers

Maintain and update existing inventories and registers of significant local historic, cultural, and archaeological sites in collaboration with tribal, federal, and state governments as appropriate. Consistent with applicable state and federal laws the location of sensitive historic, cultural and/or archaeological sites should remain confidential.

B. Protection of resources

Preserve and maintain the historic, cultural, scientific, or educational integrity of known resources, including properties listed on the Gig Harbor Register of Historic Places; properties located in the Gig Harbor Historic District; and all other resources listed on existing inventories and surveys. Plan and design development on sites having historic, cultural, or archaeological resources in a manner that prevents impacts to the resource and provides educational benefits to the public, where appropriate. Develop adaptive re-use options for historic net sheds and registered landmarks listed on the City's Register of Historic Places to encourage preservation of Gig Harbor's cultural heritage.

C. Compatible design

Design and operate development adjacent to identified historic, cultural or archaeological sites to be compatible with the continued protection of the resource.

D. Public access and education opportunities

Encourage private and public owners of historic sites to provide public access and educational opportunities in a manner consistent with long term protection of the resource.

E. Overwater Nesika Beach cabins

Encourage the preservation and continued use of the existing overwater cabins at Nesika Beach. New cabins and the expansion of existing cabins should not be allowed.

6.4.2 Regulations – General

Significant cultural, archaeological and historic resources shall be permanently preserved in situ or recovered for scientific study, education and public observation.

All shoreline permits and statements of exemption shall contain provisions which require developers to immediately stop work and notify the City, the State Department of Archaeology and Historic Preservation (DAHP), the Puyallup Tribe of Indians, and the Suquamish Tribe if any artifacts of possible historic, cultural, or archaeological value are uncovered during excavations. In such cases, the developer shall be required to provide for a site inspection and evaluation by a professional archaeologist or historic preservation professional, as applicable, in coordination with the state and/or affected tribes.

6.4.3 Regulations - Procedural Requirements

1) Upon receipt of an application for a shoreline permit or request for a statement of exemption for development on properties known to contain an historic, cultural or archaeological resource(s), the City shall require a site inspection, evaluation, and written report by a professional archaeologist or historic preservation professional, as applicable, to determine the presence of cultural, historic or archaeological resource(s). The professional should meet qualification standards for cultural resource management professionals promulgated by the National Park Service, published in 36 CFR Part 61, and included on the DAHP approved consultant list. If it is determined that a site has a significant resource(s), shoreline permits or a statement of exemption shall not be issued until protection or mitigation is developed to the satisfaction of both

DAHP and affected tribes. The City may require that development be postponed to allow for:

Coordination with potentially affected tribes and/or the Department of Archaeology and Historic Preservation; and/or

Investigation of potential to provide public access and educational opportunities; and/or

Retrieval and preservation of significant artifacts.

2) Upon receipt of an application for a shoreline permit or request for a statement of exemption for development adjacent to a historic, cultural or archaeological site listed on federal, state, or local preservation registers, the Administrator shall determine if the proposal is compatible. The Administrator may establish design standards or conditions to ensure compatibility with or the avoidance of adverse effects to the integrity of the resource.

3) Where public access is provided to any private or publicly-owned building or structure of historic, archeological or cultural significance, a public access management plan shall be developed in consultation with the Washington State Department of Archaeology and Historic Preservation, affected tribes and/or other agencies, to address the following:

   a) The type and/or level of public access that is consistent with the long term protection of both historic resource values and shoreline ecological functions and processes; and

   b) Types and location of interpretative signs, displays and other educational materials; and

   c) Site- and resource-specific conditions, including hours of operation, interpretive and/or directional signage, lighting, pedestrian access, and/or traffic and parking.

6.5 Public Access

It is the goal of the City of Gig Harbor to preserve and enhance opportunities for physical and visual public access to shorelines.

6.5.1 Policies

A. Protection of public access

Protect and maintain existing public access sites and view corridors to ensure that the public may continue to enjoy the physical and aesthetic qualities of the shoreline, including views of and from the water.

B. Public, commercial and industrial development

Provide public access as part of each development project by a public entity, and for all private commercial and industrial development, unless such access is shown to be incompatible due to reasons of safety, security, or impact to the shoreline environment.

C. Residential development

Provide public access as part of new multiple family dwelling development, and new subdivisions of more than four parcels for the enjoyment of its residents and the public, unless access is infeasible due to safety, impacts to shoreline ecology, or legal limitations.

D. Public access plan in Gig Harbor Bay

Gig Harbor should plan for an integrated shoreline area public access system that identifies public needs and opportunities to provide public access.

E. Tideland trails

Work cooperatively with private property owners, Washington Department of Natural Resources and Pierce County to develop shoreline trail systems on tidelands, consistent with the City's Parks and Open Space Plan. The City should

seek to own property or obtain access easements through property on which tideland trails are located, when appropriate.

F. Non-motorized boat trails

Work cooperatively with Washington Water Trails Association to develop water trails and upland hand-launch sites for non-motorized boats.

G. Street-ends

Preserve, maintain, and enhance public access provided by shoreline street-ends. Enhancement of existing street-ends could include directional and informational signage, plantings, and/or benches.

H. Commensurate public access

Require public access improvements commensurate with the scale and character of the development and adjoining development. Requirements should be reasonable, effective and fair to all affected parties including but not limited to the land owner and the public. . In requiring public access, carefully analyze development proposals to ensure that an essential nexus exists between the development and the public access required, and that the required public access is roughly proportional to the impacts of the project.

I. Views and visual access

Preserve views and vistas to and from the water, to enjoy the aesthetic qualities and character of Gig Harbor shorelines. Expand opportunities for visual public access to shorelines commensurate with obligations for urban infilling under the Growth Management Act, and the rights of private property owners.

6.5.2 **Regulations – Public Access Required**

Shoreline substantial developments and/or conditional uses shall provide public access where any of the following conditions are present except as provided in Section 6.5.2 Item 3:

Where a development or use will interfere with an existing public access, the development or use shall provide public access to mitigate this impact. Blocking

access or discouraging use of existing on-site public access are examples of such impacts that will require mitigation.

Proposed water-enjoyment, water-related and non-water-dependent commercial or industrial shoreline developments.

Residential developments involving the creation of more than four (4) lots or the construction of multiple-family dwellings.

Where the development is proposed or funded by a public entity or on public lands, except where public access improvements would adversely affect publicly funded restoration actions.

Where a use or development will interfere with a public use of land or waters subject to the public trust doctrine.

The requirement for public access shall be determined based on a site specific analysis. Where public access is required, the area dedicated and improved for public access shall be roughly proportional to the scale and character of the proposed development and its impacts.

An applicant may not need to provide public access where one or more of the following conditions apply.

a) Unavoidable health or safety hazards to the public exist which cannot be prevented by any practical means;

b) Inherent security requirements of the use cannot be satisfied through the application of alternative design features or other solutions;

c) The cost of providing the access, easement or an alternative amenity is unreasonably disproportionate to the total long-term cost of the proposed development, as determined by the Administrator;

d) Unacceptable environmental impacts that cannot be mitigated would occur; or

e) Significant undue and unavoidable conflict between any access provisions and the proposed use and/or adjacent uses would occur and cannot be mitigated.

In order to meet any of the conditions under Section 6.5.2 Regulation #3 above, the applicant must first demonstrate and the City must determine in its findings that all reasonable alternatives have been exhausted, including but not limited to:

a) Regulating access by such means as maintaining a gate and/or limiting hours of use; and

b) Designing separation of uses and activities (e.g. fences, terracing, screening, hedges, landscaping, etc.).

Public access easements and permits subject to conditions regarding public access must be recorded with the auditor. Requirements for public access shall be shown on approved plats. Required public access shall be provided for the life of the project.

6.5.3 Regulations - Type and Design of Public Access

1) Developments within the shoreline area that are required to provide public access per Section 6.5.2 shall provide, at a minimum, visual access to the water. Visual access shall consist of one of the following:

   a) A public view corridor measuring twenty (20) frontage feet along the street or twenty (20) percent of the total waterfront footage of the parcel, whichever is greater. View corridors shall be from public rights-of-way. Parking shall not be allowed in view corridors. Fences or railings exceeding 42 inches in height shall only be permitted when required by the building code.

   b) A five-foot (5) wide public pathway along the property perimeter down one side line of the property to the ordinary high water mark or bulkhead or to the waterside face of the structure, whichever is further waterward, thence across the waterside face of the property or structure and back to the street along the other side property line. Landscaping may be planted intermittently along the pathway.

   c) A public viewing platform at the highest level of any structure on the property, with the platform having a minimum area of fifty (50) square feet. Railings around the platform, consistent with the City Building Code, may extend the maximum allowable height.

2) If the Administrator determines that visual access per Section 6.5.3 Regulation #1 is not appropriate or infeasible, one of the following forms of public access or recreational opportunity shall be implemented instead:

   a) A public fishing pier extending out to mean lower low water and connected by a minimum five (5) foot wide public pathway which connects to the

frontage street. A minimum of ten (10) feet of open water shall surround the pier.

b) A small vessel landing available for transient use by rowboats, canoes, dinghies, or other type of non-motorized watercraft less than 18 eighteen feet in length, and extending out to mean lower low water or beyond and connected by a five (5) foot wide public pathway to the frontage street. A minimum of ten (10) feet of open water shall surround the small boat landing.

c) A public transient moorage for up to two (2) vessels a maximum of thirty (30) feet in length, and which moorage must have a minimum water depth of minus eight (8) feet (reference MLLW). The facility must be easily accessible to visiting vessels and posted with signage that is legible to a distance of one hundred feet.

3) The location of new public access sites shall be clearly identified. Signs identifying public access shall be constructed, installed and maintained by the property owner in conspicuous locations at public access sites and/or along common routes to public access sites. The signs shall indicate the public's right of access, the hours of access, and other information as needed to control or limit access according to conditions of approval. The final location of all public access signage shall be subject to the approval of the Administrator.

4) Public access sites shall be directly connected to the nearest public street and shall include improvements that conform to the requirements of the Americans with Disabilities Act (ADA) when feasible.

5) Required public access sites shall be fully developed and available for public use at the time of occupancy of the use or activity.

6) When otherwise consistent with this Program, public access structures shall be exempt from the shoreline buffer requirements of this Program, meaning that such structures shall be allowed to encroach into the shoreline buffer when necessary to provide physical and or visual access to the water's edge.

7) Public access shall be located and designed to be compatible with the natural shoreline character, to avoid adverse impacts to shoreline ecological functions and processes, and to ensure public safety.

6.6 Water Quality and Quantity

It is the goal of the City of Gig Harbor to maintain or enhance the quantity and quality of surface and ground water over the long term by effectively managing the location, construction, operation, and maintenance of all shoreline uses and developments.

6.6.1 Policies

A. Stormwater management

Manage and treat stormwater runoff consistent with NPDES permit requirements, the Stormwater Comprehensive Plan, the most current edition of the City's Stormwater Management and Site Development Manual, and applicable City regulations (GHMC Title 14 Storm and Surface Water Drainage).

B. Contaminating and polluting activities

Define and regulate activities which can possibly contaminate or pollute the harbor and shorelines including best management practices for the use or storage of chemicals, pesticides, fertilizers, fuels and lubricants, animal and human wastes, and construction materials that will have contact with the water.

C. Water quality basin plan

Coordinate with Pierce County, Kitsap County, the Tacoma-Pierce County Health Department, and the Key Peninsula-Gig Harbor-Islands watershed council to develop and implement a water quality baseline study as a prelude to an area-wide water-quality basin plan.

D. Landscaping maintenance

Fertilizers and herbicides should not be used to maintain landscaping near the shoreline. Technical guidance, public outreach, and educational materials addressing alternatives that are more environmentally protective should be provided to residents and businesses located adjacent to shorelines.

E. Erosion and runoff

Require effective temporary and permanent erosion control and water runoff treatment methods during and after construction.

F. Sanitary sewer

Require new development to connect to the City's sanitary sewer lines in areas where sewer service is available, consistent with the City's Wastewater Comprehensive Plan, City Public Works Standards and other City regulations. Work cooperatively with Tacoma-Pierce County Health Department to identify and correct sanitary system failures.

G. Reclaimed water

Study the benefits and potential uses for reclaimed water and explore options to create reclaimed water (Class A water) at the City's existing Wastewater Treatment Plant or new satellite treatment facilities.

6.6.2 **Regulations**

New development shall provide stormwater management facilities designed, constructed, and maintained in accordance with the current stormwater management standards.

All shoreline uses and activities shall be designed and constructed employing best management practices (BMPs) to control treatment and release of surface water runoff so that the receiving water quality and shore properties and features are not adversely affected.

All shoreline uses and activities shall use effective erosion control methods during both project construction and operation. At a minimum, effective erosion control methods shall require compliance with the current edition of the City's stormwater management standards and the erosion and sedimentation control provisions of the Gig Harbor Municipal Code (GHMC Chapter 14.20).

All materials that may come in contact with water shall be constructed of materials, such as untreated wood, concrete, approved plastic composites or steel, that will not adversely affect water quality or aquatic plants or animals. Materials used for decking or other structural components shall be approved by applicable state agencies for contact with water to avoid discharge of pollutants from wave splash, rain, or runoff.

For lawns and other vegetation maintained within the shoreline jurisdiction, the use of chemical fertilizers, pesticides or other similar chemical treatments shall be discouraged and alternative practices shall be employed. Where chemical fertilizer, herbicide, or pesticide use is necessary for protecting existing natural vegetation or establishing new vegetation in shoreline areas as part of an erosion control or mitigation plan, the use of time release fertilizer and herbicides shall be preferred over liquid or concentrate application.

The release of oil, chemicals or hazardous materials onto land or into the water is prohibited. Equipment for the transportation, storage, handling or application of such materials shall be maintained in safe and leak-proof condition. If there is evidence of leakage, the further use of such equipment shall be suspended until the deficiency has been corrected.

During construction in the shoreline area, vehicle refueling or maintenance shall be conducted outside the shoreline jurisdiction where possible and in accordance with an approved permit pursuant to the City of Gig Harbor Fire Code.

New developments in the shoreline shall connect to the City's sanitary sewer system and are prohibited from installing an on-site sewage system unless otherwise approved in accordance with City regulations.

Water reuse projects for reclaimed water must be in accordance with the adopted water or sewer comprehensive plans that have been approved by the state Departments of Ecology and Health.

6.7 Quality Waterfront Development along Gig Harbor Bay

It is the goal of the City of Gig Harbor to define and enforce the highest quality standards concerning present and future land use developments within the Gig Harbor Bay waterfront areas, recognizing the unique historic character and scale of the Gig Harbor Bay waterfront. This goal will be achieved through a balance of several different uses including those commercial endeavors such as commercial fishing, boating, marine shops and services, restaurants and retail shops, as well as residential uses which provide the bay's unique appeal.

6.7.1 Policies

A. Balance and scale

Maintain a balance in waterfront land use development so that any single use does not overpower or detract from the others. Maintain a human, compatible scale so that new structures do not overpower existing facilities and do not dominate the shoreline in terms of size, location or appearance. Achieve balance and scale through compliance with GHMC 17.99 (Design Manual).

B. Public amenities

Encourage waterfront developments to provide public amenities commensurate with the project's scale and the character of the development. Amenities may include additional docks, paths or walks, overlooks, picnic and seating areas, fishing piers or areas, and viewpoints.

C. Supporting improvements

Enforce suitable standards governing the development of supporting improvements (e.g., parking areas, sidewalks, stormwater facilities) equal to the standards enforced in other developed areas in the planning area. In addition, illustrate and enforce design standards which control scale, construction methods and materials, drainage patterns, site coverage, landscaping and screening, signage, and other features of unique importance to the waterfront setting. Encourage innovative, effective solutions which cluster and share common improvements, reduce paved

areas and otherwise blend construction with the natural setting or with desirable features of the built environment.

6.7.2 Regulations

0) Where appropriate use clustering to minimize adverse impacts on shoreline ecological functions and processes. Development shall be designed to minimize clearing, grading and alteration of natural topography, bank stabilization, and other natural features and shall comply with the applicable requirements of GHMC 17.99.240 Natural site conditions. Roadway and driveway alignment shall follow the natural contours of the site and minimize width to the maximum extent feasible.

1) Impervious surfacing for parking lot/space areas shall be minimized through the use of alternative surfaces where feasible, consistent with the most current edition of the City's stormwater management standards as established in GHMC 14.20.

2) Utilities shall be located within roadway and driveway corridors and right-of-ways wherever feasible.

3) Design of structures should provide natural bank stabilization and conform to natural contours and minimize disturbance to soils and native vegetation and shall comply with the applicable requirements of GHMC 17.99.370 Site-sensitive building design. Foundations shall be tiered with earth retention incorporated into the structure.

4) Development shall be located, designed, and managed so that impacts on public use of the shoreline, such as fishing, boating, and water-related recreation, are minimized and mitigated per Section 6.5.2 Regulation #1a.

5) Public recreation activities such as fishing, boating, and water related recreation shall be protected.

6) Exterior lighting located outside of public street rights-of-way shall be designed and operated to avoid illuminating nearby properties or public areas, prevent glare on adjacent properties, public areas or roadways to avoid infringing on the use and enjoyment of such areas, and to prevent hazards. Methods of controlling spillover light include, but are not limited to, limits on height of structure, limits on light levels of fixtures, light shields, setbacks, buffer areas and screening and shall comply with the applicable requirements of GHMC 17.99.

7) All facilities shall be located and designed to avoid impediments to navigation and to avoid depriving other properties of reasonable access to navigable waters. All in-water structures shall be marked and lighted in compliance with U.S. Coast Guard regulations.

8) All shoreline use and development shall provide appropriate setbacks from adjacent properties and shall comply with applicable provisions of GHMC Title 17. Setbacks shall be of adequate width to attenuate proximity impacts such as noise, light and glare, and may address scale and aesthetic impacts.

6.8 Restoration and Remediation

It is the goal of the City of Gig Harbor to improve the overall shoreline ecological conditions by restoring ecological functions and processes through development incentives and community involvement as provided in this Master Program and its associated Shoreline Restoration Plan Element.

6.8.1 Policies

A. Restoration actions

Employ incentives and encourage actions in shorelines and critical areas that restore the ecological functions and ecosystem-wide processes of the City's shorelines consistent with the Shoreline Restoration Plan Element.

B. Regional coordination

Continue to work with the State, Kitsap and Pierce Counties, West Sound Watershed Council, West Central Local Integrating Organization and other governmental and non-governmental organizations to explore how Gig Harbor can best address the needs of preserving and restoring ecological processes and shoreline functions.

C. City-led projects

Identify specific restoration opportunities where the City can take the lead with support from other regional entities.

D. Integration with public projects

Incorporate habitat enhancement elements into the design and implementation of public infrastructure improvement projects.

E. Integration with mitigation requirements

Use the restoration framework outlined in the Shoreline Restoration Plan Appendix B to integrate compensatory mitigation projects into the broader restoration vision for the city.

F. Climate change

Consideration should be made for potential adverse effects of global climate change and sea level rise when designing restoration and remediation projects.

G. Education and outreach

Educate the community and encourage public involvement in the restoration of the shoreline by creating and leveraging programs, such as the NPDES Phase II stormwater requirements.

H. General remediation actions

Encourage remediation actions as part of redevelopment proposals. Such actions could include removal of derelict buildings, unnecessary hard shoreline armoring, derelict overwater structures, and pilings treated with toxic materials.

I. Hazardous substance remediation

Encourage development proposals to integrate hazardous substance remediation into development projects.

6.8.2 **Regulations**

Restoration of ecological functions and processes shall be allowed on all shorelines and shall be located, designed and implemented in a manner that is consistent with the Shoreline Restoration Plan Element, observes the critical area standards in Section 6.2.5 and assures compatibility with other shoreline uses.

Ecological restoration projects shall be carried out in accordance with City or resource agency-approved restoration plan and in accordance with the policies and regulations of this Program.

To encourage shoreline property owners to remove bulkheads and perform other beneficial shoreline restoration actions in advance of shoreline development or redevelopment the City may give mitigation credit pursuant to Section 6.2.2, Regulation #7.