



CHAIR, DENNIS MARTINEZ; VICE-CHAIR, HEIDI WATTERS; COMMISSIONERS, SHARON MANN, MIKE HANSEN, LOUISE STRANDER, KAREN SIMMONS AND DIXIE STARK

**PLANNING COMMISSION PUBLIC HEARING  
MARCH 28, 2019 - 6:30 PM  
TUKWILA CITY HALL COUNCIL CHAMBERS**

- I. CALL TO ORDER
- II. ATTENDANCE
- III. ADOPT MINUTES

- IV. CASE NUMBER: L18-0075 Shoreline Master Program Update  
APPLICANT: The City of Tukwila and Department of Ecology

PURPOSE: Periodic review of the Shoreline Master Program. The City has prepared draft SMP amendments to keep the SMP current with changes in state law, changes in other Tukwila plans and regulations, and other changed local circumstances.

- V. DIRECTOR'S REPORT
- VI. ADJOURN





## PLANNING COMMISSION WORK SESSION MINUTES

**Date:** February 28, 2019  
**Time:** 6:30 PM  
**Location:** Council Chambers

**Present:** Chair Dennis Martinez, Vice-Chair Heidi Watters, Commissioners Louise Strander, Karen Simmons and Dixie Stark

**Excused  
Absence:** Commissioners Sharon Mann and Mike Hansen

**Staff:** Planning Supervisor Minnie Dhaliwal, Urban Environmentalist Andrea Cummins and Planning Commission Secretary Wynetta Bivens

**Adopt  
Minutes:** Commissioner Strander made a motion to adopt the January 24, 2019 minutes. Commissioner Watters seconded the motion. Motion passed.

**Chair Martinez** opened the work session on critical areas regulations.

**Minnie Dhaliwal**, Planning Supervisor and Andrea Cummins, Urban Environmentalist, provided some background information on the critical areas. The state law regulates what is allowed in the critical areas and mandates cities to comply with the Growth Management Act (GMA). Cities must update and adopt critical area regulations every eight years, based on best available science. Staff has reviewed and identified gaps in the City's existing code for the Planning Commissioners (PC) to vet and determine what to change.

At the November 8, 2018 work session, the PC requested staff return with additional information on four topics. There was discussion and clarification on each of the topics, which are listed in the information memorandum dated February 19, 2019.

Following are some of the issues discussed, as well as the policy decisions made by the PC.

1. Mitigation plans and monitoring costs

Staff provided some information on the benefits of monitoring and the chances of mitigation success. The City has established a five-year monitoring period. The Department of Ecology and US Army Corps of Engineers also have monitoring requirements for some wetland impacts, which could be up to 10 years. There was a lengthy discussion on this topic. One of the issues raised pertained to a property owner developing their property that is adjacent to property that has a wetland. Staff clarified that if buffers extend on their property, they will need to address potential impacts to the buffers from the proposed development; further, they may need to get access rights to delineate the wetland. It was noted that the buffers are not in

good condition. There was discussion on the mitigation plans, performance standards, monitoring requirements and what happens once the monitoring period ends. There was also discussion regarding the types of projects that require a Federal permit in Tukwila.

**Decision:** Option 3 - Adopt the standard buffer widths recommended by the Department of Ecology but allow alternative buffer if impact minimization measures are taken AND buffer is replanted.

## 2. Exempt wetland

Commissioner Stark made inquiry regarding why there is not a buffer mitigation with option 1. Commissioner Strander said in the discussion at the November 8, 2018 work session that option 3 seemed to have more options for the property owner. There was also discussion on wetland mosaic.

**Decision:** Option 1 - Keep the existing code and exempt wetlands up to 1,000 sq. ft. with mitigation for wetland impacts.

**Note:** Four of the five Commissioners were in consensus with staff's recommendation. Commissioner Strander was opposed and in favor of option 3.

## 3. Non-conforming provisions

### Part 1 - Vertical Expansion

**Decision:** Option 1 - Allow existing buildings to expand vertically to add upper stories in exchange for buffer enhancement.

### Part 2 - Lateral Expansion

Commissioners Strander and Watters were opposed to limiting it to a one-time expansion allowance and were in consensus with establishing a cap on the overall expansion.

Commissioner Stark said option 1 needed some additional language and wanted to know if staff would draft the language. Staff said that they would draft and return with language. The PC were in consensus.

Staff noted the following suggestions made by the consultant:

- Add a provision stating that expansion is only allowed on legally permitted property.
- Expansions should be excluded for detached accessory structures.
- To qualify for expansion along the sides there is a threshold of 50% of the existing intrusion but no more than 500 sq. ft. with the assumption that 75% of the buffer is in place.
- To qualify for expansion along the side opposite to the critical area, the maximum threshold of 500 sq. ft. could be raised to 1,000 sq. ft.

**Decision:** Option 1 - Allow expansion along the existing building lines in exchange for buffer enhancement but limit it to a one-time expansion and limit the square footage of a new intrusion into the buffer to less than 50% of the current intrusion. Further, this option could be limited to situations where the buffer width is at least 75% of the

required buffer. **Note:** the PC were in consensus to also add the following language, “500 sq. ft. on either side and 1,000 sq. ft. away from the buffer zone.”

Part 3 – Enclosing within existing footprint (e.g., enclosing a carport or adding a roof over decks)

**Decision:** Option 1 - Allow enclosing within existing footprint.

4. Geologically Hazardous Areas

This section of the code is administered by the Public Works Department and their opinion is not to establish one standard setback for all slopes. Instead the setback should be established by the geotechnical engineer after site conditions are determined for each site.

**Decision:** To be administered case-by-case.

Staff will complete a final strikethrough/underline document, release it for public review and then schedule a PC public hearing on this item in April.

**Director’s Report:**

- Staff reminded the PC to respond to staff’s inquiry regarding their availability for a second meeting on April 11<sup>th</sup>.
- The Shoreline Master Program will be on the March PC agenda.
- Staff informed the PC about Sound Transit’s Bus Rapid Transit project that was approved as part of ST3 by the voters and includes frequent bus service from Burien to Lynnwood with a stop along SR518 to connect Tukwila International Boulevard station.

Adjourned: 8:15 PM

Submitted: By Wynetta Bivens  
Planning Commission Secretary





## STAFF REPORT TO THE PLANNING COMMISSION FOR THE MARCH 28, 2019 HEARING

- FILE NUMBERS: L18-0075 SMP Update
- REQUEST: Review and revise Tukwila’s Shoreline Master Program and Zoning Code Shoreline Overlay, hold a public hearing and make a recommendation to the City Council.
- LOCATION: 200 feet landward of the OHWM of the Green River through Tukwila
- PUBLIC NOTICE: Notice was published in the Seattle Times and a postcard was mailed to the owners and tenants of all Tukwila parcels within Shoreline jurisdiction on 3/14/19. Information about the update was included in the citywide Stormwater mailer and the September eHazelnut newsletter. An open house was held on 10/9/18. Periodic emails have been sent to the interested parties list.
- STAFF: Nora Gierloff, Deputy DCD Director
- ATTACHMENTS:
- A. Edits to TMC 18.44 Shoreline Overlay District
  - B. Updated Shoreline Master Program
  - C. Gap Analysis Report

### BACKGROUND

The Green/Duwamish River flows over 93 miles from the Cascade Mountains to Elliott Bay. Approximately 13 miles of the river meanders through Tukwila’s industrial district, urban center and residential neighborhoods. The river system has undergone extensive changes over the years as the population has increased dramatically, forests have been logged, levees have been built, streams and rivers rerouted, and freeways, homes, shopping and manufacturing centers constructed. As the impacts of human development have been recognized, State and Federal agencies have developed regulations that require local jurisdictions to provide better protection for remaining habitat, to control the collected storm water flowing directly into the river, and to identify and restore areas where habitat restoration can succeed. This took on new urgency when salmon were listed under the Federal Endangered Species Act in 1999.

The Green/Duwamish River in Tukwila is categorized as a Shoreline of the State. In response to the State Shoreline Management Act (SMA) and Federal requirements, Tukwila has adopted three documents related to the river – the Shoreline Master Program (SMP), Shoreline Element in the City’s Comprehensive Plan, and zoning regulations in TMC Chapter 18.44 Shoreline Overlay.

Most construction, grading or clearing within 200 feet landward of the ordinary high water mark (OHWM) requires a Shoreline Substantial Development Permit which is reviewed by the Washington State Department of Ecology after issuance by the City. The City’s shoreline development regulations balance economic interests, flood control, and residential development with enhancement and stewardship of the ecological functions of the river.

The City of Tukwila completed a comprehensive update to its Shoreline Master Program in 2009, with additional revisions made in 2011. Washington state law requires jurisdictions to periodically review and update their SMPs every eight years for compliance with changes to the SMA and Department of Ecology guidelines and legislative rules. The current update is due on June 30, 2019.

### **SHORELINE MASTER PROGRAM PERIODIC UPDATE**

This update process is being undertaken jointly with the Department of Ecology using the joint review process. By coordinating closely with DOE from the start we will streamline the review timeline and ensure that we are addressing all required topics. The current update will focus on:

- Reviewing relevant legislative updates since 2009 and incorporating any applicable amendments per the Gap Analysis Report (Attachment C, also available on the Shoreline Management page of the City website).
- Ensuring consistency with recently adopted regulations for critical areas and flood hazard areas.
- Streamlining and eliminating duplication in the documents.
- Addressing a limited number of policy questions.

This periodic update will not:

- Re-evaluate the ecological baseline which was established as part of the 2009 comprehensive update.
- Extensively assess no net loss criteria other than to ensure that proposed amendments do not result in degradation of the baseline condition.
- Change shoreline jurisdiction or environment designations.

### **DISCUSSION**

Staff began public outreach and education about the update process with an all-city mailing advertising an open house in October in addition to mentions in other City publications and on the City’s web site. This hearing was advertised through an additional postcard to property owners and tenants within the shoreline jurisdiction and email notices to interested parties.



Staff has developed public review drafts of the documents that comprise the SMP and made them available on the City's web site. Attachment A to this report is an annotated, strikeout/underline version of TMC Chapter 18.44 showing the bulk of the proposed changes. Attachment B is a clean version of the SMP (strikeout/underline is available on the City's Shoreline website) containing the history of Tukwila's SMP, a summary of the shoreline inventory and characterization study, a summary of the shoreline restoration plan, background on how the shoreline buffers were determined, and an explanation of where the goals, policies and regulations for the shoreline are located.

The language in the public review drafts represents the mandatory consistency updates, housekeeping changes to streamline the document, and staff's recommended policy changes. For the policy questions alternatives are listed below the discussion of the staff recommendation.

### **Consistency with State Regulations**

As documented in the Gap Analysis report there are areas where the City's regulations do not reflect recent changes to State law. These include updates to definitions, new shoreline exemptions, and updated references to RCW and WAC sections. These changes are mandatory for consistency across jurisdictions. The proposal also includes language for revisions and time extensions for issued shoreline permits in accordance with State requirements.

### **Streamlining/Eliminating Duplication**

The current SMP includes policies and regulations that were subsequently also adopted into the Comprehensive Plan and Zoning Code. This duplication has given rise to inconsistencies and requires duplicate amendments whenever changes are made. The proposal is to create a multi-part SMP that spans these documents and includes the Shoreline Element and Chapter 18.44 by reference without repeating policy or regulation language.

The current Chapter 18.44 Shoreline Overlay duplicates the environmental regulations found in Chapter 18.45 Sensitive Area Ordinance for sensitive areas within the shoreline jurisdiction. After discussion with our DOE reviewer the proposal is to eliminate this duplication, reference the regulations in 18.45 that are currently being updated, and add additional language about applicability and limitations of that chapter. This does mean that adoption of the environmental regulation update will need to occur concurrently with the adoption of the shoreline update.

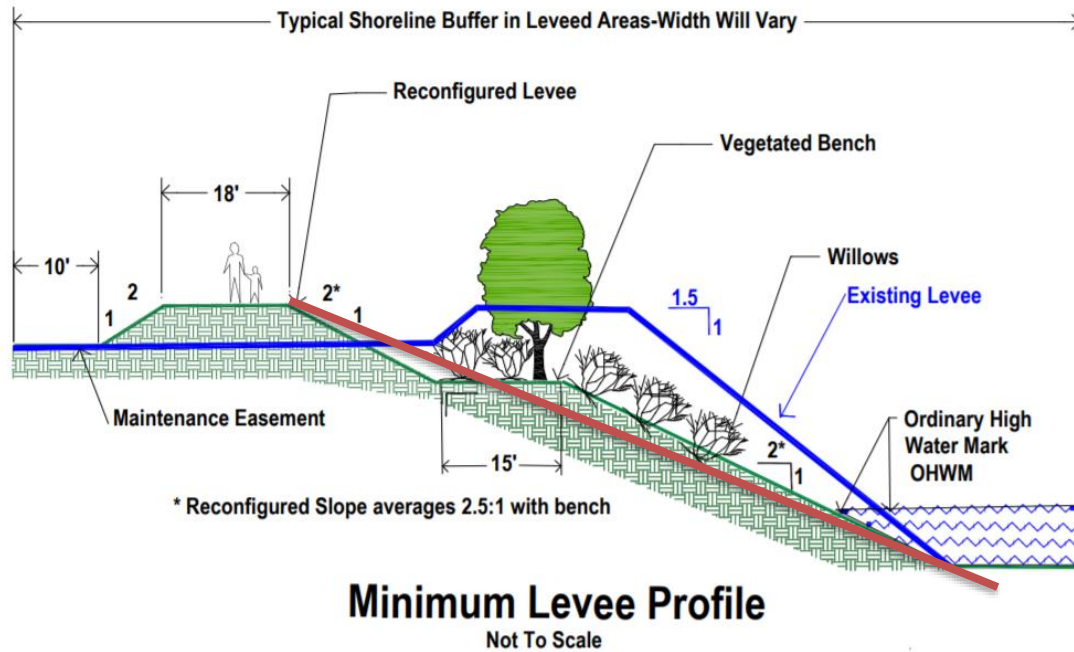
Another proposal is to combine the shoreline use matrix and narrative list of uses into a single table for clarity. Similarly, the narrative discussion of shoreline buffers has been put into a table. Tree protection standards and penalties for tree unauthorized removal are proposed to be updated to match the standards required outside of the shoreline under the new Tree Ordinance.

### **Policy Questions**

#### **1) Additional Flexibility for Levee Profile**

The current SMP contains a minimum levee profile with a mid-slope bench that is required throughout the City. In practice this has not always been the chosen solution for a given location and has required

a shoreline variance even for designs with better environmental performance. The proposal is to retain the minimum levee profile as an example but allow flexibility to address site conditions and environmental opportunities without the variance process as long as criteria such as an overall 2.5:1 river bank slope (red line below) and native plantings are met.



**Alternatives:**

- A. Accept the proposal in the public review draft to allow more flexibility in levee design, or
- B. Retain the current minimum levee profile and continue to require variances for designs that deviate from that cross section, or
- C. Select different levee design standards.

**2) Additional Flexibility for Floodwalls**

This update is happening alongside a discussion about flood protection measures in the Lower Green River Corridor Flood Hazard Management Plan. There are multiple alternatives under consideration including the question of whether future levees should be built to protect against 500 year rather than 100 year flood events. This could require levees to be between 3.5 and 5.5 feet higher, which requires between 20 and 30 additional feet of width with a front and back slope of at least 2.5:1 or adding 3.5 to 5.5 feet of height to a flood wall configuration without the need for an additional 20 to 30 feet of width.

The current Flood Control District access road standard is 15', not the 10' built into our current buffer calculation so the total width of the levee footprint could increase by up to 35 feet. Allowing an alternative flood wall configuration to substitute for the back slope, especially where site constraints exist, would reduce the width needed and lessen the impact on adjacent property owners. Levees are so expensive to build and the consequences of a levee failure are so significant that the need to allow site specific design solutions may be desirable to reach life safety and economic goals.

**Alternatives:**

- A. Accept the proposal in the public review draft to allow greater use of floodwalls, or
- B. Retain the current restrictions on use of floodwalls and widen the shoreline buffer to cover a wider levee footprint, or
- C. Select different flood wall standards.

**3) Increased Height Incentives**

The proposal is to provide increased building height incentives for property owners who provide shoreline restoration or shoreline public access above that required by code. Currently the shoreline 45 foot height limit may be increased by 15% on properties that restore shoreline buffers or build shoreline public access amenities. However, this only results in a 6.75 foot building height increase, not enough for an additional story, so developers have not used the provision. Changing to a 30% or 13.5 foot increase may be a more appealing incentive to encourage buffer restoration or public access.

**Alternatives:**

- A. Accept the incentive increase proposal in the public review draft, or
- B. Retain the current 15% height incentive, or
- C. Select different height incentive such as increasing the building height to that allowed in the underlying zone.

**4) Resloping Standard for Buffer Reduction in Urban Conservancy**

As an alternative to the standard buffer in non-leveed areas of a shoreline environment a property owner may opt to voluntarily reslope (lay back) the bank to a more stable angle and replant it with native plant species to a specific standard. The buffer would then be reduced to the width needed to accommodate the enhanced cross section. Currently the standard for this reduction in the Urban Conservancy environment is a river bank slope of 2.5:1 and the proposal is to change it to 3:1 to match the standard in the High Intensity environment. This means that if the top of the bank is 10 feet higher in elevation than the ordinary high water mark the river bank would be flattened to create a 30 foot wide slope. This more gentle slope would improve habitat value, reduce erosion, and provide greater flood capacity.

**Alternatives:**

- A. Accept the proposal in the public review draft to require flatter river banks for properties seeking buffer reductions, or
- B. Retain the current 2.5:1 standard for buffer reductions in Urban Conservancy, or
- C. Select different criteria for buffer enhancement and reduction.

**RECOMMENDATION**

Hold the public hearing on the proposed changes, review each proposed change and policy alternative, and determine whether any additional changes should be added based on public testimony. Staff will return with a comment matrix and revised drafts for the PC to review and forward to the City Council.



**ZONING CODE CHAPTER 18.06**

**DEFINITIONS**

**18.06.210 Development**

"Development" means the construction, reconstruction, conversion, structural alteration, relocation, or enlargement of any structure that requires a building permit. "Development" does not include dismantling or removing structures if there is no other associated development or re-development.

**18.06.330 Floodplain** "Floodplain" means that land area susceptible to inundation with a one percent chance of being equaled or exceeded in any given year (synonymous with 100-year floodplain). The limit of this area shall be based upon flood ordinance regulation maps or a reasonable method that meets the objectives of the Shoreline Management Act.

**18.06.338 Floodway**

~~"Floodway" means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot~~

"Floodway" means the area that has been established in effective federal emergency management agency flood insurance rate maps or floodway maps. The floodway does not include lands that can reasonably be expected to be protected from flood waters by flood control devices maintained by or maintained under a license from the federal government, the state, or a political subdivision of the state.

~~**18.06.425 High Impact Environment** "High impact environment" means the area between the low impact environment and a point 200 feet landward from the mean high water mark. (Ord. 1758 §1 (part), 1995)~~

**Commented [NG1]:** This is a term from the prior SMP and is no longer used.

~~**18.06.550 Low Impact Environment** "Low impact environment" means the area between the River Environment and a point 100 feet landward from the mean high water mark having environmentally protective land use regulations as established in the Shoreline Overlay District chapter of this title.~~

**Commented [NG2]:** This is a term from the prior SMP and is no longer used.

~~**18.06.494 Levee, Minimum Profile**~~

~~"Levee, minimum profile" means the minimum levee profile for any new or reconstructed levees is the King County "Briscoe Levee" profile — 2.5:1 overall slope with 15-foot mid slope bench for maintenance access and native vegetation plantings.~~

**Commented [NG3]:** The proposal is to move away from a specific levee design and instead give parameters such as overall 2.5:1 or flatter slope from the toe.

**18.06.691 River Channel** "River channel" means that area of the river environment lying riverward of the mean high water mark. (Ord. 1758 §1 (part), 1995)

~~**18.06.695 River Environment** "River environment" means the area between the mean high water mark and a point 40 feet landward from the mean high water mark, having the most environmentally protective land use regulations as established in the Shoreline Overlay District chapter of this title.~~

**Commented [NG4]:** This is a term from the prior SMP and is no longer used.

~~**18.06.755 Shoreline** "Shoreline" means the line at mean high water surrounding any body of water of 20 acres or larger or where the mean flow is 20 cubic feet per second or greater. (Ord. 1758 §1 (part), 1995)~~

**Commented [NG5]:** We now regulate at Ordinary High Water Mark (OHWM)

**18.06.757 Shorelines or Shoreline Areas** "Shorelines" or "Shoreline areas" means all "shorelines of the state" and "shorelands" as defined in RCW 90.58.030.

18.06.817 **Substantial Development**

**Commented [NG6]:** These changes are due to updates in State law.

“Substantial development” means any development of which the total cost or fair market value exceeds ~~\$5,000~~ 7,047.00 or any development that materially interferes with the normal public use of the water or shorelines of the state. The dollar threshold established in this definition must be adjusted for inflation by the Office of Financial Management every five years, beginning July 1, 2007, based upon changes in the Consumer Price Index during that time period. “Consumer Price Index” means, for any calendar year, that year’s annual average Consumer Price Index, Seattle, Washington area, for urban wage earners and clerical workers, all items, compiled by the Bureau of Labor and Statistics, United States Department of Labor. The following shall not be considered substantial developments for the purpose of the Shoreline Management Act, but are not exempt from complying with the substantive requirements of this Shoreline Master Program:

1. Normal maintenance or repair of existing structures or developments, including repair of damage caused by accident, fire, or elements.
2. Emergency construction necessary to protect property from damage by the elements.
3. Construction and practices normal or necessary for farming, irrigation, and ranching activities, including agricultural service roads and utilities on shorelands, and the construction and maintenance of irrigation structures including but not limited to head gates, pumping facilities, and irrigation channels. A feedlot of any size, all processing plants, other activities of a commercial nature, and alteration of the contour of the shorelands by leveling or filling other than that which results from normal cultivation, shall not be considered normal or necessary farming or ranching activities. A feedlot shall be an enclosure or facility used or capable of being used for feeding livestock hay, grain, silage, or other livestock feed, but shall not include land for growing crops or vegetation for livestock feeding and/or grazing, nor shall it include normal livestock wintering operations.
4. Construction or modification of navigational aids such as channel markers and anchor buoys.
5. Construction on shorelands by an owner, lessee, or contract purchaser of a single family residence for his own use or for the use of his or her family, which residence does not exceed a height of 35 feet above average grade level and which meets all requirements of the state agency or local government having jurisdiction thereof, other than requirements imposed pursuant to this chapter.
6. Construction of a dock, including a community dock, designed for pleasure craft only, for the private non-commercial use of the owner, lessee, or contract purchaser of single and multiple family residences. This exception applies if either:
  - ~~\_\_\_\_\_~~ (a) In salt waters, the fair market value of the dock does not exceed \$2,500; or (
  - ~~\_\_\_\_\_~~ b) in fresh waters, the fair market value of the dock does not exceed i) \$242,500 for docks that are constructed to replace existing docks, and are of equal or lesser square footage than the existing dock being replaced; or  
ii) \$11,200 for all other docks constructed on freshwaters; but  
iii) However, if subsequent construction having a fair market value exceeding \$2,500 occurs within five years of completion of the prior construction, and the combined fair market value of the subsequent and prior construction exceeds the amount specified above, the subsequent construction shall be considered a substantial development for the purpose of this chapter.
7. Operation, maintenance, or construction of canals, waterways, drains, reservoirs, or other facilities that now exist or are hereafter created or developed as a part of an irrigation system for the primary purpose of making use of system waters, including return flow and artificially stored groundwater for the irrigation of lands.
8. The marking of property lines or corners on state owned lands, when such marking does not significantly interfere with normal public use of the surface of the water.
9. Operation and maintenance of any system of dikes, ditches, drains, or other facilities existing on September 8, 1975, which were created, developed, or utilized primarily as a part of an agricultural drainage or diking system.
10. Site exploration and investigation activities that are prerequisite to preparation of an application for development authorization under this chapter, if:
  - \_\_\_\_\_ a. The activity does not interfere with the normal public use of the surface waters;

b. The activity will have no significant adverse impact on the environment including, but not limited to, fish, wildlife, fish or wildlife habitat, water quality, and aesthetic values;

c. The activity does not involve the installation of a structure, and upon completion of the activity the vegetation and land configuration of the site are restored to conditions existing before the activity;

d. A private entity seeking development authorization under this section first posts a performance bond or provides other evidence of financial responsibility to the local jurisdiction to ensure the site is restored to preexisting conditions; and

e. The activity is not subject to the permit requirements of RCW 90.58.550 (Oil and Natural Gas exploration in marine waters).

11. The process of removing or controlling an aquatic noxious weed, as defined in RCW 17.26.020, through the use of an herbicide or other treatment methods applicable to weed control that are recommended by a final environmental impact statement published by the Department of Agriculture or the department jointly with other state agencies under chapter 43.21C RCW.

12. Watershed restoration projects, which means a public or private project authorized by the sponsor of a watershed restoration plan that implements the plan or a part of the plan and consists of one or more of the following activities:

a. A project that involves less than ten miles of stream reach, in which less than twenty-five cubic yards of sand, gravel, or soil is removed, imported, disturbed or discharged, and in which no existing vegetation is removed except as minimally necessary to facilitate additional plantings;

b. A project for the restoration of an eroded or unstable stream bank that employs the principles of bioengineering, including limited use of rock as a stabilization only at the toe of the bank, and with primary emphasis on using native vegetation to control the erosive forces of flowing water; or

c. A project primarily designed to improve fish and wildlife habitat, remove or reduce impediments to migration of fish, or enhance the fishery resource available for use by all of the citizen of the state, provided that any structure, other than a bridge or culvert or instream habitat enhancement structure associated with the project, is less than two hundred square feet in floor area and is located above the ordinary high water mark of the stream.

13. Watershed restoration plan, which means a plan, developed or sponsored by the department of fish and wildlife, the department of ecology, the department of natural resources, the department of transportation, a federally recognized Indian tribe acting within and pursuant to its authority, a city, a county or a conservation district that provides a general program and implementation measures or actions for the preservation, restoration, re-creation, or enhancement of the natural resources, character, and ecology of a stream, stream segment, drainage area or watershed for which agency and public review has been conducted pursuant to the State Environmental Policy Act.

14. A public or private project that is designed to improve fish or wildlife habitat or fish passage, when all of the following apply:

a. The project has been approved in writing by the department of fish and wildlife;

b. The project has received hydraulic project approval by the department of fish and wildlife pursuant to chapter 77.55 RCW; and

c. The local government has determined that the project is substantially consistent with the local shoreline master program. The local government shall make such determination in a timely manner and provide it by letter to the project proponent.

Additional criteria for determining eligibility of fish habitat projects are found in WAC 173-27-040 2 (p) and apply to this exemption.

15. The external or internal retrofitting of an existing structure with for the exclusive purpose of compliance with the Americans with Disabilities Act of 1990 (42 U.S.C. Sec. 12101 et seq.) or to otherwise provide physical access to the structure by individuals with disabilities.

**ZONING CODE CHAPTER 18.44**  
**SHORELINE OVERLAY DISTRICT**

**Sections:**

- ~~18.44.010~~ 18.44.010 Purpose and Applicability
- 18.44.020 Shoreline Environment Designations
- 18.44.030 Principally Permitted Uses and Shoreline Use and Modification Matrix
- 18.44.040 ~~Shoreline Residential Environment – Uses~~ Shoreline Buffers
- 18.44.050 ~~Urban Conservancy Environment – Uses~~
- 18.44.060 ~~High Intensity Environment – Uses~~
- 18.44.065 ~~Aquatic Environment – Uses~~
- 18.44.070 ~~050~~ 050 Development Standards
- 18.44.080 ~~060~~ 060 Vegetation Protection and Landscaping
- 18.44.090 ~~070~~ 070 Environmentally ~~Sensitive~~ Critical Areas within the Shoreline Jurisdiction
- 18.44.100 ~~080~~ 080 Public Access to the Shoreline
- 18.44.110 ~~090~~ 090 Shoreline Design Guidelines
- 18.44.120 ~~100~~ 100 Shoreline Restoration
- 18.44.130 Administration
- 18.44.140 ~~120~~ 120 Appeals
- 18.44.150 ~~130~~ 130 Enforcement and Penalties
- 18.44.160 ~~140~~ 140 Liability

**18.44.010 Purpose and Applicability**

A. The purpose of this chapter is to implement the Shoreline Management Act of 1971, as amended and the rules and regulations thereunder as codified in the Washington Administrative Code; and to provide for the regulation of development which affect those areas of the City under the jurisdiction of the Shoreline Management Act. In particular, the purpose of this chapter is to:

1. Recognize and protect shorelines of State-wide significance;
2. Preserve the natural character of the shoreline;
3. Protect the resources and ecology of the shoreline;
4. Increase public access to publicly -owned areas of the shoreline;
5. Increase recreational opportunities for the public in the shoreline;
6. Protect and create critical Chinook salmon habitat in the Transition Zone of the Green River

**B. Applicability of Amended Zoning Code.** After the effective date of this ordinance, Chapter 18.44 of the Zoning Code, as hereby amended, shall apply to all properties subject to the shoreline overlay, provided that nothing contained herein shall be deemed to override any vested rights or require any alteration of a non-conforming use or non-conforming structure, except as specifically provided in Chapter 18.44 of the Zoning Code, as amended.

**C. Pursuant to WAC 173-26-191-(2)(-c), this Chapter, together with the Shoreline Element of the Comprehensive Plan, constitutes the City of Tukwila’s Shoreline Master Program. Any modifications to these documents will be processed as a Shoreline Master Program Amendment and require approval by the Department of Ecology.**

**Commented [NG7]:** This section explains that Tukwila’s Shoreline Master Program is comprised of policy and regulations in separate documents.

**18.44.020 Shoreline Environment Designations**

All shoreline within the City is designated “urban” and further identified as follows:

1. **Shoreline Residential Environment.** All lands zoned for residential use as measured 200 feet landward from the Ordinary High Water Mark (OHWM).
2. **Urban Conservancy Environment.** All lands not zoned for residential use upstream from the Turning Basin as measured 200 feet landward from the OHWM.

**Commented [NG8]:** No changes are proposed to the shoreline environment designations.



3. **High Intensity Environment.** All lands downstream from the Turning Basin as measured 200 feet landward from the OHWM.

4. **Aquatic Environment.** All water bodies within the City limits and its potential annexation areas under the jurisdiction of the Shoreline Management Act waterward of the Ordinary High Water Mark. The Aquatic Environment includes the water surface together with the underlying lands and the water column.

(Ord. 2346 §1, 2011)

**18.44.030 Principally Permitted Uses and Shoreline Use and Modification Matrix**

A. TMC Section 18.44.030(A), including the Use Matrix (**Figure 18-1**), specifies the uses that are permitted outright, permitted as a Conditional Use or prohibited altogether for each Shoreline Environment. Also included are special conditions and general requirements controlling specific uses. These regulations are intended to implement the purpose of each Shoreline Environment designation.

B. In the matrix, shoreline environments are listed at the top of each column and the specific uses are listed along the left-hand side of each horizontal row. The cell at the intersection of a column and a row indicates whether a use may be allowed in a specific shoreline environment and whether additional use criteria apply. The matrix shall be interpreted as follows:

1. If the letter "P" appears in the box at the intersection of the column and the row, the use may be allowed within the shoreline environment if the underlying zoning also allows the use. Shoreline (SDP, CUP and Variance) permits may be required.

2. If the letter "C" appears in the box at the intersection of the column and the row, the use may be allowed within the shoreline environment subject to the shoreline conditional use review and approval procedures specified in TMC- Section 18.44.130-110-C.

3. If the letter "X" appears in the box at the intersection of the column and the row, the use is prohibited in that shoreline environment.

C. In addition to the matrix the following general use requirements also apply to all development within the shoreline jurisdiction. Additional requirements controlling specific uses are set forth for each Shoreline Environment designation, to implement the purpose of the respective Shoreline Environment designations.

1. The first priority for City-owned property other than right-of-way within the shoreline jurisdiction shall be reserved for water-dependent uses including but not limited to habitat restoration, followed by water-enjoyment uses, public access, passive recreation, passive open space uses, or public educational purposes.

2. No hazardous waste handling, processing or storage is allowed within the SMA shoreline jurisdiction, unless incidental to a use allowed in the designated shoreline environment and adequate controls are in place to prevent any releases to the shoreline/river.

3. Overwater structures, shall not cause a net loss of ecological function, interfere with navigation or flood management, or present potential hazards to downstream properties or facilities. They shall comply with the standards in the Overwater Structures Section of TMC Section 18.44.070-050(K).

4. Parking as a primary use is not permitted, except for existing Park and Ride lots, where adequate stormwater collection and treatment is in place to protect water quality. Parking is permitted only as an accessory to a permitted or conditional use in the shoreline jurisdiction.

5. All development, activities or uses, unless it is an approved overwater, flood management structure or shoreline restoration project, shall be prohibited waterward of the OHWM.

(Ord. 2346 §2, 2011)

**Commented [NG9]:** The proposal is to combine the Use Matrix and the narrative list of uses into one table for clarity. Shoreline use categories are broader than Zoning District uses and both sets of requirements must be met when establishing a new use.

City of Tukwila Shoreline Update

P = May be Permitted Subject to development standards C = May be Permitted as a Shoreline Conditional Use X = Not Allowed in Shoreline Jurisdiction	Shoreline Residential		Urban Conservancy		High Intensity		Aquatic Environment
	Buffer-(1)	Non-Buffer	Buffer (2)	Non-Buffer	Buffer (3)	Non-Buffer	
<b>AGRICULTURE</b>							
Farming and farm-related activities	X	X	X	P	X	X	X
Aquaculture	X	X	X	X	X	X	X
<b>COMMERCIAL (4,1)</b>							
General	X	X	X	P	X	P (82)	P (53)
Automotive services, gas (outside pumps allowed), washing, body and engine repair shops (enclosed within a building)	X	X	X	C	X (82)	C	X
Contractors storage yards	X	X	X	C	X (82)	C	X
Water-oriented uses	<del>P</del> C	P	<del>C</del> P	P	<del>P</del> C	P	<del>X</del> C
<u>Water-dependent uses</u>	<del>P (4)</del>	<del>P (5)</del>	<del>P (4)</del>	<del>P</del>	<del>P (4)</del>	<del>P</del>	<del>P</del>
<u>Storage</u>	<del>P (6)</del>	<del>P (5)</del>	<del>P (6)</del>	<del>P</del>	<del>P (6)</del>	<del>P</del>	<del>X</del>
<b>CIVIC/INSTITUTIONAL</b>							
General	X	P	X	P	X	P	X
<b>DREDGING</b>							
<u>Dredging for remediation of contaminated substances</u>	<del>C (7)</del>	<del>NA</del>	<del>C (7)</del>	<del>NA</del>	<del>C (7)</del>	<del>NA</del>	<del>C (7)</del>
<u>Dredging for maintenance of established navigational channel</u>	<del>NA</del>	<del>NA</del>	<del>NA</del>	<del>NA</del>	<del>NA</del>	<del>NA</del>	<del>P (8)</del>
<u>Other dredging for navigation</u>	<del>NA</del>	<del>NA</del>	<del>NA</del>	<del>NA</del>	<del>NA</del>	<del>NA</del>	<del>C (9)</del>
<u>Dredge material disposal</u>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>
<u>Dredging for fill</u>	<del>NA</del>	<del>NA</del>	<del>NA</del>	<del>NA</del>	<del>NA</del>	<del>NA</del>	<del>X</del>
<b>ESSENTIAL PUBLIC FACILITY (Water Dependent) –</b>	<del>C</del> P	<del>P</del> C	<del>C</del> P	<del>P</del> C	<del>C</del> P	<del>P</del> C	<del>P (5)</del>
<b>ESSENTIAL PUBLIC FACILITY (Nonwater Dependent) (910)</b>	C	C	C	C	C	C	C
<b>FENCES</b>	<del>P (11)</del>	<del>P</del>	<del>C (11)</del>	<del>P</del>	<del>C (11)</del>	<del>P</del>	<del>X</del>
<b>FILL</b>							
<u>General</u>	<del>C (12)</del>	<del>P</del>	<del>C (12)</del>	<del>P</del>	<del>C (12)</del>	<del>P</del>	<del>C (12)</del>
<u>Fill for remediation or ecological restoration</u>	<del>P (13)</del>	<del>P</del>	<del>P (13)</del>	<del>P</del>	<del>P (13)</del>	<del>P</del>	<del>P (13)</del>
<b>FLOOD HAZARD MANAGEMENT</b>							

City of Tukwila Shoreline Update

P = May be Permitted Subject to development standards C = May be Permitted as a Shoreline Conditional Use X = Not Allowed in Shoreline Jurisdiction	Shoreline Residential		Urban Conservancy		High Intensity		Aquatic Environment
	Buffer- <del>(1)</del>	Non-Buffer	Buffer- <del>(2)</del>	Non-Buffer	Buffer- <del>(3)</del>	Non-Buffer	
Flood hazard reduction <u>(14)</u>	P	P	P	P	P	P	P
Shoreline stabilization <u>(15)</u>	P	P	P	P	P	P	P
<b>INDUSTRIAL <u>(16)</u></b>							
General	X	X	P <u>(53)</u>	P	P <u>(53)</u>	P <u>(82)</u>	P <u>(53)</u>
Animal rendering	X	X	X	C	X	X	X
Cement manufacturing	X	X	X	C	X	C <u>(82)</u>	X
Hazardous substance processing and handling & hazardous waste treatment and storage facilities (on or off-site) <u>(617)</u>	X	X	X	X	X	X	X
Rock crushing, asphalt or concrete batching or mixing, stone cutting, brick manufacture, marble works, and the assembly of products from the above materials	X	X	X	C	X	C <u>(82)</u>	X
Salvage and wrecking operations	X	X	X	C	X	C <u>(82)</u>	X
Tow-truck operations, subject to all additional State and local regulations	X	X	X	C	X	P <u>(82)</u>	X
Truck terminals	X	X	X	P	X	P <u>(82)</u>	X
Water-oriented uses	X	X	P <u>C</u>	P	P <u>C</u>	P	P <u>C</u>
<u>Water-dependent uses (17)</u>	<u>X</u>	<u>X</u>	<u>P (4)</u>	<u>P</u>	<u>P (4)</u>	<u>P</u>	<u>P</u>
<b>MINING</b>							
General	X	X	X	X	X	X	X
<del>Dredging</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>C</del>
<b>OVERWATER STRUCTURES <u>(18)</u></b>							
<u>Piers, Docks, and other overwater structures</u>	<u>P(19)</u>	<u>NA</u>	<u>P (20)</u>	<u>NA</u>	<u>P (20)</u>	<u>NA</u>	<u>P (20,21)</u>
<u>Vehicle bridges (public)</u>	<u>P (31, 4)</u>	<u>P (31)</u>	<u>P (31, 4)</u>	<u>P (31)</u>	<u>P (31, 4)</u>	<u>P (31)</u>	<u>P (31)</u>
<u>Vehicle bridges (private)</u>	<u>C</u>	<u>C</u>	<u>C</u>	<u>C</u>	<u>C</u>	<u>C</u>	<u>C</u>
<u>Public pedestrian bridges</u>	<u>P</u>	<u>P</u>	<u>P</u>	<u>P</u>	<u>P</u>	<u>P</u>	<u>P</u>
<b>PARKING -- ACCESSORY</b>							
Parking areas limited to the minimum necessary to support permitted or conditional uses	X	P <u>(5)</u>	X	P	X	P	X
<b>RECREATION</b>							
Recreation facilities (commercial – indoor)	X	X	X	P	X	P <u>(2211)</u>	X
Recreation facilities (commercial – outdoor)	X	X	C <u>(23,2412)</u>	C <u>(24)</u>	X <u>C(23,24) C (24)</u>	X	X
Recreation facilities, including boat launching (public)	P <u>(123)</u>	P	P <u>(23,24)</u>	C <u>(12)</u>	C	P <u>(23)</u>	P <u>(53)</u>
<u>Public and private promenades, footpaths, or trails</u>	<u>P</u>	<u>P</u>	<u>P (26)</u>	<u>P</u>	<u>P (26)</u>	<u>P</u>	<u>X</u>
<b>RESIDENTIAL – SINGLE FAMILY/MULTI-FAMILY</b>							
Dwelling	X <u>(2710)</u>	P	X	P	X	X	X
Houseboats	X	X	X	X	X	X	X
Live-aboards	X	X	X	X	X	X	P <u>(21,2813)</u>

City of Tukwila Shoreline Update

P = May be Permitted Subject to development standards C = May be Permitted as a Shoreline Conditional Use X = Not Allowed in Shoreline Jurisdiction	Shoreline Residential		Urban Conservancy		High Intensity		Aquatic Environment
	Buffer-(1)	Non-Buffer	Buffer-(2)	Non-Buffer	Buffer-(3)	Non-Buffer	
<u>Patios and Decks</u>	<u>P(29)</u>	<u>P</u>	<u>P(29)</u>	<u>P</u>	<u>P</u>	<u>P</u>	<u>X</u>
<u>SIGNS (30)</u>	<u>P</u>	<u>P</u>	<u>P</u>	<u>P</u>	<u>P</u>	<u>P</u>	<u>X</u>
<u>SHORELINE RESTORATION</u>	<u>P</u>	<u>P</u>	<u>P</u>	<u>P</u>	<u>P</u>	<u>P</u>	<u>P</u>
<b>TRANSPORTATION</b>							
General	C	C	C	C	C	C	C (35)
Park & ride lots	X	X	X	C (9)	X	C (9)	X
<u>Levee maintenance roads</u>	<u>P (32)</u>	<u>P (32)</u>	<u>P (32)</u>	<u>P (32)</u>	<u>P (32)</u>	<u>P (32)</u>	<u>NA</u>
<u>Railroad</u>	<u>X</u>	<u>P</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>
<b>UTILITIES</b>							
General (910)	<u>C(4)</u>	<u>P</u>	<u>P(4)</u>	<u>P</u>	<u>P(4)</u>	<u>P</u>	<u>C</u>
<u>Provision, distribution, collection, transmission, or disposal of refuse</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>
Hydroelectric and private utility power generating plants	X	X	X	X	X	X	X
<u>Wireless towers</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>
<u>Support facilities, such as outfalls</u>	<u>P (33)</u>	<u>P</u>	<u>P (33)</u>	<u>P</u>	<u>P (33)</u>	<u>P</u>	<u>C (33)</u>
<u>Regional detention facilities</u>	<u>X</u>	<u>X</u>	<u>P (34)</u>	<u>P (34)</u>	<u>P (34)</u>	<u>P (34)</u>	<u>X</u>
<b>USES NOT SPECIFIED</b>	<u>C</u>	<u>C</u>	<u>C</u>	<u>C</u>	<u>C</u>	<u>C</u>	<u>C</u>

\*This matrix is a summary. Individual notes modify standards in this matrix. Detailed use standards are found in the text of this chapter. Permitted or conditional uses listed herein may also require a shoreline substantial development permit and other permits.

(1) Additional permitted uses found at TMC 18.44.040 are allowed in the buffer.

(2) Additional permitted uses found at TMC 18.44.050 are allowed in the buffer.

(3) Additional permitted uses found at TMC 18.44.060 are allowed in the buffer.

1. Commercial uses mean those uses that are involved in wholesale, retail, service and business trade. Examples include office, restaurants, brew pubs, medical, dental and veterinary clinics, hotels, retail sales, hotel/motels, and warehousing.
2. Nonwater-oriented uses may be allowed as a permitted use where the City determines that water-dependent or water-enjoyment use of the shoreline is not feasible due to the configuration of the shoreline and water body.
3. Permitted only if water dependent.
4. Structures greater than 35 feet tall require a conditional use permit.
5. Permitted if located to the most upland portion of the property and adequately screened and/or landscaped in accordance with the Vegetation Protection and Landscaping section.
6. Outdoor storage within the shoreline buffer is only permitted in conjunction with a water-dependent use.
7. Conditionally allowed when in compliance with all federal and state regulations.
8. Maintenance dredging of established navigation channels and basins is restricted to maintaining previously dredged and/or existing authorized location, depth and width.
9. Conditionally allowed when significant ecological impacts are minimized and mitigation is provided.

10. Allowed in shoreline jurisdiction when it is demonstrated that there is no feasible alternative to locating the use within shoreline jurisdiction.
11. The maximum height of the fence along the shoreline shall not exceed four feet and the fence shall not extend waterward beyond the top of the bank. Chain-link fences must be vinyl coated.
12. Fill minimally necessary to support water-dependent uses, public access, or for the alteration or expansion of a transportation facility of statewide significance currently located on the shoreline when it is demonstrated that alternatives to fill are not feasible is conditionally allowed.
13. Landfill as part of an approved remediation plan for the purpose of capping contaminated sediments is permitted.
14. Any new or redeveloped levee shall meet the applicable levee requirements of this chapter.
15. Permitted when consistent with TMC Section 18.44.050 F.
16. Industrial uses mean those uses for manufacturing, processing, assembling and/or storing of finished or semi-finished goods with supportive office and commercial uses. Examples include, but are not limited to, manufacturing processing and/or assembling such items as electrical or mechanical equipment, previously manufactured metals, chemicals, light metals, plastics, solvents, soaps, wood, machines, food, pharmaceuticals, previously prepared materials; warehousing and wholesale distribution; sales and rental of heavy machinery and equipment; and internet data centers.
17. Subject to compliance with state siting criteria found in Chapter 70.105d RCW (See also Environmental Regulations, TMC Section 18.44.070).
18. Permitted when associated with water-dependent uses, public access, recreation, flood control or channel management.
19. Permitted when the applicant has demonstrated a need for moorage and that the following alternatives have been investigated and are not available or feasible:
  - a. commercial or marina moorage;
  - b. floating moorage buoys;
  - c. joint use moorage pier/dock.
20. Permitted if associated with water-dependent uses, public access, recreation, flood control, channel management or ecological restoration.
21. Boats may only be moored at a dock or marina. No boats may be moored on tidelands or in the river channel.
22. Limited to athletic or health clubs.
23. Recreation furniture and structures such as benches, tables, viewpoints, and picnic shelters are permitted in the buffer provided no such structure shall block views to the shoreline from adjacent properties.
24. Permitted only if water-oriented.
25. Parks, recreation and open space facilities open to the public and operated by public agencies and non-profit organizations are permitted.
26. Plaza connectors between buildings and levees, not exceeding the height of the levee, are permitted for the purpose of providing and enhancing pedestrian access along the river and for landscaping purposes.
27. Additional development may be allowed consistent with TMC Section 18.44.110.-G.-2.-f. A shoreline conditional use permit is required for water-oriented accessory structures that exceed the height limits of the Shoreline Residential environment.
28. Permitted in only in the Aquatic Environment and subject to the criteria in TMC Section 18.44.050.-K.5.
29. Patios and decks are permitted within the shoreline buffer so long as they do not exceed 18 inches in height, are limited to a maximum of 200 square feet and 50% of the width of the river frontage. Decks or patios must be located landward of the top of the bank and be constructed to be pervious and of environmentally-friendly materials.
30. Permitted when consistent with TMC Section 18.44.050 L.
31. Permitted only if connecting public rights-of-way.

32. May be co-located with fire lanes or parking areas.

33. Allowed if they require a physical connection to the shoreline to provide their support function, provided they are located at or below grade and as far from the OHWM as technically feasible.

34. Regional detention facilities that meet the City's Infrastructure Design and Construction Standards along with their supporting elements such as ponds, piping, filter systems and outfalls vested as of the effective date of this program or if no feasible alternative location exists. Any regional detention facility located in the buffer shall be designed such that a fence is not required, planted with native vegetation, designed to blend with the surrounding environment, and provide design features that serve both public and private use, such as an access road that can also serve as a trail. The facility shall be designed to locate access roads and other impervious surfaces as far from the river as practical.

(4) Commercial uses mean those uses that are involved in wholesale, retail, service and business trade. Examples include office, restaurants, brew pubs, medical, dental and veterinary clinics, hotels, retail sales, hotel/motels, and warehousing.

(5) Permitted only if water dependent.

(6) Subject to compliance with state siting criteria RCW Chapter 70.105 (See also Environmental Regulations, TMC 18.44.090).

(7) Industrial uses mean those uses that are facilities for manufacturing, processing, assembling and/or storing of finished or semi-finished goods with supportive office and commercial uses. Examples include manufacturing, processing and/or assembling such items as electrical or mechanical equipment, previously manufactured metals, chemicals, light metals, plastics, solvents, soaps, wood, machines, food, pharmaceuticals, previously prepared materials; warehousing and wholesale distribution; sales and rental of heavy machinery and equipment; and internet data centers.

(8) Non-water oriented uses may be allowed as a permitted use where the City determines that water dependent or water enjoyment use of the shoreline is not feasible due to the configuration of the shoreline and water body.

(9) Allowed in shoreline jurisdiction when it is demonstrated that there is no feasible alternative to locating the use within shoreline jurisdiction.

(10) Additional development may be allowed consistent with TMC 18.44.130 E. 2. f. A shoreline conditional use permit is required for water-oriented accessory structures that exceed the height limits of the Shoreline Residential Environment.

(11) Limited to athletic or health clubs.

(12) Permitted only if water oriented.

**18.44.040 Shoreline Buffers**

**A. Buffer widths. The following river buffer widths apply in shoreline jurisdiction.**

<u>Environment</u>	<u>Buffer width (1)(2)</u>	<u>Modification</u>
<u>Shoreline Residential</u>	<u>50 feet OR the area needed to achieve a slope no steeper than 2.5:1, measured from the toe of the bank to the top of the bank, plus 20 linear feet measured from the top of the bank landward, whichever is greater</u>	<u>(3)</u>
<u>Urban Conservancy</u>	<u>Areas without levees</u> <u>100 feet</u>	<u>(4)</u>

**Commented [NG10]:** The buffer distances and modifications that were previously included in the use section have been consolidated into a table.

<u>Areas with levees</u>	<u>125 feet</u>	<u>(5)</u>
<u>High Intensity</u>	<u>100 feet</u>	<u>(4)</u>
<u>Aquatic</u>	<u>Not Applicable</u>	

1. Unless otherwise noted, all buffers are measured landward from the OHWM.
2. In any shoreline environment where an existing improved street or road runs parallel to the river through the buffer, the buffer ends on the river side of the edge of the improved right-of-way.
3. Removal of invasive species and replanting with native species of high habitat value is voluntary unless triggered by requirement for a Shoreline Substantial Development permit.
4. The Director may reduce the standard buffer on a case-by-case basis by up to 50% upon construction of the following cross section:
  - a. Reslope bank from OHWM (not toe) to be no steeper than 3:1, using bioengineering techniques
  - b. Minimum 20' buffer landward from top of bank
  - c. Bank and remaining buffer to be planted with native species with high habitat value

**Commented [NG11]:** The current code calls for 2.5:1 slopes in the Urban Conservancy environment. 3:1 in High Intensity. The proposal is to require buffer reductions in both areas reslope to 3:1.

Maximum slope is reduced due to measurement from OHWM and to recognize location in the Transition Zone where pronounced tidal influence makes work below OHWM difficult.

Any buffer reduction proposal must demonstrate to the satisfaction of the Director that it will not result in direct, indirect or long-term adverse impacts to the river. In all cases, a buffer enhancement plan must also be approved and implemented as a condition of the reduction. The plan must include the use of a variety of native vegetation that improves the functional attributes of the buffer and provides additional protection for the shoreline ecological functions.

5. Upon reconstruction of a levee to the levee standards of this chapter, the Director may reduce the buffer to actual width required for the levee. If fill is placed along the back slope of a new levee, the buffer may be reduced to the point where the ground plane intersects the back slope of the levee. If the property owner provides a 15-foot levee maintenance easement landward from the landward toe of the levee or levee wall which prohibits the construction of any structures and allows the City to access the area to inspect the levee and make any necessary repairs that area may be outside of the shoreline buffer and allow incidental uses such as parking.

**18.44.040 Shoreline Residential Environment — Uses**

~~A. **Shoreline Residential Buffer — Delineated Uses.** The Shoreline Residential River Buffer shall consist of the area needed to achieve a 2.5:1 slope of the river bank, measured from the toe of the bank to the top of the bank, plus 20 linear feet measured from the top of the bank landward; provided, that in no case shall the Shoreline Residential Buffer be less than 50 feet landward of the OHWM.~~

**Commented [SS12]:** These sections are shown as deleted because the uses have been moved to use and modifications matrix in 18.44.030

1. ~~**Permitted Uses.** No uses or structures are permitted in the Shoreline Residential Buffer except for the following:~~
  - ~~a. Shoreline restoration projects.~~
  - ~~b. Over-water structures subject to the standards in the Over-water Structures Section associated with water dependent uses, public access, recreation, flood control or channel management. Private, single residence piers for the sole use of the property owner shall not be considered an outright use on the shoreline. A dock may be allowed when the applicant has demonstrated a need for moorage and that the following alternatives have been investigated and are not available or feasible:~~
    - ~~(1) commercial or marina moorage;~~
    - ~~(2) floating moorage buoys;~~

- ~~(3) joint use moorage pier/dock.~~
- ~~c. Public parks, recreation and open space.~~
  - ~~d. Public pedestrian bridges.~~
  - ~~e. Public and/or private promenades, footpaths or trails.~~
  - ~~f. Recreation structures such as benches, tables, viewpoints, and picnic shelters, provided no such structure shall exceed 15 feet in height or 25 square feet in area or block views to the shoreline from adjacent properties.~~
  - ~~g. Signs conforming to the development standards of this chapter.~~
  - ~~h. Construction, maintenance or re-development of levees for flood control purposes, provided that any new or redeveloped levee shall meet the applicable levee requirements of this chapter.~~
  - ~~i. Vehicle bridges, only if connecting public rights-of-way.~~
  - ~~j. Utility towers and utilities, except the provision, distribution, collection, transmission or disposal of refuse.~~
  - ~~k. Fire lanes when co-located with levee maintenance roads.~~
  - ~~l. New shoreline stabilization utilizing the development standards in TMC Section 18.44.070(F).~~
  - ~~m. Water dependent uses and their structures, as long as there is no net loss of shoreline ecological function.~~
    - ~~n. Fences, provided the maximum height of a fence along the shoreline is four feet and the fence does not extend waterward beyond the top of the bank. Chain link fences must be vinyl coated.~~
    - ~~o. Existing essential streets, roads and rights-of-way may be maintained or improved.~~
    - ~~p. Outdoor storage, only in conjunction with a water dependent use.~~
    - ~~q. Water oriented essential public facilities, both above and below ground.~~
    - ~~r. Non-water oriented essential public facilities, both above and below ground, provided it has been documented that no feasible location is available outside of the buffer.~~
    - ~~s. Landfill as part of an approved remediation plan for the purpose of capping contaminated sediments.~~
      - ~~t. Patios or decks not exceeding 18 inches in height, limited to a maximum 200 square feet and 50% of the width of the river frontage. Decks or patios must be located landward of the top of the bank and be constructed to be pervious and of environmentally friendly materials. If a deck or patio will have an environmental impact in the shoreline buffer, then commensurate mitigation shall be required.~~
      - ~~u. Support facilities for above or below ground utilities or pollution control, such as outfall facilities or other facilities that must have a physical connection to the shoreline to provide their support function, provided they are located at or below grade and as far from the OHWM as technically feasible.~~
- ~~2. Conditional Uses. Only the following may be allowed as a Conditional Use in the Shoreline Residential River Buffer subject to the requirements, procedures and conditions established by TMC Chapter 18.64 and shall be reviewed through a Shoreline Conditional Use Permit:~~
- ~~a. Dredging activities when in compliance with all federal and state regulations, when necessary for navigation or remediation of contaminated sediments.~~
  - ~~b. Dredging for navigational purposes is permitted where necessary for assuring safe and efficient accommodation of existing navigational uses and then only when significant ecological impacts are minimized and when mitigation is provided. Maintenance dredging of established navigation channels and basins is restricted to maintaining previously dredged and/or existing authorized location, depth and width. Dredging of bottom materials for the purpose of obtaining fill material is prohibited.~~
  - ~~c. New private vehicle bridges.~~
  - ~~d. Fill minimally necessary to support water dependent uses, public access, or for the alteration or expansion of a transportation facility of statewide significance currently located on the shoreline when it is demonstrated that alternatives to fill are not feasible.~~
  - ~~e. Bridges, approved above ground utility structures, and water dependent uses and their structures greater than 35 feet in height.~~

**Commented [CL13]:** The height and size requirement has been an issue for some of the recreation uses in the shoreline buffer – informational kiosk at Duwamish Hill. In hindsight, I think 15 ft. and 25 sq. ft. are too stringent.

**Commented [NG14R13]:** Note 23 in the use matrix removes these size restrictions.



~~B. **Shoreline Residential Environment Outside of Buffer — Permitted Uses.** The following uses are permitted within the Shoreline Residential Environment outside of the Shoreline Residential River Buffer. Uses shall meet the purposes and criteria of the Shoreline Environment Designation section.~~

~~1. **Permitted Uses.** The Shoreline Residential Environment shall contain residential, recreational and limited commercial uses and accessory uses as allowed in the underlying zoning district. In addition, the Shoreline Residential Environment shall allow the following uses:~~

- ~~a. All uses permitted in the Shoreline Residential River Buffer.~~
- ~~b. For non-residential uses, parking/loading and storage facilities located to the most upland portion of the property and adequately screened and/or landscaped in accordance with the Vegetation Protection and Landscaping section.~~
- ~~c. Railroad tracks.~~
- ~~d. Public or private roads.~~

~~2. **Conditional Uses.** All uses listed as Conditional Uses in the underlying zone may be allowed subject to the requirements, procedures and conditions established by TMC Chapter 18.64. A Shoreline Conditional Use Permit is required.~~

(Ord. 2346 §3, 2011)

~~18.44.050 Urban Conservancy Environment — Uses~~

~~A. **Urban Conservancy Environment Buffer — Delineated.** The Urban Conservancy Environment Buffer shall consist of that area measured 100 feet landward of the OHWM for non-leveed portions of the river, and that area measured 125 feet landward from the OHWM for leveed portions of the river.~~

~~B. **Urban Conservancy Environment Buffer — Uses.**~~

~~1. **Permitted Uses.** The following uses are permitted in the Urban Conservancy River Buffer:~~

- ~~a. Shoreline restoration projects.~~
- ~~b. Over-water structures subject to the standards established in the Over-water Structures Section, TMC Section 18.44.070(K), that are associated with water-dependent uses, public access, recreation, flood control, channel management or ecological restoration.~~
- ~~c. Public parks, recreation and open space.~~
- ~~d. Public and/or private promenades, footpaths or trails.~~
- ~~e. Public pedestrian bridges.~~
- ~~f. Recreation structures such as benches, tables, viewpoints, and picnic shelters, provided no such structure shall exceed 15 feet in height and 25 square feet in area and views of the shoreline are not blocked from adjacent properties.~~
- ~~g. Signs conforming to the development standards of this chapter.~~
- ~~h. Construction, maintenance or re-development of levees for flood control purposes, provided that any new or re-developed levee shall meet the applicable levee requirements of this chapter.~~
- ~~i. New vehicle bridges: permitted only if connecting public rights of way; existing public or private vehicle bridges may be maintained or replaced.~~
- ~~j. Utility towers and utilities, except the provision, distribution, collection, transmission or disposal of refuse.~~
- ~~k. Levee maintenance roads.~~
- ~~l. Plaza connectors between buildings and levees, not exceeding the height of the levee, are permitted for the purpose of providing and enhancing pedestrian access along the river and for landscaping purposes.~~
- ~~m. New shoreline stabilization utilizing the development standards in the Shoreline Stabilization Section, TMC Section 18.44.070(F).~~
- ~~n. Existing essential streets, roads and rights of way may be maintained or improved.~~
- ~~o. Water-dependent commercial and industrial development, if permitted by the underlying zoning district.~~

**Commented [CL15]:** Same explanation as under residential buffer.

~~p. Support facilities for above or below ground utilities or pollution control, such as outfall facilities or other facilities that must have a physical connection to the shoreline to provide their support function, provided they are located at or below grade and as far from the OHWM as technically feasible.~~

~~q. Outdoor storage, only in conjunction with a water dependent use.~~

~~r. Water oriented essential public facilities, both above and below ground.~~

~~s. Non-water oriented essential public facilities, both above and below ground, provided it has been documented that no feasible location is available outside of the buffer.~~

~~t. Landfill as part of an approved remediation plan for the purpose of capping contaminated sediments.~~

~~u. Regional detention facilities that meet the City's Infrastructure Design and Construction Standards along with their supporting elements such as ponds, piping, filter systems and outfalls vested as of the effective date of this program or if no feasible alternative location exists. Any regional detention facility located in the buffer shall be designed such that a fence is not required, planted with native vegetation, designed to blend with the surrounding environment, and provide design features that serve both public and private use, such as an access road that can also serve as a trail. The facility shall be designed to locate access roads and other impervious surfaces as far from the river as practical.~~

~~2. Conditional Uses. Only the following may be allowed as a Conditional Use in the Shoreline Urban Conservancy Environment Buffer, subject to the requirements, procedures and conditions established by TMC Chapter 18.64 and shall be reviewed through a Shoreline Conditional Use Permit:~~

~~a. Dredging activities where necessary for assuring safe and efficient accommodation of existing navigational uses and then only when significant ecological impacts are minimized and when mitigation is provided. Dredging for remediation of contaminated sediments when mitigation is provided. Dredging of bottom materials for the purpose of obtaining fill material is prohibited. Dredging activities must comply with all federal and state regulations.~~

~~e. New private vehicle bridges.~~

~~d. Fill minimally necessary to support water dependent uses, public access, or for the alteration or expansion of a transportation facility of statewide significance currently located on the shoreline when it is demonstrated that alternatives to fill are not feasible.~~

~~C. Urban Conservancy Environment Outside of Buffer Uses. The following uses are permitted in the Urban Conservancy Environment, outside of the Urban Conservancy Environment Buffer. Uses shall meet the purposes and criteria of the Urban Conservancy Environment as established in the Shoreline Environment Designation section.~~

~~1. Permitted Uses. All uses permitted in the Urban Conservancy Environment Buffer and/or the Shoreline Use Matrix may be allowed.~~

~~2. Conditional Uses. All uses listed as Conditional Uses in the underlying zone may be allowed subject to the requirements, procedures and conditions established by TMC Chapter 18.64. A Shoreline Conditional Use Permit shall be required.~~

~~D. Urban Conservancy Buffer Width Reduction. The Director may reduce the Urban Conservancy Environment Buffer as follows:~~

~~1. For property located within the 100-foot buffer in non-levee portions of the river, the Urban Conservancy Environment Buffer may be reduced to that area occupied by the river bank plus 20 feet, measured landward from the top of the bank; provided however, that the applicant must first re-slope the river bank to 2.5:1, provide a 20-foot setback from the top of the new slope and vegetate both the river bank and the 20-foot setback area in accordance with the standards in TMC Section 18.44.080, and provided that the Director determines that any buffer reduction will not result in direct, indirect or long-term adverse impacts to shoreline ecosystem functions. Further, a buffer enhancement plan, including removal of invasive plants and plantings using a variety of native vegetation that improves the functional attributes of the buffer and provides additional protection for the watercourse functions, must be approved by the Director and implemented by the applicant as a condition of the reduction. In no case shall the reduced buffer be less than 50 feet.~~

**Commented [RL16]:** The KCFCD is implementing 500-year level of flood protection. This may require that future levees are constructed within areas that are not currently protected by a levee.

**Commented [MP17]:** The WRIA 9 *Re-green the Green - Riparian Revegetation strategy* states that tall trees along a 165-foot wide swath next to the river will have the most habitat/shade benefit.

~~2.—For property located within the 125-foot buffer along leveed portions of the river, the Urban Conservancy Environment Buffer may be reduced to that area occupied by levee or river bank improvements meeting the minimum levee profile or other levee standards provided in this chapter, plus 10 feet measured landward from the landward toe of the levee or (if permitted by this chapter) floodwall. In the event that the owner provides the City with a 10-foot levee maintenance easement, measured landward from the landward toe of the levee or levee wall and prohibiting the construction of any structures and allows the City to access the area to inspect the levee, then the buffer shall be reduced to the landward toe of the levee, or landward edge of the levee floodwall, as the case may be.~~

~~3.—If fill is placed along the back slope of a new levee, the Urban Conservancy Environment Buffer may be reduced to the point where the ground plane intersects the back slope of the levee; provided, that the property owner must grant the City a levee maintenance easement measured 10 feet landward from the landward toe of the levee or levee wall, and which easement prohibits the construction of any structures and allows the City to access the area to inspect the levee and/or wall and make any necessary repairs.~~

~~(Ord. 2346 §4, 2011)~~

#### **18.44.060 High Intensity Environment — Uses**

~~A. **High Intensity Environment Buffer — Delineated.** The High Intensity Environment Buffer shall consist of an area measured 100 feet landward from the OHWM. The remaining area of shoreline jurisdiction is non-buffer area.~~

##### ~~B. **High Intensity Environment Buffer — Uses.**~~

~~1. **Permitted Uses.** The following uses are permitted in the High Intensity River Buffer:~~

~~a. Shoreline restoration projects.~~

~~b. Over-water structures subject to the standards established in the Over-water Structures Section that are associated with water-dependent uses, public access, recreation, flood control, channel management or ecological restoration.~~

~~c. Public parks, recreation and open space.~~

~~d. Public and/or private promenades, footpaths or trails.~~

~~e. Public pedestrian bridges.~~

~~f. Recreation structures such as benches, tables, viewpoints, and picnic shelters, provided no such structure shall exceed 15 feet in height and 25 square feet in area and no views of the shoreline are blocked from adjacent properties.~~

~~g. Signs conforming to the development standards of this chapter.~~

~~h. Construction, maintenance or re-development of levees for flood control purposes, provided that any new or re-developed levee shall meet the applicable levee requirements of this chapter.~~

~~i. New vehicle bridges: permitted only if connecting public rights-of-way; existing public or private vehicle bridges may be maintained or replaced.~~

~~j. Utility towers and utilities, except the provision, distribution, collection, transmission or disposal of refuse.~~

~~k. Levee maintenance roads.~~

~~l. Plaza connectors between buildings and levees, not exceeding the height of the levee, are permitted for the purpose of providing and enhancing pedestrian access along the river and for landscaping purposes.~~

~~m. New shoreline stabilization utilizing the development standards in the Shoreline Stabilization Section, TMC Section 18.44.070(F).~~

~~n. Existing essential streets, roads and rights-of-way may be maintained or improved.~~

~~o. Water dependent commercial and industrial development, if permitted by the underlying zoning district.~~

~~p. Support facilities for above or below ground utilities or pollution control, such as outfall facilities or other facilities that must have a physical connection to the shoreline to provide their support function, provided they are located at or below grade and as far from the OHWM as technically feasible.~~

~~q. Outdoor storage, only in conjunction with a water dependent use.~~

**Commented [CL18]:** I think we should reconsider the hard and fast levee profile that was adopted in the SMP – the profile we approved for the Kent repair was actually better in some ways than our adopted profile. However it required a shoreline variance because it did not meet the exact design of the minimum levee profile.

**Commented [CL19]:** See explanation above

**Commented [CL20]:** See explanation under residential buffer.

- r. ~~Water-oriented essential public facilities, both above and below ground.~~
- s. ~~Non-water-oriented essential public facilities, both above and below ground, provided it has been documented that no feasible location is available outside of the buffer.~~
- t. ~~Landfill as part of an approved remediation plan for the purpose of capping contaminated sediments.~~

u. ~~Regional detention facilities that meet the City's Infrastructure Design and Construction Standards along with their supporting elements such as ponds, piping, filter systems and outfalls vested as of the effective date of this program or if no feasible alternative location exists. Any regional detention facility located in the buffer shall be designed such that a fence is not required, planted with native vegetation, designed to blend with the surrounding environment, and provide design features that serve both public and private use, such as an access road that can also serve as a trail. The facility shall be designed to locate access roads and other impervious surfaces as far from the river as practical.~~

2. ~~**Conditional Uses.** Only the following may be allowed as a Conditional Use in the Shoreline High Intensity Environment Buffer subject to the requirements, procedures and conditions established by TMC Chapter 18.64. A Shoreline Conditional Use Permit shall be required.~~

a. ~~Dredging activities where necessary for assuring safe and efficient accommodation of existing navigational uses and then only when significant ecological impacts are minimized and when mitigation is provided.~~

b. ~~Dredging for remediation of contaminated sediments when mitigation is provided. Dredging of bottom materials for the purpose of obtaining fill material is prohibited. Dredging activities must comply with all federal and state regulations~~

e. ~~New private vehicle bridges.~~

d. ~~Fill minimally necessary to support water dependent uses, public access, or for the alteration or expansion of a transportation facility of statewide significance currently located on the shoreline when it is demonstrated that alternatives to fill are not feasible.~~

C. ~~**Shoreline Urban High Intensity Environment — Uses.** The Shoreline High Intensity Environment shall consist of the remaining area within the 200 foot Shoreline Jurisdiction that is not within the Shoreline High Intensity Environment Buffer area. Uses shall meet the purposes and criteria of the Shoreline Environment Designations section.~~

1. ~~**Permitted Uses.** All uses permitted in the High Intensity Environment Buffer and/or the Shoreline Use Matrix may be allowed.~~

2. ~~**Conditional Uses.** All uses listed as Conditional Uses in the underlying zone may be allowed subject to the requirements, procedures and conditions established by TMC Chapter 18.64. A Shoreline Conditional Use Permit shall be required.~~

D. ~~**Shoreline High Intensity Environment Buffer Reduction.** The Director may reduce the High Intensity Environment Buffer where the applicant re-slopes the river bank to be no steeper than 3:1 above the OHWM, provides a 20-foot setback from the top of the new slope, vegetates both the river bank and the 20-foot setback area in accordance with the standards in the Vegetation Protection and Landscaping Section, and the Director determines there will be no net loss of shoreline ecological functions. In no case shall the reduced buffer be less than 50 feet. On properties where the bank slope currently is no steeper than 3:1 or where the property owner has already re-sloped the river bank, provided a 20-foot setback and vegetated the bank and setback as provided in this chapter, the buffer width will be the distance measured from the OHWM to the top of the bank, plus 20 feet.~~

*(Ord. 2346 §5, 2011)*

#### **18.44.065 Aquatic Environment — Uses**

A. ~~**Aquatic Environment — Delineated.** The Aquatic Environment consists of all water bodies within the City limits and its potential annexation areas under the jurisdiction of the Shoreline Management Act waterward of the Ordinary High Water Mark. The Aquatic Environment includes the water surface together with the underlying lands and the water column.~~

~~B. **Permitted Uses.** The following uses are permitted in the Aquatic Environment. Uses and activities within the Aquatic Environment must be compatible with the adjoining shoreline environment:~~

- ~~1. Shoreline restoration projects.~~
- ~~2. Over water structures subject to the standards established in the Over water Structures Section that are associated with water dependent uses, public access, recreation, flood control, channel management or ecological restoration.~~
- ~~3. Maintenance or redevelopment of levees for flood control purposes, provided that any redevelopment of a levee shall meet the applicable levee regulations of this chapter.~~
- ~~4. New shoreline stabilization utilizing the development standards in the Shoreline Stabilization Section.~~
- ~~5. Water dependent commercial and industrial development, if permitted by the underlying zoning district.~~
- ~~6. Boats moored at a dock or marina. No boats may be moored on tidelands or in the river channel.~~
- ~~7. Fill for ecological restoration.~~

~~C. **Conditional Uses.** Only the following may be allowed as a Conditional Use in the Shoreline Aquatic Environment Buffer subject to the requirements, procedures and conditions established by this program:~~

- ~~1. Dredging activities where necessary for assuring safe and efficient accommodation of existing navigational uses and then only when significant ecological impacts are minimized and when mitigation is provided.~~
- ~~2. Dredging for remediation of contaminated sediments when mitigation is provided. Dredging of bottom materials for the purpose of obtaining fill material is prohibited. Dredging activities must comply with all federal and state regulations~~
- ~~3. Fill minimally necessary to support water dependent uses, public access, or for the alteration or expansion of a transportation facility of statewide significance currently located on the shoreline when it is demonstrated that alternatives to fill are not feasible.~~

*(Ord. 2346 §6, 2011)*

#### **18.44.070050 Development Standards**

A. **Applicability.** The development standards of this chapter apply to work that meets the definition of substantial development except for vegetation removal per TMC Section 18.44.080060, which applies to all shoreline development. The term "substantial development" applies to non-conforming, new or re-development. Non-conforming uses, structures, parking lots and landscape areas, will be governed by the standards in TMC Section 18.44.430110(E), "Non-Conforming Development."

B. **Shoreline Residential Development Standards.** A shoreline substantial development permit is not required for construction within the Shoreline Residential Environment by an owner, lessee or contract purchaser of a single family residence for his/her own use or for the use of a family member. Such construction and all normal appurtenant structures must otherwise conform to this chapter. Short subdivisions and subdivisions are not exempt from obtaining a Shoreline Substantial Development Permit.

1. **Shoreline Residential Environment Standards.** The following standards apply to the Shoreline Residential Environment:

- a. The development standards of the applicable underlying zoning district (Title 18, Tukwila Municipal Code) shall apply.
- b. New development and uses must be sited so as to allow natural bank inclination of 2.5:1 slope with a 20-foot setback from the top of the bank. The Director may require a riverbank analysis as part of any development proposal.
- c. Utilities such as pumps, pipes, etc., shall be suitably screened with native vegetation per the standards in the Vegetation Protection and Landscaping Section.
- d. New shoreline stabilization, repair of existing stabilization or modifications to the river bank must comply with the standards in the Shoreline Stabilization Section, TMC Section 18.44.070050(F).

e. Short plats of five to nine lots or formal subdivisions must be designed to provide public access to the river in accordance with the Public Access Section, TMC Section 18.44.08400. Signage is required to identify the public access point(s).

f. Parking facilities associated with single family residential development or public recreational facilities are subject to the specific performance standards set forth in the Off-Street Parking Section, TMC Section 18.44.070050(I).

g. Fences, freestanding walls or other structures normally accessory to residences must not block views of the river from adjacent residences or extend waterward beyond the top of the bank. Chain link fencing must be vinyl coated.

h. Recreational structures permitted in the buffer must provide buffer mitigation.

i. The outside edge of surface transportation facilities, such as railroad tracks, streets, or public transit shall be located no closer than 50 feet from the OHWM, except where the surface transportation facility is bridging the river.

j. Except for bridges, approved above ground utility structures, and water-dependent uses and their structures, the maximum height for structures shall be 30 feet. For bridges, approved above ground utility structures, and water-dependent uses and their structures, the height limit shall be as demonstrated necessary to accomplish the structure's primary purpose. Bridges, approved above ground utility structures, and water-dependent uses and their structures greater than 35 feet in height require approval of a Shoreline Conditional Use Permit.

2. **Design Review.** Design review is required for non-residential development in the Shoreline Residential Environment.

**C. High Intensity, Urban Conservancy and Aquatic Environment Development Standards.**

1. **Standards.** The following standards apply in the High Intensity, Urban Conservancy and Aquatic Environments.

a. The development standards for the applicable underlying zoning district (Title 18, Tukwila Municipal Code) shall apply.

b. All new development performed by public agencies, or new multi-family, commercial, or industrial development shall provide public access in accordance with the standards in the Public Access Section.

c. Development or re-development of properties in areas of the shoreline armored with revetments or other hard armoring other than levees, or with non-armored river banks, must comply with the Vegetation Protection and Landscaping Section, TMC Section 18.44.080060.

d. Any new shoreline stabilization or repairs to existing stabilization must comply with Shoreline Stabilization Section, TMC Section 18.44.070050(F).

e. Over-water structures shall be allowed only for water-dependent uses and the size limited to the minimum necessary to support the structure's intended use and shall result in no net loss to shoreline ecological function. Over-water structures must comply with the standards in the Over-water Structures Section, TMC Section 18.44.070050(K).

2. **Setbacks and Site Configuration.**

a. The yard setback adjacent to the river is the buffer width established for the applicable shoreline environment.

b. A fishing pier, viewing platform or other outdoor feature that provides access to the shoreline is not required to meet a setback from the OHWM.

3. **Height Restrictions.** Except for bridges, approved above ground utility structures, and water-dependent uses and their structures, to preserve visual access to the shoreline and avoid massing of tall buildings within the shoreline jurisdiction, the maximum height for structures shall be as follows:

a. 15 feet where located within the River Buffer;

b. 45 feet between the outside landward edge of the River Buffer and 200 feet of the OHWM;

c. Provided, no permit shall be issued for any new or expanded building or structure of more than 35 feet above average grade level on shorelines of the State that will obstruct the view of a substantial number

**Commented [NG21]:** This is part of the current code and the intent was to step development down toward the water. In some cases that has led developers to put parking adjacent to the river buffer so that their buildings were outside of shoreline jurisdiction and not subject to the height restriction.

of residences on areas adjoining such shorelines. For any building that is proposed to be greater than 35 feet in height in the shoreline jurisdiction, the development proponent must demonstrate the proposed building will not block the views of a substantial number of residences.

d. The Director may approve a ~~30%~~<sup>45%</sup> increase in height for structures within the shoreline jurisdiction if the project proponent provides additional restoration and/or enhancement of the entire shoreline buffer, ~~beyond what may otherwise be required~~ including, but not limited to, paved areas no longer in use on the property in accordance with the standards of TMC Section 18.44.080~~060~~, "Vegetation Protection and Landscaping." If the required buffer has already been restored, the project proponent may provide a 20% wider buffer, ~~planted accordance with TMC Section 18.44.060, "Vegetation Protection and Landscaping" and/or enhanced~~ in order to obtain the ~~45%~~<sup>30%</sup> increase in height, ~~in accordance with TMC Section 18.44.080~~060~~, "Vegetation Protection and Landscaping."~~

e. Incentives may not be used to increase building height above that permitted in the underlying zoning district.

4. **Lighting.** In addition to the lighting standards in TMC Chapter 18.60, "Board of Architectural Review," lighting for the site or development shall be designed and located so that:

a. The minimum light levels in parking areas and paths between the building and street shall be one-foot candle.

b. Lighting shall be designed to prevent light spillover and glare on adjacent properties and on the river channel ~~to the maximum extent feasible~~, be directed downward so as to illuminate only the immediate area, and be shielded to eliminate direct off-site illumination.

c. The general grounds need not be lighted.

d. The lighting is incorporated into a unified landscape and/or site plan.

D. **Surface Water and Water Quality.** The following standards apply to all shoreline development.

1. New surface water systems may not discharge directly into the river or streams tributary to the river without pre-treatment to reduce pollutants and meet State water quality standards.

2. Such pre-treatment may consist of biofiltration, oil/water separators, or other methods approved by the City of Tukwila Public Works Department.

3. Shoreline development, uses and activities shall not cause any increase in surface runoff, and shall have adequate provisions for storm water detention/infiltration.

4. Stormwater outfalls must be designed so as to cause no net loss of shoreline ecological functions or adverse impacts where functions are impaired. New stormwater outfalls or maintenance of existing outfalls must include shoreline restoration as part of the project.

5. Shoreline development and activities shall have adequate provisions for sanitary sewer.

6. Solid and liquid wastes and untreated effluents shall not be allowed to enter any bodies of water or to be discharged onto shorelands.

7. The use of low impact development techniques is required, unless such techniques conflict with other provisions of the SMP or are shown to not be feasible due to site conditions.

E. **Flood Hazard Reduction.** The following standards apply to all shoreline development.

1. New structural flood hazard reduction structures shall be allowed only when it can be demonstrated by a Riverbank Analysis that:

a. They are necessary to protect existing development;

b. Non-structural measures are not feasible; and

c. Impacts to ecological functions and priority species and habitats can be successfully mitigated so as to assure no net loss.

2. Flood hazard structures must incorporate appropriate vegetation restoration and conservation actions consistent with the standards of the Vegetation Protection and Landscaping Section.

~~3. Levees, berms and similar flood control structures, whether new or redeveloped, shall be designed to meet the minimum levee profile, except as provided in Section 18.44.070.E.40 below.~~

34. Publicly-funded structural measures to reduce flood hazards shall improve public access or dedicate and provide public access where public access improvements would cause unavoidable health or

**Commented [NG22]:** We've had a couple building permits for structures in the shoreline that found the 45' limit limiting – and the incentives to increase the height weren't enough to be worthwhile. A 15% increase is only 6.75 feet while a 30% increase could equal an additional story.

**Commented [NG23]:** We added "to the maximum extent feasible" here based on our experience with the pedestrian bridge which required a shoreline variance for the light that came through the grating. There was a balance between safety of the bridge users and lighting of the river.

**Commented [CL24]:** We have seen an NPDES issue with a graveled parking lot in the shoreline – paving it would allow storm water controls to be installed however the shoreline regulations prevented the paving without the parking lot losing its nonconforming status.

**Commented [SS25R24]:** See non-conforming parking lot changes

**Commented [NG26]:** The proposal is to move away from a single levee design.

safety hazards to the public, inherent and unavoidable security problems, or significant ecological impacts that cannot be mitigated.

45. Rehabilitation or replacement of existing flood control structures, such as levees, with a primary purpose of containing the 1% to 0.02% annual chance flood event, shall be allowed where it can be demonstrated by an engineering analysis that the existing structure:

- a. Does not provide an appropriate level of protection for surrounding lands; or
- b. Does not meet the minimum levee profile a 2.5:1 riverside slope or other appropriate engineering design standards for stability (e.g., over-steepened side slopes for existing soil and/or flow conditions); and
- c. Repair of the existing structure will not cause or increase significant adverse ecological impacts to the shoreline.

56. Rehabilitated or replaced flood hazard reduction structures shall not extend the toe of slope any further waterward of the OHWM than the existing structure.

67. New structural flood hazard reduction measures, such as levees, berms and similar flood control structures shall be placed landward of the floodway as determined by the best information available.

78. New, redeveloped or replaced structural flood hazard reduction measures shall be placed landward of associated wetlands, and designated fish and wildlife habitat conservation areas.

89. No commercial, industrial, office or residential development shall be located within a floodplain without a Flood Control Zone Permit issued by the City. No development shall be located within a floodway except as otherwise permitted.

940. New, redeveloped or replaced flood hazard reduction structures may deviate from the minimum levee profile only as follows: must have an overall waterward slope no steeper than 2.5:1 unless it is not physically possible to achieve such a slope. A floodwall may be substituted for all or a portion of a levee back slope only where necessary to avoid encroachment or damage to a structure legally constructed prior to the date of adoption of this subsection, and which structure has not lost its nonconforming status, or to allow area for waterward habitat restoration development. The floodwall shall be designed to be the minimum necessary to provide 150 feet of clearance between the levee and the building, or the minimum necessary to preserve access needed for building functionality while meeting all engineering safety standards. A floodwall may also be used where necessary to prevent the levee from encroaching upon a railroad easement recorded prior to the date of adoption of this subsection. If a floodwall is permitted under this subsection the levee slope must be 2.5H:1V unless it is not physically possible to achieve such a slope; in that instance, the levee slope must be as close to 2.5H:1V as physically possible.

F. **Shoreline Stabilization.** The provisions of this section apply to those structures or actions intended to minimize or prevent erosion of adjacent uplands and/or failure of riverbanks resulting from waves, tidal fluctuations or river currents. Shoreline stabilization or armoring involves the placement of erosion resistant materials (e.g., large rocks and boulders, cement, pilings and/or large woody debris (LWD)) or the use of bioengineering techniques to reduce or eliminate erosion of shorelines and risk to human infrastructure. This form of shoreline stabilization is distinct from flood control structures and flood hazard reduction measures (such as levees). The terms "shoreline stabilization," "shoreline protection" and "shoreline armoring" are used interchangeably.

1. Shoreline protection shall not be considered an outright permitted use and shall be permitted only when it has been demonstrated through a riverbank analysis and report that shoreline protection is necessary for the protection of existing legally established structures and public improvements.

2. New development and re-development shall be designed and configured on the lot to avoid the need for new shoreline stabilization. Removal of failing shoreline stabilization shall be incorporated into re-development design proposals wherever feasible.

3. Replacement of lawfully established, existing bulkheads or revetments are subject to the following priority system:

- a. The first priority for replacement of bulkheads or revetments shall be landward of the existing bulkhead.

**Commented [RL27]:** KCFCD is now constructing levees to provide 500-year protection plus 3 feet of freeboard.

**Commented [NG28]:** Our experience with the SMP is that BAS has evolved and the one size fits all minimum levee profile isn't always the best solution. This language would allow for different solutions without the need for a shoreline variance if the design meets flood control and habitat goals. For example the City of Kent's Briscoe Reach #1 that was 3:1 slope (prior to the COE redesign).

**Commented [NG29]:** The proposal is to allow more flexibility in the use of flood walls to balance the need for greater flood protection with the already developed nature of our shoreline. The alternative would be to widen shoreline buffers and create more non-conformities.

**Commented [MP30]:** Flood walls can be ugly and uninviting, but they can in a pinched shoreline zone like ours, provide the space to implement habitat restoration. Kent has done some good-looking flood walls that we can model from.



b. The second priority for replacement of existing bulkheads or revetments shall be to replace in place (at the bulkhead's existing location).

4. When evaluating a proposal against the above priority system, at a minimum the following criteria shall be considered:

- a. Existing topography;
- b. Existing development;
- c. Location of abutting bulkheads;
- d. Impact to shoreline ecological functions; and,
- e. Impact to river hydraulics, potential changes in geomorphology, and to other areas of the shoreline.

5. Proponents of new or replacement hard shoreline stabilization (e.g. bulkheads or revetments) must demonstrate through a documented river bank analysis that bioengineered shoreline protection measures or bioengineering erosion control designs will not provide adequate upland protection of existing structures or would pose a threat or risk to adjacent property. The study must also demonstrate that the proposed hard shoreline stabilization will not adversely affect other infrastructure or adjacent shorelines.

6. Shoreline armoring such as rip rap rock revetments and other hard shoreline stabilization techniques are detrimental to river processes and habitat creation. Where allowed, shoreline armoring shall be designed, constructed and maintained in a manner that does not result in a net loss of shoreline ecological functions, including fish habitat, and shall conform to the requirements of the 2004 Washington State Department of Fish and Wildlife (or as amended) criteria and guidelines for integrated stream bank protection (Washington State Department of Fish and Wildlife, Washington Department of Ecology and U.S. Fish and Wildlife Service, Olympia, Washington), U. S. Army Corps of Engineers and other regulatory requirements. The hard shoreline stabilization must be designed and approved by an engineer licensed in the State of Washington and qualified to design shoreline stabilization structures.

7. Shoreline armoring shall be designed to the minimum size, height, bulk and extent necessary to remedy the identified hazard.

8. An applicant must demonstrate the following in order to qualify for the RCW 90.58.030(30)(e)(iii)(ii) exemption from the requirement to obtain a shoreline substantial development permit for a proposed single family bulkhead and to insure that the bulkhead will be consistent with the SMP:

- a. Erosion from currents or waves is imminently threatening a legally established single family detached dwelling unit or one or more appurtenant structures; and
- b. The proposed bulkhead is more consistent with the City's Master Program in protecting the site and adjoining shorelines and that non-structural alternatives such as slope drainage systems, bioengineering or vegetative growth stabilization, are not feasible or will not adequately protect a legally established residence or appurtenant structure; and
- c. The proposed bulkhead is located landward of the OHWM or it connects to adjacent, legally established bulkheads; and
- d. The maximum height of the proposed bulkhead is no more than one foot above the elevation of extreme high water on tidal waters as determined by the National Ocean Survey published by the National Oceanic and Atmospheric Administration.

9. Bulkheads or revetments shall be constructed of suitable materials that will serve to accomplish the desired end with maximum preservation of natural characteristics. Materials with the potential for water quality degradation shall not be used. Design and construction methods shall consider aesthetics and habitat protection. Automobile bodies, tires or other junk or waste material that may release undesirable chemicals or other material shall not be used for shoreline protection.

10. The builder of any bulkhead or revetment shall be financially responsible for determining the nature and the extent of probable adverse effects on fish and wildlife or on the property of others caused by his/her construction and shall propose and implement solutions approved by the City to minimize such effects.

11. When shoreline stabilization is required at a public access site, provision for safe access to the water shall be incorporated in the design whenever possible.

12. Placement of bank protection material shall occur from the top of the bank and shall be supervised by the property owner or contractor to ensure material is not dumped directly onto the bank face.

13. Bank protection material shall be clean and shall be of a sufficient size to prevent its being washed away by high water flows.

14. When riprap is washed out and presents a hazard to the safety of recreational users of the river, it shall be removed by the owner of such material.

15. Bank protection associated with bridge construction and maintenance may be permitted subject to the provisions of the SMP and shall conform to provisions of the State Hydraulics Code (RCW 77.55) and U.S. Army Corps of Engineer regulations.

**G. Archaeological, Cultural and Historical Resources.** In addition to the requirements of TMC 18.50.110, Archaeological/Paleontological Information Preservation Requirements, the following regulations apply.

1. All land use permits for projects within the shoreline jurisdiction shall be coordinated with affected tribes.

2. If the City determines that a site has significant archaeological, natural scientific or historical value, a substantial development that would pose a threat to the resources of the site shall not be approved.

3. Permits issued in areas documented to contain archaeological resources require a site inspection or evaluation by a professional archaeologist in coordination with affected Indian tribes. The City may require that development be postponed in such areas to allow investigation of public acquisition potential, retrieval and preservation of significant artifacts and/or development of a mitigation plan. Areas of known or suspected archaeological middens shall not be disturbed and shall be fenced and identified during construction projects on the site.

4. Developers and property owners shall immediately stop work and notify the City of Tukwila, the Washington Department of Archaeology and Historic Preservation and affected Indian tribes if archaeological resources are uncovered during excavation.

5. In the event that unforeseen factors constituting an emergency, as defined in RCW 90.58.030, necessitate rapid action to retrieve or preserve artifacts or data identified above, the project may be exempted from any shoreline permit requirements. The City shall notify the Washington State Department of Ecology, the State Attorney General's Office and the State Department of Archaeology and Historic Preservation Office of such an exemption in a timely manner.

6. Archaeological excavations may be permitted subject to the provision of this chapter.

7. On sites where historical or archaeological resources have been identified and will be preserved in situ, public access to such areas shall be designed and managed so as to give maximum protection to the resource and surrounding environment.

8. Interpretive signs of historical and archaeological features shall be provided subject to the requirements of the Public Access Section when such signage does not compromise the protection of these features from tampering, damage and/or destruction.

#### H. Environmental Impact Mitigation.

1. Halting the continuing decline of Puget Sound Chinook salmon and Southern Resident Orca calls for an improvement to current shoreline conditions, which have been degraded by human activity over time. All shoreline development and uses shall at a minimum occur in a manner that results in no net loss of shoreline ecological functions through the careful location and design of all allowed development and uses. In cases where impacts to shoreline ecological functions from allowed development and uses are unavoidable, those impacts shall be mitigated according to the provisions of this section; in that event, the "no net loss" standard is met.

2. To the extent Washington's State Environmental Policy Act of 1971 (SEPA), chapter 43.21C RCW, is applicable, the analysis of environmental impacts from proposed shoreline uses or developments shall be conducted consistent with the rules implementing SEPA (TMC Chapter 21.04 and WAC 197-11).

3. For all development, mitigation sequencing shall be applied in the following order of priority:

a. Avoiding the impact altogether by not taking a certain action or parts of an action.

- 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. Reducing or eliminating the impact over time by preservation and maintenance operations.
- e. Compensating for the impact by replacing, enhancing, or providing substitute resources or environments.

f. Monitoring the impact and the compensation projects and taking appropriate corrective measures.

4. In determining appropriate mitigation measures applicable to shoreline development, lower priority measures shall be applied only where higher priority measures are determined by the City to be infeasible or inapplicable.

5. When mitigation measures are appropriate pursuant to the priority of mitigation sequencing above, preferential consideration shall be given to measures that replace the impacted functions directly and in the immediate vicinity of the impact. However, if mitigation in the immediate vicinity is not scientifically feasible due to problems with hydrology, soils, waves or other factors, then off-site mitigation within the Shoreline Jurisdiction may be allowed if consistent with the Shoreline Restoration Plan. Mitigation for projects in the Transition Zone must take place in the Transition Zone. In the event a site is not available in the Transition Zone to carry out required mitigation, the project proponent may contribute funds equivalent to the value of the required mitigation to an existing or future restoration project identified in the CIP to be carried out by a public agency in the Transition Zone.

I. **Off Street Parking and Loading Requirements.** In addition to the parking requirements in TMC 18.56, the following requirements apply to all development in the shoreline jurisdiction.

1. Any parking, loading, or storage facilities located between the river and any building must incorporate additional landscaping in accordance with the Vegetation Protection and Landscaping Section, or berming or other site planning or design techniques to reduce visual and/or environmental impacts from the parking areas utilizing the following screening techniques:

- a. A solid evergreen screen of trees and shrubs a minimum of six feet high; or
- b. Decorative fence a maximum of six feet high with landscaping. Chain link fence, where allowed, shall be vinyl coated and landscaped with native trailing vine or an approved non-native vine other than ivy, except where a security or safety hazard may exist; or
- c. Earth berms at a minimum of four feet high, planted with native plants in accordance with the Vegetation Protection and Landscaping Section.

2. Where a parking area is located in the shoreline jurisdiction and adjacent to a public access feature, the parking area shall be screened by a vegetative screen or a built structure that runs the entire length of the parking area adjacent to the amenity. The landscape screening shall comply with the Vegetation Protection and Landscaping Section.

3. Where public access to or along the shoreline exists or is proposed, parking areas shall provide pedestrian access from the parking area to the shoreline.

4. Parking facilities, loading areas and paved areas shall incorporate low impact development techniques wherever feasible, adequate storm water retention areas, oil/water separators and biofiltration swales, or other treatment techniques and shall comply with the standards and practices formally adopted by the City of Tukwila Public Works Department.

J. **Land Altering Activities.** All land altering activities in the shoreline jurisdiction shall be in conjunction with an underlying land development permit, except for shoreline restoration projects. All activities shall meet the following standards:

1. **Clearing, Grading and Landfill.**

- a. Land altering shall be permitted only where it meets the following criteria:
  - (1) The work is the minimum necessary to accomplish an allowed shoreline use;
  - (2) Impacts to the natural environment are minimized and mitigated;
  - (3) Water quality, river flows and/or fish habitat are not adversely affected;

- (4) Public access and river navigation are not diminished;
- (5) The project complies with all federal and state requirements;
- (6) The project complies with the vegetation protection criteria of the Vegetation Protection and Landscaping Section;

(7) The project will achieve no net loss of shoreline ecological functions or processes. In cases where impacts to shoreline ecological functions from an otherwise allowed land altering project are unavoidable, those impacts shall be mitigated according to the provisions of this section. In that event, the "no net loss" standard is met; and

(8) Documentation is provided to demonstrate that the fill comes from a clean source.

b. Clearing, grading and landfill activities, where allowed, shall include erosion control mechanisms, and any reasonable restriction on equipment, methods or timing necessary to minimize the introduction of suspended solids or leaching of contaminants into the river, or the disturbance of wildlife or fish habitats in accordance with the standards in TMC Chapter 16.54, "Grading."

## 2. Dredging.

a. Dredging activities must comply with all federal and state regulations. Maintenance dredging of established navigation channels and basins must be restricted to maintaining previously dredged and/or existing authorized location, depth, and width.

b. Where allowed, dredging operations must be designed and scheduled so as to ensure no net loss to shoreline ecological functions or processes. In cases where impacts to shoreline ecological functions from allowed dredging are unavoidable, those impacts shall be mitigated according to the provisions of this section; in that event, the "no net loss" standard is met.

## K. Marinas, Boat Yards, Dry Docks, Boat Launches, Piers, Docks and Other Over-water Structures.

### 1. General Requirements.

a. A dock may be allowed when the applicant has demonstrated a need for moorage and that the following alternatives have been investigated and are not available or feasible:

- (1). commercial or marina moorage;
- (2). floating moorage buoys;
- (3). joint use moorage pier/dock.

ab. Prior to issuance of a Shoreline Substantial Development Permit for construction of piers, docks, wharves or other over-water structures, the applicant shall present ~~approvals from~~ proof of application submittal to State or Federal agencies, as applicable.

bc. Structures must be designed by a qualified engineer and must demonstrate the project will result in no net loss of shoreline ecological function and will be stable against the forces of flowing water, wave action and the wakes of passing vessels.

cd. In-water structures shall be designed and located to minimize shading of native aquatic vegetation and fish passage areas. Removal of shoreline, riparian and aquatic vegetation shall be limited to the minimum extent necessary to construct the project. All areas disturbed by construction shall be replanted with native vegetation as part of the project.

de. New or replacement in-water structures shall be designed and located such that natural hydraulic and geologic processes, such as erosion, wave action or floods will not necessitate the following:

- (1) reinforcement of the shoreline or stream bank with new bulkheads or similar artificial structures to protect the in-water structure; or
- (2) dredging.

ef. No structures are allowed on top of over-water structures except for properties located north of the Turning Basin.

fg. Pilings or other associated structures in direct contact with water shall not be treated with preservatives unless the applicant can demonstrate that no feasible alternative to protect the materials exists and that non-wood alternatives are not economically feasible. In that case, only compounds approved for marine use may be used and must be applied by the manufacturer per current best management practices of the Western Wood Preservers Institute. The applicant must present verification that the best management

**Commented [CL31]:** We don't require approval by other agencies to be presented for other land use permits. Also, this section says the approvals must be received prior to issuance of the SSDP while 4.e. below says that the permits need to be obtained prior to construction starting. Often, applicants need our permit before either the State or Federal permit will be issued.

practices were followed. The preservatives must also be approved by the Washington Department of Fish and Wildlife.

g. All over-water structures shall be constructed and maintained in a safe and sound condition. Abandoned or unsafe over-water structures shall be removed or repaired promptly by the owner. Accumulated debris shall be regularly removed and disposed of properly so as not to jeopardize the integrity of the structure. Replacement of in-water structures shall include proper removal of abandoned or other man-made structures and debris.

h. Boat owners who store motorized boats on-site are encouraged to use best management practices to avoid fuel and other fluid spills.

**2. Marinas, Boat Yards and Dry Docks.**

a. All uses under this category shall be designed to achieve no net loss of shoreline ecological functions. In cases where impacts to shoreline ecological functions from uses allowed under this category are unavoidable, those impacts shall be mitigated according to the provisions of this chapter; in that event, the "no net loss" standard is met.

b. Commercial/industrial marinas and dry docks shall be located no further upriver than Turning Basin #3.

c. Marinas shall be located, designed, constructed and operated to avoid or minimize adverse impacts on fish, wildlife, water quality, native shoreline vegetation, navigation, public access, existing in-water recreational activities and adjacent water uses.

d. Marinas shall submit a fuel spill prevention and contingency plan to the City for approval. Haul-out and boat maintenance facilities must meet the City's stormwater management requirements and not allow the release of chemicals, petroleum or suspended solids to the river.

e. Marinas, boat yards and dry docks must be located a minimum of 100 feet from fish and wildlife habitat areas. (see "Sensitive Areas in the Shoreline" Map 5).

f. New marinas, launch ramps and accessory uses must be located where water depths are adequate to avoid the need for dredging.

**3. Boat Launches and Boat Lifts.**

a. Boat launch ramps and vehicle access to the ramps shall be designed to not cause erosion; the use of pervious paving materials, such as grasscrete, are encouraged.

b. Boat launch ramps shall be designed to minimize areas of landfill or the need for shoreline protective structures.

c. Access to the boat ramp and parking for the ramp shall be located a sufficient distance from any frontage road to provide safe maneuvering of boats and trailers.

d. Launching rails shall be adequately anchored to the ground.

e. Launch ramps and boat lifts shall extend waterward past the OHWM only as far as necessary to achieve their purpose.

f. Boat lifts and canopies must meet the standards of the U.S. Army Corps of Engineers Regional General Permit Number 1 for Watercraft Lifts in Fresh and Marine/Estuarine Waters within the State of Washington.

4. **Over-water Structures.** Where allowed, over-water structures such as piers, wharves, bridges, and docks shall meet the following standards:

a. The size of new over-water structures shall be limited to the minimum necessary to support the structure's intended use and to provide stability in the case of floating docks. Structures must be compatible with any existing channel control or flood management structures.

b. Over-water structures shall not extend waterward of the OHWM any more than necessary to permit launching of watercraft, while also ensuring that watercraft do not rest on tidal substrate at any time.

c. Adverse impacts of over-water structures on water quality, river flows, fish habitat, shoreline vegetation, and public access shall be minimized and mitigated. Mitigation measures may include joint use of existing structures, open decking or piers, replacement of non-native vegetation, installation of in-water habitat features or restoration of shallow water habitat.

**Commented [NG32]:** Not all environmentally sensitive areas are mapped. The City's maps are a starting point but site specific analysis is required.

**Commented [CL33]:** The question came up when we worked on the new pedestrian bridge, whether the pedestrian bridge would be considered an overwater structure. The requirement for 30% grating was a safety issue for bicyclists, so I believe PW had to get a variance from this standard.

**Commented [NG34R33]:** The proposal is to consider bridges to be overwater structures. This is clarified in the use matrix.

d. Any proposals for in-water or over-water structures shall provide a pre-construction habitat evaluation, including an evaluation of salmonid and bull trout habitat and shoreline ecological functions, and demonstrate how the project achieves no net loss of shoreline ecological functions.

e. Over-water structures shall obtain all necessary state and federal permits prior to construction or repair.

f. All over-water structures must be designed by a qualified engineer to ensure they are adequately anchored to the bank in a manner so as not to cause future downstream hazards or significant modifications to the river geomorphology and are able to withstand high flows.

g. Over-water structures shall not obstruct normal public use of the river for navigation or recreational purposes.

h. Shading impacts to fish shall be minimized by using grating on at least 30% of the surface area of the over-water structure on residential areas and at least 50% of the over-water structure on all other properties. This standard may be modified for bridges if necessary to accommodate the proposed use. The use of skirting is not permitted.

i. If floats are used, the flotation shall be fully enclosed and contained in a shell (such as polystyrene) that prevents breakup or loss of the flotation material into the water, damage from ultraviolet radiation, and damage from rubbing against pilings or waterborne debris.

j. Floats may not rest on the tidal substrate at any time and stoppers on the piling anchoring the floats must be installed to ensure at least 1 foot of clearance above the substrate. Anchor lines may not rest on the substrate at any time.

k. The number of pilings to support over-water structures, including floats, shall be limited to the minimum necessary. Pilings shall conform to the pilings standards contained in the US Army Corps of Engineers Regional General Permit No. 6.

l. No over-water structure shall be located closer than five feet from the side property line extended, except that such structures may abut property lines for the common use of adjacent property owners when mutually agreed upon by the property owners in an easement recorded with King County. A copy of this agreement shall be submitted to the Department of Community Development and accompany an application for a development permit and/or Shoreline Permit.

5. **Live-Aboards.** New over-water residences are prohibited. Live-abouts may be allowed provided that:

- a. They are for single-family use only.
- b. They are located in a marina that provides shower and toilet facilities on land and there are no sewage discharges to the water.
- c. Live-abouts do not exceed 10 percent of the total slips in the marina.
- d. They are owner-occupied vessels.
- e. There are on-shore support services in proximity to the live-abouts.

**L. Signs in Shoreline Jurisdiction.**

1. Signage within the shoreline buffer is limited to the following:

- a. Interpretative signs and restoration signage, including restoration sponsor acknowledgment.
- b. Signs for water-related uses.
- c. Signs installed by a government agency for public safety along any public trail or at any public park.

d. Signs installed within the rights of way of any public right-of-way or bridge within the shoreline buffer. All signs shall meet the requirements of the Manual on Uniform Traffic Control Devices for Streets and Highways, current edition, published by the U.S. Department of Transportation.

e. Signs installed on utilities and wireless communication facilities denoting danger or other safety information, including emergency contact information.

2. Billboards and other off-premise signs are strictly forbidden in the shoreline buffer.

*(Ord. 2346 §7, 2011)*

**Commented [RL35]:** I do not see why we need to state this in this code. This is a traffic related item.

## 18.44.080060 Vegetation Protection and Landscaping

### A. Purpose, Objectives and Applicability.

1. The purpose of this section is to:
  - a. Regulate the protection of existing trees and native vegetation in the shoreline jurisdiction;
  - b. Establish requirements for removal of invasive plants at the time of development or re-development of sites;
  - c. Establish requirements for landscaping for new development or re-development;
  - d. Establish requirements for the long-term maintenance of native vegetation to prevent establishment of invasive species and promote shoreline ecosystem processes.
2. The City's goal is to:
  - a. Preserve as many existing trees as possible and increase the number of native trees, shrubs and other vegetation in the shoreline because of their importance to shoreline ecosystem functions as listed below:

- (1) Overhead tree canopy to provide shade for water temperature control;
- (2) Habitat for birds, insects and small mammals;
- (3) Vegetation that overhangs the river to provide places for fish to shelter;
- (4) Source of insects for fish;
- (5) Filtering of pollutants and slowing of stormwater prior to its entering the river; and
- (6) A long-term source of woody debris for the river.

b. In addition, trees and other native vegetation are important for aesthetics. It is the City's goal that unsightly invasive vegetation, such as blackberries, be removed from the shoreline and be replaced with native vegetation to promote greater enjoyment of and access to the river.

c. The City will provide information and technical assistance to property owners for improving vegetation in the shoreline jurisdiction and will work collaboratively with local citizen groups to assist property owners in the removal of invasive vegetation and planting of native vegetation, particularly for residential areas.

3. With the exception of residential development/re-development of 4 or fewer residential units, all activities and developments within the shoreline environment must comply with the landscaping and maintenance requirements of this section, whether or not a shoreline substantial development permit is required. Single family residential projects are not exempt if implementing a shoreline stabilization project or overwater structure.

4. The tree protection and retention requirements and the vegetation management requirements apply to existing uses as well as new or re-development.

#### 5. Minor Activities Allowed without a Permit or Exemption.

##### a. The following activities are allowed without a permit or exemption:

(1) Maintenance of existing, lawfully established areas of crop vegetation, landscaping (including paths and trails) or gardens within a regulated critical area or its buffer. Examples include, mowing lawns, weeding, harvesting and replanting of garden crops, pruning, and planting of non-invasive ornamental vegetation or indigenous native species to maintain the general condition and extent of such areas. Cutting down trees and shrubs within a buffer is not covered under this provision. Excavation, filling, and construction of new landscaping features, such as concrete work, berms and walls, are not covered in this provision and are subject to review;

(2) Noxious weed control within vegetative buffers, if work is selective only for noxious species; is done by hand removal/spraying of individual plants; spraying is conducted by a licensed applicator; and no area-wide vegetation removal or grubbing is conducted. Control methods not meeting these criteria may still apply for a restoration exemption, or other authorization as applicable.

### B. ~~Tree Protection,~~ Retention and Replacement.

1. As many significant trees and as much native vegetation as possible are to be retained on a site proposed for development or re-development, taking into account the condition and age of the trees. As part of design review, the Director of Community Development or the Board of Architectural Review may require

alterations in the arrangement of buildings, parking or other elements of proposed development in order to retain significant non-invasive trees, particularly those that provide shading to the river. Trees located on properties not undergoing development or re-development may not be removed except those that interfere with access and passage on public trails or that present an imminent hazard to existing structures or the public. If the hazard is not readily apparent, the City may require an evaluation by an International Society of Arborists (ISA)-certified arborist.

2. To protect the ecological functions that trees and native vegetation provide to the shoreline, removal of any significant tree or native vegetation in the Shoreline Jurisdiction requires a Shoreline Tree Removal and Vegetation Clearing Permit and is generally only allowed on sites undergoing development or re-development. Only trees that interfere with access and passage on public trails or trees that present an imminent hazard to existing structures or the public may be removed from sites without an issued building permit or Federal approval. Factors that will be considered in approving tree removal include, but are not limited to: tree condition and health, age, risks to structures, and potential for root or canopy interference with utilities.

3. Prior to any tree removal or site clearing, a Type 2 Shoreline Tree Removal and Vegetation Clearing Permit application must be submitted to the Department of Community Development (DCD) containing the following information:

- a. A vegetation survey on a site plan that shows the diameter, species and location of all significant trees and all existing native vegetation.
- b. A site plan that shows trees and native vegetation to be retained and trees to be removed and provides a table showing the number of significant trees to be removed and the number of replacement trees required.
- c. Tree protection zones and other measures to protect any trees or native vegetation that are to be retained for sites undergoing development or re-development.
- d. Location of the OHWM, river buffer, Shoreline Jurisdiction boundary and any ~~sensitive~~ **critical** areas with their buffers.
- e. A landscape plan that shows diameter, species name, spacing and planting location for any required replacement trees and other proposed vegetation.
- f. An arborist evaluation justifying the removal of hazardous trees if required by DCD.
- g. An application fee per the current Land Use Permit Fee resolution.

4. Where permitted, significant trees that are removed from the shoreline shall be replaced pursuant to the tree replacement requirements shown below, up to a density of 100 trees per acre (including existing trees). The Director or Planning Commission may require additional trees or shrubs to be installed to mitigate any potential impact from the loss of this vegetation as a result of new development.

**Tree Replacement Requirements**

Diameter* of Tree Removed (*measured at height of 4.5 feet from the ground)	Number of Replacement Trees Required
4 - 6 inches (single trunk); 2 inches (any trunk of a multi-trunk tree)	3
Over 6 - 8 inches	4
Over 8 - 20 inches	6
Over 20 inches	8

5. The property owner is required to ensure the viability and long-term health of trees planted for replacement through proper care and maintenance for the life of the project. Replaced trees that do not survive must be replanted in the next appropriate season for planting.

6. If all required replacement trees cannot be reasonably accommodated on the site, off-site tree replacement within the shoreline jurisdiction may be allowed at a site approved by the City. Priority for off-site tree planting will be at locations within the Transition Zone. If no suitable off-site location is available, the applicant shall pay into a tree replacement fund. The fee shall be based on the value of the replacement trees and their delivery, labor for site preparation and plant installation, soil amendments, mulch, and staking supplies.

**Commented [NG36]:** The preference is to replant on site but some sites cannot accommodate the number of replacement trees required without unhealthy crowding. This gives options so that trees can be replaced in other locations.



7. When a tree suitable for use as LWD is permitted to be removed from the shoreline buffer, the tree trunk and root ball (where possible) will be saved for use in a restoration project elsewhere in the shoreline jurisdiction. The applicant will be responsible for the cost of moving the removed tree(s) to a location designated by the City. If no restoration project or storage location is available at the time, the Director may waive this requirement. Trees removed in the shoreline jurisdiction outside the buffer shall be placed as LWD in the buffer (not on the bank), if feasible. Priority for LWD placement projects will be in the Transition Zone.

8. Dead or dying trees located within the buffer or undeveloped upland portion of the Shoreline Jurisdiction shall be left in place as wildlife snags, unless they present a hazard to structures, facilities or the public. Dead or dying trees within developed or landscaped areas shall be replaced 1:1 in the next appropriate season for planting.

9. ~~Topping of trees is prohibited unless absolutely necessary to protect overhead utility lines. Topping of trees will be regulated as removal and with tree replacement will be required.~~

10. Trees may only be pruned to lower their height to prevent interference with an overhead utility line with prior approval by the Director. The pruning must be carried out under the direction of a Qualified Tree Professional or performed by the utility provider under the direction of a Qualified Tree Professional. The crown shall be maintained to at least 2/3 the height of the tree prior to pruning.

#### C. Tree Protection

~~10. For new development or re-development where trees are proposed for retention, tree protection zones shall be indicated on site plans and shall be established in the field prior to commencement of any construction or site clearing activity. A minimum 4-foot high construction barrier shall be installed around significant trees and stands of native trees or vegetation to be retained. Minimum distances from the trunk for the construction barriers shall be based on the approximate age of the tree (height and canopy) as follows:~~

~~a. Young trees (have reached less than 20% of life expectancy): 0.75 feet per inch of trunk diameter.~~

~~b. Mature trees (have reached 20-80% of life expectancy): 1 foot per inch of trunk diameter.~~

~~c. Over mature trees (have reached greater than 80% of life expectancy): 1.5 feet per inch of trunk diameter.~~

All trees not proposed for removal as part of a project or development shall be protected using Best Management Practices and the standards below.

1. The Critical Root Zones (CRZ) for all trees designated for retention, on site or on adjacent property as applicable, shall be identified on all construction plans, including demolition, grading, civil and landscape site plans.

2. Any roots within the CRZ exposed during construction shall be covered immediately and kept moist with appropriate materials. The City may require a third-party Qualified Tree Professional to review long-term viability of the tree.

3. Physical barriers, such as 6-foot chain link fence or plywood or other approved equivalent, shall be placed around each individual tree or grouping at the CRZ.

4. Minimum distances from the trunk for the physical barriers shall be based on the approximate age of the tree (height and canopy) as follows:

a. Young trees (trees which have reached less than 20% of life expectancy): 0.75 per inch of trunk diameter.

b. Mature trees (trees which have reached 20-80% of life expectancy): 1 foot per inch of trunk diameter.

c. Over mature trees (trees which have reached greater than 80% of life expectancy): 1.5 feet per inch of trunk diameter.

5. Alternative protection methods may be used that provide equal or greater tree protection if approved by the Director.

6. A weatherproof sign shall be installed on the fence or barrier that reads:

"TREE PROTECTION ZONE – THIS FENCE SHALL NOT BE REMOVED OR ENCROACHED UPON. No soil disturbance, parking, storage, dumping or burning of materials is allowed within the Critical Root Zone. The value of this tree is \$ [insert value of tree as determined by a Qualified Tree Professional here]."

**Commented [NG37]:** This is a more appropriate approach for landscape islands or other parts of the developed landscape.

**Commented [NG38]:** The language below provides more direction for utility related pruning.

**Commented [NG39]:** The proposal is to match the updated tree protection standards required outside of shoreline jurisdiction, see TMC 18.54.070.

Damage to this tree due to construction activity that results in the death or necessary removal of the tree is subject to the Violations section of TMC Chapter 18.54.”

7. All tree protection measures installed shall be inspected by the City and, if deemed necessary a Qualified Tree Professional, prior to beginning construction or earth moving.

8. Any branches or limbs that are outside of the CRZ and might be damaged by machinery shall be pruned prior to construction by a Qualified Tree Professional. No construction personnel shall prune affected limbs except under the direct supervision of a Qualified Tree Professional.

9. The CRZ shall be covered with 4 to 6 inches of wood chip mulch. Mulch shall not be placed directly against the trunk. A 6-inch area around the trunk shall be free of mulch. Additional measures, such as fertilization or supplemental water, shall be carried out prior to the start of construction if deemed necessary by the Qualified Tree Professional's report to prepare the trees for the stress of construction activities.

10. No storage of equipment or refuse, parking of vehicles, dumping of materials or chemicals, or placement of permanent heavy structures or items shall occur within the CRZ.

11. No grade changes or soil disturbance, including trenching, shall be allowed within the CRZ. Grade changes within 10 feet of the CRZ shall be approved by the City prior to implementation.

12. The applicant is responsible for ensuring that the CRZ of trees on adjacent properties are not impacted by the proposed development.

13. A pre-construction inspection shall be conducted by the City to finalize tree protection actions.

14. Post-construction inspection of protected trees shall be conducted by the City and, if deemed necessary by the City, a Qualified Tree Professional. All corrective or reparative pruning will be conducted by a Qualified Tree Professional.

**D.C. Landscaping.** This section presents landscaping standards for the Shoreline Jurisdiction and is divided into a general section and separate sections for the River Buffer and for the remaining part of the Shoreline Jurisdiction for each environment designation.

1. **General Requirements.** For any new development or redevelopment in the Shoreline Jurisdiction, except single family residential development of 4 or fewer lots, invasive vegetation must be removed and native vegetation planted and maintained in the River Buffer, including the river bank.

a. The landscaping requirements of this subsection apply for any new development or redevelopment in the Shoreline Jurisdiction, except: single family residential development of 4 or fewer lots. The extent of landscaping required will depend on the size of the proposed project. New development or full redevelopment of a site will require landscaping of the entire site. For smaller projects, the Director will review the intent of this section and the scope of the project to determine a reasonable amount of landscaping to be carried out. ~~Trees and other vegetation shading the river shall be retained or replanted when riprap is placed per the approved tree permit, if required.~~

b. Invasive vegetation must be removed as part of site preparation and native vegetation planted, including the river bank ~~to OHWM.~~

c. On properties located ~~behind~~ **landward of** publicly maintained levees, an applicant is not required to remove invasive vegetation or plant native vegetation within the buffer.

d. Removal of invasive species shall be done by hand or with hand-held power tools. Where not feasible and mechanized equipment is needed, the applicant must obtain a Shoreline Tree Removal and Vegetation Clearing Permit and show how the slope stability of the bank will be maintained, ~~and a~~ **A** plan must be submitted indicating how the work will be done and what erosion control and tree protection features will be utilized. Federal and State permits may be required for vegetation removal with mechanized equipment.

e. Trees and other vegetation shading the river shall be retained or replanted when riprap is placed, as specified in the approved tree permit if a permit is required.

f. Removal of invasive vegetation may be phased over several years prior to planting, if such phasing is provided for by a plan approved by the Director to allow for alternative approaches, such as sheet mulching and goat grazing. The method selected shall not destabilize the bank or cause erosion.

g. A combination of native trees, shrubs and groundcovers (including grasses, sedges, rushes and vines) shall be planted. The plants listed in the Riparian Restoration and Management Table of the 2004 Washington Stream Habitat Restoration Guidelines (Washington Department of Fish and Wildlife, Washington

Commented [NG40]: Duplicated below in e.

Department of Ecology, and U.S. Fish and Wildlife Service, Olympia, Washington, as amended) shall provide the basis for plant selection. Site conditions, such as topography, exposure, and hydrology shall be taken into account for plant selection. Other species may be approved if there is adequate justification.

h. Non-native trees may be used as street trees in cases where conditions are not appropriate for native trees (for example where there are space or height limitations or conflicts with utilities).

i. Plants shall meet the current American Standard for Nursery Stock (American Nursery and Landscape Association – ANLA).

j. Plant sizes in the non-buffer areas of all Shoreline Environments shall meet the following minimum size standards:

Deciduous trees	2-inch caliper
Conifers	6 – 8 foot height
Shrubs	24-inch height
Groundcover/grasses	4-inch or 1 gallon container

k. Smaller plant sizes (generally one gallon, bareroot, plugs, or stakes, depending on plant species) are preferred for buffer plantings. Willow stakes must be at least 1/2-inch in diameter.

l. Site preparation and planting of vegetation shall be in accordance with best management practices for ensuring the vegetation's long-term health and survival.

m. Plants may be selected and placed to allow for public and private view corridors and/or access to the water's edge.

n. Native vegetation in the shoreline installed in accordance with the preceding standards shall be maintained by the property owner to promote healthy growth and prevent establishment of invasive species. Invasive plants (such as blackberry, ivy, knotweed, bindweed) shall be removed on a regular basis, according to the approved maintenance plan.

o. Areas disturbed by removal of invasive plants shall be replanted with native vegetation where necessary to maintain the density shown in TMC Section 18.44.080~~060~~.B.4. and must be replanted in a timely manner, except where a long-term removal and re-vegetation plan, as approved by the City, is being implemented.

p. Landscape plans shall include a detail on invasive plant removal and soil preparation.

q.p. The following standards apply to utilities and loading docks located in the shoreline jurisdiction.

(1) Utilities such as pumps, pipes, etc. shall be suitably screened with native vegetation;

(2) Utility easements shall be landscaped with native groundcover, grasses or other low-growing plants as appropriate to the shoreline environment and site conditions;

(3) Allowed loading docks and service areas located waterward of the development shall have landscaping that provides extensive visual separation from the river.

**2. River Buffer Landscaping Requirements in all Shoreline Environments.** The River Buffer in all shoreline environments shall function, in part, as a vegetation management area to filter sediment, capture contaminants in surface water run-off, reduce the velocity of water run-off, and provide fish and wildlife habitat.

a. A planting plan prepared by ~~a licensed landscape architect or~~ an approved biologist shall be submitted to the City for approval that shows plant species, size, number and spacing. The requirement for a ~~landscape architect or~~ biologist may be waived by the Director for single family property owners (when planting is being required as mitigation for construction of overwater structures or shoreline stabilization), if the property owner accepts technical assistance from City staff.

b. Plants shall be installed from the OHWM to the upland edge of the River Buffer unless the Director determines that site conditions would make planting unsafe.

c. Plantings close to and on the bank shall include native willows, red osier dogwood and other native vegetation that will extend out over the water, to provide shade and habitat functions when mature. Species selected must be able to withstand seasonal water level fluctuations.

d. Minimum plant spacing in the buffer shall follow the River Buffer Vegetation Planting Densities Table shown in TMC Section 18.44.060 C.2. Existing non-invasive plants may be included in the density calculations.

e. Irrigation for buffer plantings is required for at least two dry seasons or until plants are established. An irrigation plan is to be included as part of the planting plan.

f. In the event that a development project allows for setback and benching of the shoreline along an existing levee or revetment, the newly created mid-slope bench area shall be planted and maintained with a variety of native vegetation appropriate for site conditions.

g. The Department Director, in consultation with the City's environmentalist, may approve the use of shrub planting and installation of willow stakes to be counted toward the tree replacement standard in the buffer if proposed as a measure to control invasive plants and increase buffer function.

**Commented [NG41]:** This could help control the regrowth of invasive species while newly planted trees are establishing in a restoration area.

**River Buffer Vegetation Planting Densities Table**

Plant Material Type	Planting Density
Stakes/cuttings along river bank (willows, red osier dogwood)	1 - 2 feet on center or per bioengineering method
Shrubs	3 - 5 feet on center, depending on species
Trees	15 - 20 feet on center, depending on species
Groundcovers, grasses, sedges, rushes, other herbaceous plants	1 - 1.5 feet on center, depending on species
Native seed mixes	5 - 25 lbs per acre, depending on species

**3. Landscaping Requirements for the Urban Conservancy and High Intensity Environments — Outside of the River Buffer.** For the portions of property within the Shoreline Jurisdiction landward of the River Buffer the landscape requirements in the General section of this chapter and the requirements for the underlying zoning as established in TMC Chapter 18.52 shall apply except as indicated below.

a. **Parking Lot Landscape Perimeters:** One native tree for each 20 lineal feet of required perimeter landscaping, one shrub for each 4 lineal feet of required perimeter landscaping, and native groundcovers to cover 90% of the landscape area within 3 years, planted at a minimum spacing of 12 inches on-center.

b. **Interior Parking Lot Landscaping:** Every 300 square feet of paved surface requires 10 square feet of interior landscaping within landscape islands separated by no more than 150 feet between islands.

c. Landscaping shall be provided at yards not adjacent to the river, with the same width as required in the underlying zoning district. This standard may be reduced as follows:

(1) Where development provides a public access corridor between off-site public area(s) and public shoreline areas, side yard landscaping may be reduced by 25 percent to no less than 3 feet; or

(2) Where development provides additional public access area(s) (as allowed by the High Intensity and Urban Conservancy Environment Development Standards) equal in area to at least 2.5% of total building area, front yard landscaping may be reduced by 25 percent.

**D. Vegetation Management in the Shoreline Jurisdiction.** The requirements of this section apply to all existing and new development within the shoreline jurisdiction.

1. Trees and shrubs may only be pruned for safety, to maintain views or access corridors and trails by pruning up or on the sides of trees, to maintain clearance for utility lines, and/or for improving shoreline ecological function. No more than 25% may be pruned from a tree within a 36 month period without prior City review. This type of pruning is exempt from any permit requirements. Topping of trees is prohibited except where absolutely necessary to avoid interference with existing utilities.

**Commented [AC42]:** Excessive pruning can damage the health of trees.

2. Plant debris from removal of invasive plants or pruning shall be removed from the site and disposed of properly.

**Commented [NG43]:** This duplicates the language in 18.44.060 B 10

3. Use of pesticides.

a. Pesticides (including herbicides, insecticides, and fungicides) shall not be used in the shoreline jurisdiction except where:

- (1) Alternatives such as manual removal, biological control, and cultural control are not feasible given the size of the infestation, site characteristics, or the characteristics of the invasive plant species;
- (2) The use of pesticides has been approved through a comprehensive vegetation or pest management and monitoring plan;
- (3) The pesticide is applied in accordance with state regulations;
- (4) The proposed herbicide is approved for aquatic use by the U.S. Environmental Protection Agency; and

(5) The use of pesticides in the shoreline jurisdiction is approved in writing by the City and the applicant presents a copy of the Aquatic Pesticide Permit issued by the Department of Ecology or Washington Department of Agriculture.

b. Self-contained rodent bait boxes designed to prevent access by other animals are allowed.

c. Sports fields, parks, golf courses and other outdoor recreational uses that involve maintenance of extensive areas of turf shall provide and implement an integrated turf management program or integrated pest management plan designed to ensure that water quality in the river is not adversely impacted.

4. Restoration Project Plantings: Restoration projects may overplant the site as a way to discourage the re-establishment of invasive species. Thinning of vegetation without a separate shoreline vegetation removal permit may be permitted five to ten years after planting if this approach is approved as part of the restoration project's maintenance and monitoring plan and with approval by the City prior to thinning work. -

**Commented [CL44]:** This provision sparked by request from the City's habitat manager to use the overplanting approach as a way to prevent the re-establishment of invasives.

**E. Maintenance and Monitoring.**

1. A five-year monitoring and maintenance plan must be approved by the City prior to permit issuance. The monitoring period will begin when the restoration is accepted by the City and as-built plans have been submitted.

**Commented [CL45]:** Mitigation sequencing requires a monitoring period.

2. Monitoring reports shall be submitted annually for City review up until the end of the monitoring period. Reports shall measure survival rates against project goals and present contingency plans to meet project goals.

3. Mitigation will be complete after project goals have been met and accepted by the City environmentalist.

4. A performance bond or financial security equal to 150% of the cost of labor and materials required for implementation of the planting, maintenance and monitoring shall be submitted prior to City acceptance of project.

**Commented [AC46]:** This is similar to the requirement for areas outside of the shoreline.

(Ord. 2346 §8, 2011)

**18.44.090070 Environmentally Sensitive Critical Areas within the Shoreline Jurisdiction**

**A. Purpose.**

~~1. The Growth Management Act (RCW 36.70A) requires protection of critical areas (sensitive areas), defined as wetlands, watercourses, frequently flooded areas, geologically hazardous areas, critical aquifer recharge areas, fish and wildlife conservation areas, and abandoned mine areas.~~

~~2. The purpose of protecting environmentally sensitive areas within the shoreline jurisdiction is to:~~

- ~~a. Minimize development impacts on the natural functions and values of these areas.~~
- ~~b. Protect quantity and quality of water resources.~~
- ~~c. Minimize turbidity and pollution of wetlands and fish-bearing waters and maintain wildlife habitat.~~
- ~~d. Prevent erosion and the loss of slope and soil stability caused by the removal of trees, shrubs, and root systems of vegetative cover.~~

**Commented [CL47]:** This section needs to match the concurrent SAO update. I believe this will address comments Minnie received from Donna Buntun in March, 2012 regarding corrections needed. See PDF of email exchange with Minnie, saved here: [Annotated 18.44 - corrections needed email exchange w Donna Buntun-Ecology-SAO references.pdf](#).

**Commented [NG48R47]:** The proposal is to eliminate the duplication of Critical Areas regulations and apply one set of rules with the few exceptions added below.

~~b. The Director may allow modifications to the required contents of the study where, in the judgment of a qualified professional, more or less information is required to adequately address the potential sensitive area impacts and required mitigation.~~

~~c. If there is written agreement between the Director and the applicant concerning the sensitive area classification and type, the Director may waive the requirement for sensitive area studies provided that no adverse impacts to sensitive areas or buffers will result. There must be substantial evidence that the sensitive areas delineation and classification are correct, that there will be no detrimental impact to the sensitive areas or buffers, and that the goals, purposes, objectives and requirements of the Shoreline Management Program will be followed.~~ **Applicable Critical Areas Regulations**

The following critical areas shall be regulated in accordance with the provisions of the Critical Areas Ordinance TMC Chapter 18.45, adopted [Date to be added], which is herein incorporated by reference into this SMP, except for the provisions excluded in subsection B of this Section. Said provisions shall apply to any use, alteration, or development within shoreline jurisdiction whether or not a shoreline permit or written statement of exemption is required. Unless otherwise stated, no development shall be constructed, located, extended, modified, converted, or altered, or land divided without full compliance with the provision adopted by reference and the Shoreline Master Program. Within shoreline jurisdiction, the regulations of TMC Chapter 18.45 shall be liberally construed together with the Shoreline Master Program to give full effect to the objectives and purposes of the provisions of the Shoreline Master Program and the Shoreline Management Act. If there is a conflict or inconsistency between any of the adopted provisions below and the Shoreline Master Program, the most restrictive provisions shall prevail.

1. Wetlands
2. Watercourses (Type F, Type Np, Type Ns)
3. Areas of potential geologic instability
4. Abandoned mine areas
5. Fish and wildlife habitat conservation areas
6. Frequently flooded areas

B. The following provisions in TMC Chapter 18.45 do not apply:

1. Reasonable Use Exception (TMC Section 18.45.180) Exceptions within shoreline jurisdiction shall require a shoreline variance based on the variance criteria listed in TMC Section 18.44.130.-D and WAC 173-27-170.
2. Activities and alterations to shorelines of the state and their buffers shall be subject to the provisions of this Master Program.
3. Shoreline buffer widths are defined in TMC Section 18.44.040.
4. Future amendments to the Critical Areas Ordinance require Department of Ecology approval of an amendment to this Master Program to incorporate updated language.
5. If provisions of the Critical Areas Ordinance conflict with provisions of this Master Program, the provisions the most protective of the ecological resource shall apply, as determined by the Director.
- 4.6. If there are provisions of the Critical Areas Ordinance that are not consistent with the Shoreline Management Act, Chapter 90.58 RCW, and supporting Washington Administrative Code chapters, those provisions shall not apply.

C. Areas of seismic instability are also defined as critical areas. These areas are regulated by the Washington State Building Code, rather than by Section 18.44.070 of this chapter. Additional building standards applicable to frequently flooded areas are included in the Flood Zone Management Code (TMC Chapter 16.52).

18.

~~E. Procedures. When an applicant submits an application for any building permit, subdivision, short subdivision or any other land use review that approves a use, development or future construction, the location~~

**Commented [DN49]:** This may be a placeholder for future decision. This statement would apply if reference to the CAO is not to a specific dated version but rather to the current CAO as amended.

**Commented [SS50]:** Per DOE Reviewer, this approach is acceptable

and dimensions of all sensitive areas and buffers on the site shall be indicated on the plans submitted. When a sensitive area is identified, the following procedures apply:

1. The applicant shall submit the relevant sensitive area study as required by this chapter.

2. The Department of Community Development will review the information submitted in the sensitive area studies to verify the information, confirm the nature and type of the sensitive area, and ensure the study is consistent with the Shoreline Master Program. At the discretion of the Director, sensitive area studies may undergo peer review, at the expense of the applicant.

3. **Denial of use or development.** A use or development will be denied if the Director determines that the applicant cannot ensure that potential dangers and costs to future inhabitants of the development, adjacent properties, and Tukwila are minimized and mitigated to an acceptable level.

4. **Preconstruction meeting.** The applicant, specialist(s) of record, contractor, and department representatives will be required to attend pre-construction meetings prior to any work on the site.

5. **Construction monitoring.** The specialist(s) of record shall be retained to monitor the site during construction.

6. **On-site Identification.** The Director may require the boundary between a sensitive area and its buffer or between the buffer and any development or use to be permanently identified with fencing, or with a wood or metal sign with treated wood, concrete or metal posts. Size will be determined at the time of permitting, and wording shall be as follows: "Protection of this natural area is in your care. Do not alter or disturb. Please call the City of Tukwila (206-431-3670) for more information."

F. **Wetland Determinations and Classifications.**

1. Wetlands and their boundaries are established by using the Washington State Wetland and Delineation Manual, as required by RCW 36.70A.175 (Ecology Publication #96-94) and consistent with the 1987 Corps of Engineers Wetland Delineation Manual.

2. Wetland determinations shall be made by a qualified professional (certified Wetland Scientist or non-certified with at least two years of full-time work experience as a wetland professional).

3. Wetland areas within the City of Tukwila have certain characteristics, functions and values and have been influenced by urbanization and related disturbances. Wetland functions include, but are not limited to the following: improving water quality; maintaining hydrologic functions (reducing peak flows, decreasing erosion, groundwater); and providing habitat for plants, mammals, fish, birds, and amphibians. Wetland functions shall be evaluated using the Washington State Functional Assessment Method.

4. Wetlands shall be designated in accordance with the Washington State Wetlands Rating System for Western Washington (Washington State Department of Ecology, August 2004, Publication #04-06-025) as Category I, II, III or IV as listed below:

a. Category I wetlands are those that:

(1) represent a unique or rare wetland type; or

(2) are more sensitive to disturbance than most wetlands; or

(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.

The following types of wetlands listed by the Washington State Department of Ecology and potentially found in Tukwila's Shoreline Jurisdiction are Category I:

(a) Estuarine wetlands (deepwater tidal habitats with a range of fresh-brackish marine water chemistry and daily tidal cycles, salt and brackish marshes, intertidal mudflats, mangrove swamps, bays, sounds, and coastal rivers);

(b) Wetlands that perform many functions well and score at least 70 points in the Western Washington Wetlands Rating System.

(c) Waterfowl or shorebird areas designated by the State Department of Fish and Wildlife.

b. Category II wetlands are difficult, though not impossible to replace and provide high levels of some functions. These wetlands occur more commonly than Category I wetlands, but still need a relatively high level of protection. Category II wetlands potentially in Tukwila's Shoreline Jurisdiction include:

~~(1) Estuarine wetlands— Any estuarine wetland smaller than an acre, or those that are disturbed and larger than 1 acre are Category II wetlands.~~

~~(2) Wetlands that perform functions well— Wetlands scoring between 51–69 points (out of 100) on the questions related to the functions present are Category II wetlands.~~

~~c. Category III wetlands have a moderate level of functions (scores between 30–50 points). Wetlands scoring between 30–50 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.~~

~~d. Category IV wetlands have the lowest levels of functions (scores less than 30 points) and are often heavily disturbed. While these are wetlands that should be able to be replaced or improved, they still need protection because they may provide some important functions. Any disturbance of these wetlands must be considered on a case-by-case basis.~~

**~~G. Watercourse Designation and Ratings.~~**

~~1. Watercourse ratings are based on the existing habitat functions and are rated as follows:~~

~~a. Type 1 (S) Watercourse: Watercourses inventoried as Shorelines of the State under RCW 90.58 (Green/Duwamish River).~~

~~b. Type 2 (F) Watercourse: Those watercourses that have either perennial (year-round) or intermittent flows and support salmonid fish use.~~

~~c. Type 3 (NP) Watercourse: Those watercourses that have perennial flows and are not used by salmonid fish.~~

~~d. Type 4 (NS) Watercourse: Those watercourses that have intermittent flows and are not used by salmonid fish.~~

~~2. Watercourse sensitive area studies shall be performed by a qualified professional (hydrologist, geologist, engineer or other scientist with experience in preparing watercourse assessments).~~

**~~H. Fish and Wildlife Habitat Conservation Areas.~~**

~~1. Fish and wildlife habitat conservation areas within the shoreline jurisdiction include the habitats listed below:~~

~~a. Areas with which endangered, threatened, and sensitive species have a primary association;~~

~~b. Habitats and species of local importance, including but not limited to bald eagle habitat, heron rookeries, osprey nesting areas;~~

~~c. Waters of the State (i.e., the Green/Duwamish River itself);~~

~~d. State natural area preserves and natural resource conservation areas; and~~

~~e. Areas critical for habitat connectivity.~~

~~2. The approximate location and extent of known fish and wildlife habitat conservation areas are identified in the Shoreline Inventory and Characterization Report and are shown on the Sensitive Areas in the Shoreline Jurisdiction map. Only the salmon habitat enhancement project sites completed or underway are shown as Fish and Wildlife Conservation Areas on the Sensitive Areas in the Shoreline Jurisdiction Map. Streams are shown as watercourses. The river is not shown as a Fish and Wildlife Habitat Conservation Area for the sake of simplicity. Fish and wildlife habitat conservation areas correlate closely with the areas identified as regulated watercourses and wetlands and their buffers, as well as off-channel habitat areas created to improve salmon habitat (shown on the Sensitive Areas Map) in the Shoreline jurisdiction. The Green/Duwamish River is recognized as the most significant fish and wildlife habitat corridor. In addition Gilliam Creek, Riverton Creek, Southgate Creek, Hamm Creek (in the North Potential Annexation Area (PAA), and Johnson Creek (South PAA) all provide salmonid habitat.~~

**~~I. Wetland Watercourse and Fish and Wildlife Habitat Conservation Area Buffers.~~**

~~1. Purpose and Intent of Buffer Establishment.~~

~~a. A buffer area shall be established adjacent to designated sensitive areas. The purpose of the buffer area shall be to protect the integrity, functions and values of the sensitive areas. Any land alteration must be located out of the buffer areas as required by this section.~~

~~b. Buffers are intended in general to:~~



- ~~(1) Minimize long-term impacts of development on properties containing sensitive areas.~~
  - ~~(2) Protect sensitive areas from adverse impacts during development.~~
  - ~~(3) Preserve the edges of wetlands and the banks of watercourses and fish and wildlife habitat conservation areas for their critical habitat value.~~
  - ~~(4) Provide an area to stabilize banks, to absorb overflow during high water events and to allow for slight variation of aquatic system boundaries over time due to hydrologic or climatic effects.~~
  - ~~(5) Provide shading to watercourses and fish and wildlife habitat conservation areas to maintain stable water temperatures and provide vegetative cover for additional wildlife habitat.~~
  - ~~(6) Provide input of organic debris and nutrient transport in watercourses.~~
  - ~~(7) Reduce erosion and increased surface water run-off.~~
  - ~~(8) Reduce loss of or damage to property.~~
  - ~~(9) Intercept fine sediments from surface water run-off and serve to minimize water quality impacts.~~
  - ~~(10) Protect the sensitive area from human and domestic animal disturbances.~~
- ~~2. Establishment of Buffer Widths. The following standard buffers shall be established:~~
- ~~a. Wetland buffers (measured from the wetland edge):~~
    - ~~(1) Category I & II Wetland: 100-foot buffer.~~
    - ~~(2) Category III Wetland: 80-foot buffer.~~
    - ~~(3) Category IV Wetland: 50-foot buffer.~~
  - ~~b. Watercourse buffers (measured from the OHWM):~~
    - ~~(1) Type 1 (S) Watercourse: The buffer width for the Green/Duwamish River is established in the Shoreline Environment Designations of this SMP for the three designated shoreline environments.~~
    - ~~(2) Type 2 (F) Watercourse: 100-foot-wide buffer.~~
    - ~~(3) Type 3 (NP) Watercourse: 80-foot-wide buffer.~~
    - ~~(4) Type 4 (NS) Watercourse: 50-foot-wide buffer.~~
  - ~~c. Fish and Wildlife Habitat Conservation Areas: The buffer will be the same as the river buffer established for each Shoreline Environment measured from the OHWM, unless an alternate buffer is established and approved at the time a fish and wildlife habitat restoration project is undertaken.~~
- ~~3. Sensitive Area Buffer Setbacks. All commercial and industrial buildings shall be set back 15 feet and all other development shall be set back 10 feet from the sensitive area buffer's edge. The building setbacks shall be measured from the foundation to the buffer's edge. Building plans shall also identify a 20-foot area beyond the buffer setback within which the impacts of development will be reviewed. The Director may waive setback requirements when a site plan demonstrates there will be no adverse impacts to the buffer from construction or occasional maintenance activities.~~
- ~~4. Reduction of Standard Buffer Width. Except for the Green/Duwamish River (Type 1 watercourse for which any variation in the buffer shall be regulated under the shoreline provisions of this program), the buffer width may be reduced on a case-by-case basis, provided the reduced buffer area does not contain slopes 15% or greater. In no case shall the approved buffer width result in greater than a 50% reduction in width. Buffer reduction with enhancement may be allowed as part of a Substantial Development Permit if:~~
- ~~a. Additional protection to wetlands or watercourses will be provided through the implementation of a buffer enhancement plan; and~~
  - ~~b. The existing condition of the buffer is degraded; and~~
  - ~~c. Buffer enhancement includes, but is not limited to, the following:~~
    - ~~(1) Planting vegetation that would increase value for fish and wildlife habitat or improve water quality;~~
    - ~~(2) Enhancement of wildlife habitat by incorporating structures that are likely to be used by wildlife, including wood duck boxes, bat boxes, snags, root wads/stumps, birdhouses and heron nesting areas; or~~
    - ~~(3) Removing non-native plant species and noxious weeds from the buffer area and replanting the area.~~

~~5.—Increase in Standard Buffer Width.~~ Buffers for sensitive areas will be increased when they are determined to be particularly sensitive to disturbance or the proposed development will create unusually adverse impacts. Any increase in the width of the buffer shall be required only after completion of a sensitive areas study by a qualified biologist that documents the basis for such increased width. An increase in buffer width may be appropriate when:

- ~~a.—The development proposal has the demonstrated potential for significant adverse impacts upon the sensitive area that can be mitigated by an increased buffer width; or~~
- ~~b.—The area serves as habitat for endangered, threatened, sensitive or monitor species listed by the federal government or the State.~~

~~6.—Maintenance of Vegetation in Buffers.~~ Every reasonable effort shall be made to maintain any existing viable native plant life in the buffers. Vegetation may be removed from the buffer as part of an enhancement plan approved by the Director. Enhancements will ensure that slope stability and wetland or watercourse quality will be maintained or improved. Any disturbance of the buffers shall be replanted with a diverse plant community of native northwest species that are appropriate for the specific site as determined by the Director. If the vegetation must be removed, or the vegetation becomes damaged or dies because of the alterations of the landscape, then the applicant for a permit must replace existing vegetation with comparable specimens, approved by the Director, which will restore buffer functions within five years.

**J.—Areas of Potential Geologic Instability.**

~~1.—Classification.~~ Areas of potential geologic instability are classified as follows:

- ~~a.—Class 1 area, where landslide potential is low, and which slope is less than 15%;~~
- ~~b.—Class 2 areas, where landslide potential is moderate, which slope is between 15% and 40%, and which are underlain by relatively permeable soils;~~
- ~~c.—Class 3 areas, where landslide potential is high, which include areas sloping between 15% and 40%, and which are underlain by relatively impermeable soils or by bedrock, and which also include all areas sloping more steeply than 40%;~~
- ~~d.—Class 4 areas, where landslide potential is very high, which include sloping areas with mappable zones of groundwater seepage, and which also include existing mappable landslide deposits regardless of slope.~~

~~2.—Exemptions.~~ The following areas are exempt from regulation as geologically hazardous areas:

- ~~a.—Temporary stockpiles of topsoil, gravel, beauty bark or other similar landscaping or construction materials;~~
- ~~b.—Slopes related to materials used as an engineered pre-load for a building pad;~~
- ~~c.—Any temporary slope that has been created through legal grading activities under an approved permit may be re-graded.~~
- ~~d.—Roadway embankments within right of way or road easements; and~~
- ~~e.—Slopes retained by approved engineered structures, except riverbank structures and armoring.~~

~~3.—Geotechnical Study Required.~~

~~a.—Development or alterations to areas of potential geologic instability that form the river banks shall be governed by the policies and requirements of the Shoreline Stabilization section of this chapter. Development proposals on all other lands containing or threatened by an area of potential geologic instability Class 2 or higher shall be subject to a geotechnical study. The geotechnical report shall analyze and make recommendations on the need for and width of any setbacks or buffers necessary to insure slope stability. Development proposals shall then include the buffer distances as defined within the geotechnical report. The geotechnical study shall be performed by a qualified professional geotechnical engineer, licensed in the State of Washington.~~

~~b.—Prior to permitting alteration of an area of potential geologic instability, the applicant must demonstrate one of the following:~~

~~(1) There is no evidence of past instability or earth movement in the vicinity of the proposed development, and where appropriate, quantitative analysis of slope stability indicates no significant risk to the proposed development or surrounding properties; or~~

~~(2) The area of potential geologic instability can be modified or the project can be designed so that any potential impact to the project and surrounding properties is eliminated, slope stability is not decreased, and the increase in surface water discharge or sedimentation shall not decrease slope stability.~~

~~4. **Buffers for Areas of Potential Geologic Instability.**~~

~~a. Buffers are intended to:~~

~~(1) Minimize long-term impacts of development on properties containing sensitive areas;~~

~~(2) Protect sensitive areas from adverse impacts during development;~~

~~(3) Prevent loading of potentially unstable slope formations;~~

~~(4) Protect slope stability;~~

~~(5) Provide erosion control and attenuation of precipitation, surface water and storm water~~

runoff;

~~(6) Reduce loss of or damage to property; and~~

~~(7) Prevent the need for future shoreline armoring.~~

~~b. Buffers may be increased by the Director when an area is determined to be particularly sensitive to the disturbance created by a development. Such a decision will be based on a City review of the report as prepared by a qualified geotechnical engineer and by a site visit.~~

~~5. **Additional Requirements.**~~

~~a. Where any portion of an area of potential geologic instability is cleared for development, a landscaping plan for the site shall include tree replanting in accordance with the Vegetation Protection and Landscaping section of this chapter. Vegetation shall be sufficient to provide erosion and stabilization protection.~~

~~b. It shall be the responsibility of the applicant to submit, consistent with the findings of the geotechnical report, structural plans which were prepared and stamped by a structural engineer. The plans and specifications shall be accompanied by a letter from the geotechnical engineer who prepared the geotechnical report stating that in his/her judgment, the plans and specifications conform to the recommendations in the geotechnical report; the risk of damage to the proposed development site from soil instability will be minimal subject to the conditions set forth in the report; and the proposed development will not increase the potential for soil movement.~~

~~c. Further recommendations signed and sealed by the geotechnical engineer shall be provided should there be additions or exceptions to the original recommendations based on the plans, site conditions or other supporting data. If the geotechnical engineer who reviews the plans and specifications is not the same engineer who prepared the geotechnical report, the new engineer shall, in a letter to the City accompanying the plans and specifications, express his or her agreement or disagreement with the recommendations in the geotechnical report and state that the plans and specifications conform to his or her recommendations.~~

~~d. The architect or structural engineer shall submit to the City, with the plans and specifications, a letter or notation on the design drawings at the time of permit application stating that he or she has reviewed the geotechnical report, understands its recommendations, has explained or has had explained to the owner the risks of loss due to slides on the site, and has incorporated into the design the recommendations of the report and established measures to reduce the potential risk of injury or damage that might be caused by any earth movement predicted in the report.~~

~~e. The owner shall execute a Sensitive Areas Covenant and Hold Harmless Agreement running with the land, on a form provided by the City. The City will file the completed covenant with the King County Department of Records and Elections at the expense of the applicant or owner. A copy of the recorded covenant will be forwarded to the owner.~~

~~f. Whenever the City determines that the public interest would not be served by the issuance of a permit in an area of potential geologic instability without assurance of a means of providing for restoration of~~

~~areas disturbed by, and repair of property damage caused by, slides arising out of or occurring during construction, the Director may require assurance devices.~~

~~g. Where recommended by the geotechnical report, the applicant shall retain a geotechnical engineer (preferably retain the geotechnical engineer who prepared the final geotechnical recommendations and reviewed the plans and specifications) to monitor the site during construction. If a different geotechnical engineer is retained, the new geotechnical engineer shall submit a letter to the City stating whether or not he/she agrees with the opinions and recommendations of the original study. Further recommendations, signed and sealed by the geotechnical engineer, and supporting data shall be provided should there be exceptions to the original recommendations.~~

~~h. During construction the geotechnical engineer shall monitor compliance with the recommendations in the geotechnical report, particularly site excavation, shoring, soil support for foundations including piles, subdrainage installations, soil compaction and any other geotechnical aspects of the construction. Unless otherwise approved by the City, the specific recommendations contained in the soils report must be implemented. The geotechnical engineer shall provide to the City written, dated monitoring reports on the progress of the construction at such timely intervals as shall be specified. Omissions or deviations from the approved plans and specifications shall be immediately reported to the City. The final construction monitoring report shall contain a statement from the geotechnical engineer that, based upon his or her professional opinion, site observations and testing during the monitoring of the construction, the completed development substantially complies with the recommendations in the geotechnical report and with all geotechnical related permit requirements. Occupancy of the project will not be approved until the report has been reviewed and accepted by the Director.~~

~~i. Substantial weight shall be given to ensuring continued slope stability and the resulting public health, safety and welfare in determining whether a development should be allowed.~~

~~j. The City may impose conditions that address site work problems which could include, but are not limited to, limiting all excavation and drainage installation to the dry season, or sequencing activities such as installing erosion control and drainage systems well in advance of construction. A permit will be denied if it is determined by the Director that the development will increase the potential of soil movement that results in an unacceptable risk of damage to the proposed development, its site or adjacent properties.~~

**~~K. Sensitive Areas Permitted Uses and Alterations.~~**

~~1. General Sensitive Areas Permitted Uses. All uses permitted in the Shoreline Jurisdiction buffers are allowed in sensitive areas within the jurisdiction except:~~

- ~~a. Promenades~~
- ~~b. Recreational structures~~
- ~~c. Public pedestrian bridges~~
- ~~d. Vehicle bridges~~
- ~~e. New utilities~~
- ~~f. Plaza connectors~~
- ~~g. Water dependent uses and their structures~~
- ~~h. Essential streets, roads and rights-of-way~~
- ~~i. Essential public facilities~~
- ~~j. Outdoor storage~~

~~2. In addition, the following uses are allowed:~~

~~a. Maintenance activities of existing landscaping and gardens in a sensitive area buffer including, but not limited to, mowing lawns, weeding, harvesting and replanting of garden crops and pruning and planting of vegetation. The removal of established native trees and shrubs is not permitted. Herbicide use in sensitive areas or their buffers is not allowed without written permission of the City.~~

~~b. Vegetation maintenance as part of sensitive area enhancement, creation or restoration. Herbicide use in sensitive areas or their buffers is not allowed without written permission of the City.~~

~~3. Conditional Uses. Dredging, where necessary to remediate contaminated sediments, if adverse impacts are mitigated, may be permitted.~~

~~4. **Wetland Alterations.** Alterations to wetlands are discouraged, are limited to the minimum necessary for project feasibility, and must have an approved mitigation plan developed in accordance with the standards in this chapter.~~

~~a. Mitigation for wetlands shall follow the mitigation sequencing steps in this chapter and may include the following types of actions:~~

~~(1) Creation — the manipulation of the physical, chemical or biological characteristics of a site to develop a wetland on an upland or deepwater site, where a biological wetland did not previously exist;~~

~~(2) Re-establishment — the manipulation of the physical, chemical or biological characteristics of a site with the goal of restoring wetland functions to a former wetland, resulting in a net increase in wetland acres and functions;~~

~~(3) Rehabilitation — the manipulation of the physical, chemical, or biological characteristics with the goal of repairing historic functions and processes of a degraded wetland, resulting in a gain in wetland function but not acreage;~~

~~(4) Enhancement — the manipulation of the physical, chemical or biological characteristics to heighten, intensify, or improve specific functions (such as vegetation) or to change the growth stage or composition of the vegetation present, resulting in a change in wetland functions but not a gain in wetland acreage; or~~

~~(5) A combination of the three types.~~

~~b. Allowed alterations per wetland type and mitigation ratios are as follows:~~

~~(1) Alterations are not permitted to Category I wetlands unless specifically exempted under the provisions of this Program. Mitigation will still be required at a rate of 4:1 for creation or re-establishment, 8:1 for rehabilitation, and 16:1 for enhancement.~~

~~(2) Alterations are not permitted to Category II wetlands unless specifically exempted under the provisions of this Program. Mitigation will still be required at a rate of 3:1 for creation or re-establishment, 6:1 for rehabilitation, and 12:1 for enhancement.~~

~~(3) Alterations to Category III wetlands are prohibited except where the location or configuration of the wetland provides practical difficulties that can be resolved by modifying up to .10 (one tenth) of an acre of wetland. Mitigation for any alteration to a Category III wetland must be located contiguous to the altered wetland. Mitigation for any alteration to a Category III wetland must be provided at a ratio of 2:1 for creation or re-establishment, 4:1 for rehabilitation and 8:1 for enhancement alone.~~

~~(4) Alterations to Category IV wetlands are allowed, where unavoidable and adequate mitigation is carried out in accordance with the standards of this section. Mitigation for alteration to a Category IV wetland will be 1.5:1 for creation or re-establishment and 3:1 for rehabilitation and 6:1 for enhancement.~~

~~(5) Isolated wetlands formed on fill material in highly disturbed environmental conditions and assessed as having low overall wetland functions (scoring below 20 points) may be altered and/or relocated with the permission of the Director. These wetlands may include artificial hydrology or wetlands unintentionally created as the result of construction activities. The determination that a wetland is isolated is made by the US Army Corps of Engineers.~~

~~5. **Watercourse Alterations.** All impacts to a watercourse that degrade the functions and values of the watercourse shall be avoided. If adverse alteration to the watercourse is unavoidable, all adverse impacts shall be mitigated in accordance with the approved mitigation plan as described in this chapter. Mitigation shall take place on-site or as close as possible to the impact location, and compensation shall be at a minimum 1:1 ratio. Any mitigation shall result in improved watercourse functions over existing conditions.~~

~~a. Diverting or rerouting may only occur with the permission of the Director and an approved mitigation plan, as well as all necessary approvals by state agencies. Any watercourse that has critical wildlife habitat or is necessary for the life cycle or spawning of salmonids shall not be rerouted, unless it can be shown that the habitat will be improved for the benefit of the species. A watercourse may be rerouted or day-lighted as a mitigation measure to improve watercourse function.~~

~~b. Piping of any watercourse should be avoided. Relocation of a watercourse is preferred to piping; if piping occurs in a watercourse sensitive area, it shall be limited and shall require approval of the Director. Piping of Type 1 watercourses shall not be permitted. Piping may be allowed in Type 2, 3 or 4 watercourses if~~

it is necessary for access purposes. Piping may be allowed in Type 4 watercourses if the watercourse has a degraded buffer, is located in a highly developed area and does not provide shade, temperature control, etc. for habitat. The applicant must comply with the conditions of this section, including: providing excess capacity to meet the needs of the system during a 100-year flood event, and providing flow restrictors and complying with water quality and existing habitat enhancement procedures.

~~c. No process that requires maintenance on a regular basis will be acceptable unless this maintenance process is part of the regular and normal facilities maintenance process or unless the applicant can show funding for this maintenance is ensured for as long as the use remains.~~

~~d. Piping projects shall be performed pursuant to the following applicable standards:~~

~~(1) The conveyance system shall be designed to comply with the standards in current use and recommended by the Department of Public Works.~~

~~(2) Where allowed, piping shall be limited to the shortest length possible as determined by the Director to allow access onto a property.~~

~~(3) Where water is piped for an access point, those driveways or entrances shall be consolidated to serve multiple properties where possible, and to minimize the length of piping.~~

~~(4) When required by the Director, watercourses under drivable surfaces shall be contained in an arch culvert using oversize or super span culverts for rebuilding of a streambed. These shall be provided with check dams to reduce flows, and shall be replanted and enhanced according to a plan approved by the Director.~~

~~(5) All watercourse crossings shall be designed to accommodate fish passage. Watercourse crossings shall not block fish passage where the streams are fish-bearing.~~

~~(6) Stormwater run-off shall be detained and infiltrated to preserve the watercourse channel's dominant discharge.~~

~~(7) All construction shall be designed to have the least adverse impact on the watercourse, buffer and surrounding environment.~~

~~(8) Piping shall be constructed during periods of low flow, or as allowed by the State Department of Fish and Wildlife.~~

~~(9) Water quality must be as good or better for any water exiting the pipe as for the water entering the pipe, and flow must be comparable.~~

~~6. **Fish and Wildlife Conservation Area Alterations.** Alterations to the Green/Duwamish River are regulated by the shoreline provisions of this SMP. Alterations to Fish and Wildlife Conservation Areas that have been created as restoration or habitat enhancement sites and are shown on the Sensitive Areas in the Shoreline Jurisdiction Map are prohibited and may only be authorized through a shoreline variance procedure.~~

~~L. **Sensitive Areas Mitigation.** Mitigation shall be required for any proposals for dredging, filling, piping, diverting, relocation or other alterations of sensitive areas as allowed in this chapter and in accordance with mitigation sequencing and the established mitigation ratios. The mitigation plan shall be developed as part of a sensitive area study by a qualified specialist.~~

~~1. **Mitigation Sequencing.** Applicants shall demonstrate that reasonable efforts have been examined with the intent to avoid and minimize impacts to sensitive areas and buffers. When an alteration to a sensitive area or its required buffer is proposed, such alteration shall be avoided, minimized or compensated for in the following order of preference:~~

~~a. Avoidance of sensitive area and buffer impacts, whether by finding another site or changing the location of the proposed activity on-site;~~

~~b. Minimizing sensitive area and buffer impacts by limiting the degree of impact on site;~~

~~c. Mitigation actions that require compensation by replacing, enhancing, or substitution.~~

~~2. **Criteria for Approval of Alterations and Mitigation.** Alterations and mitigation plans are subject to Director approval, and may be approved only if the following findings are made:~~

~~a. The alteration will not adversely affect water quality;~~

~~b. The alteration will not adversely affect fish, wildlife, or their habitat;~~

~~c. The alteration will not have an adverse effect on drainage and/or stormwater detention capabilities;~~

~~d. The alteration will not lead to unstable earth conditions or create an erosion hazard or contribute to scouring actions;~~

~~e. The alteration will not be materially detrimental to any other property; and~~

~~f. The alteration will not have adverse effects on any other sensitive areas or the shoreline.~~

~~g. The mitigation will result in improved functions such as water quality, erosion control, wildlife and fish habitat.~~

~~3. Mitigation Location.~~

~~a. On-site mitigation shall be provided, except where it can be demonstrated that:~~

~~(1) On-site mitigation is not scientifically feasible due to problems with hydrology, soils, or other factors; or~~

~~(2) Mitigation is not practical due to potentially adverse impacts from surrounding land uses; or~~

~~(3) Existing functional values created at the site of the proposed restoration are significantly greater than lost sensitive area functions; or~~

~~(4) Established regional goals for flood storage, flood conveyance, habitat or other sensitive area functions have been established and strongly justify location of mitigation at another site.~~

~~b. Off-site mitigation shall occur within the shoreline jurisdiction in a location where the sensitive area functions can be restored. Buffer impacts must be mitigated at or as close as possible to the location of the impact.~~

~~c. Wetland creation, relocation of a watercourse, or creation of a new fish and wildlife habitat shall not result in the new sensitive area or buffer extending beyond the development site and onto adjacent property without the agreement of the affected property owners, unless otherwise exempted by this chapter.~~

~~4. Mitigation Plan Content and Standards. Mitigation Plan Content and Standards. The scope and content of a mitigation plan shall be decided on a case-by-case basis. As the impacts to the sensitive area increase, the mitigation measures to offset these impacts will increase in number and complexity. The minimum components of a complete mitigation plan are listed below. For wetland mitigation plans, the format should follow that established in "Wetland Mitigation in Washington State, Part 2—Developing Mitigation Plans" (Washington Department of Ecology, Corps of Engineers, EPA, March 2006, as amended).~~

~~a. Baseline information of quantitative data collection or a review and synthesis of existing data for both the project impact zone and the proposed mitigation site.~~

~~b. Environmental goals and objectives that describe the purposes of the mitigation measures. This should include a description of site selection criteria, identification of target evaluation species, and resource functions.~~

~~c. Performance standards for the specific criteria for fulfilling environmental goals, and for beginning remedial action or contingency measures. They may include water quality standards, species richness and diversity targets, habitat diversity indices, or other ecological, geological or hydrological criteria. The following shall be considered the minimum performance standards for approved sensitive area alterations:~~

~~(1) Sensitive area functions and improved habitat for fish and wildlife are improved over those of the original conditions.~~

~~(2) Hydrologic conditions, hydroperiods and watercourse channels are improved over existing conditions and the specific performance standards specified in the approved mitigation plan are achieved.~~

~~(3) Acreage requirements for enhancement or creation are met.~~

~~(4) Vegetation native to the Pacific Northwest is installed and vegetation survival and coverage standards over time are met and maintained.~~

~~(5) Buffer and bank conditions and functions exceed the original state.~~

~~(6) Stream channel habitat and dimensions are maintained or improved such that the fisheries habitat functions of the compensatory stream reach meet or exceed that of the original stream.~~

~~d. A detailed construction plan of the written specifications and descriptions of mitigation techniques. This plan should include the proposed construction sequence and construction management, and be accompanied by detailed site diagrams and blueprints that are an integral requirement of any development proposal.~~

~~e.—Monitoring and/or evaluation program that outlines the approach and frequency for assessing progress of the completed project. An outline shall be included that spells out how the monitoring data will be evaluated and reported.~~

~~f.—Maintenance plan that outlines the activities and frequency of maintenance to ensure compliance with performance standards.~~

~~g.—Contingency plan identifying potential courses of action and any corrective measures to be taken when monitoring or evaluation indicates project performance standards have not been met.~~

~~h.—Performance security or other assurance devices.~~

~~**5.—Mitigation Timing.**~~

~~a.—Mitigation projects shall be completed prior to activities that will permanently disturb sensitive areas or their buffers and either prior to or immediately after activities that will temporarily disturb sensitive areas.~~

~~b.—Construction of mitigation projects shall be timed to reduce impacts to existing wildlife, flora and water quality, and shall be completed prior to use or occupancy of the activity or development. The Director may allow activities that permanently disturb wetlands or watercourses prior to implementation of the mitigation plan under the following circumstances:~~

- ~~(1) To allow planting or re-vegetation to occur during optimal weather conditions;~~
- ~~(2) To avoid disturbance during critical wildlife periods; or~~
- ~~(3) To account for unique site constraints that dictate construction timing or phasing.~~

~~e.—Monitoring of buffer alterations of all mitigation components shall be required for three to five years. All other alterations shall be monitored for minimum of five years.~~

~~**6.—Corrective Actions and Monitoring.** The Director shall require subsequent corrective actions and long term monitoring of the project, for a minimum of 5 additional years, if adverse impacts to regulated sensitive areas or their buffers are identified.~~

~~**7.—Recording.** The property owner receiving approval of a use or development pursuant to the Shoreline Master Program shall record the City approved site plan clearly delineating the sensitive area and its buffer with the King County Division of Records and Elections. The face of the site plan must include a statement that the provisions of this chapter, as of the effective date of the ordinance from which the Shoreline Management Program derives or is thereafter amended, control use and development of the subject property, and provide for any responsibility of the latent defects or deficiencies.~~

~~**8.—Assurance Device.**~~

~~a.—The Director may require a letter of credit or other security device acceptable to the City, to guarantee performance and maintenance requirements. All assurances shall be on a form approved by the City Attorney.~~

~~b.—When alteration of a sensitive area is approved, the Director may require an assurance device, on a form approved by the City Attorney, to cover the monitoring costs and correction of possible deficiencies for the term of the approved monitoring and maintenance program.~~

~~c.—The assurance device shall be released by the Director upon receipt of written confirmation submitted to the Department from the applicant's qualified professional that the mitigation or restoration has met its performance standards and is successfully established. Should the mitigation or restoration meet performance standards and be successfully established in the third or fourth year of monitoring, the City may release the assurance device early. The assurance device may be held for a longer period, if at the end of the monitoring period, the performance standards have not been met or the mitigation has not been successfully established.~~

~~d.—Release of the security does not absolve the property owner of responsibility for maintenance or correcting latent defects or deficiencies or other duties under law.~~

*(Ord. 2346-§9, 2011)*



**18.44.100080 Public Access to the Shoreline**

**A. Applicability.**

1. Public access shall be provided on all property that abuts the Green/Duwamish River shoreline in accordance with this section as further discussed below where any of the following conditions are present:

- a. Where a development or use will create increased demand for public access to the shoreline, the development or use shall provide public access to mitigate this impact. For the purposes of this section, an “increase in demand for public access” is determined by evaluating whether the development reflects an increase in the land use intensity (for example converting a warehouse to office or retail use), or a significant increase in the square footage of an existing building. A significant increase is defined as an increase of 3,000 square feet.
- b. Where a development or use will interfere with an existing public access way, the development or use shall provide public access to mitigate this impact. Impacts to public access may include blocking access or discouraging use of existing on-site or nearby accesses.
- c. Where a use or development will interfere with a public use of lands or waters subject to the public trust doctrine, the development shall provide public access to mitigate this impact.
- d. Where the development is proposed by a public entity or on public lands.
- e. Where identified on the Shoreline Public Access Map in the Shoreline Master Program.
- f. Where a land division of five or greater lots, or a residential project of five or greater residential units, is proposed.

2. ~~For the purposes of this section, an “increase in demand for public access” is determined by evaluating whether the development reflects an increase in the land use intensity, for example converting a warehouse to office or retail use, or a significant increase in the square footage of an existing building. A significant increase is defined as an increase of 3,000 square feet. The extent of public access required will be proportional to the amount of increase in the demand for public access. For smaller projects, the Director will review the intent of this section and the scope of the project to determine a reasonable amount of public access to be carried out. Depending on the amount of increase, the project may utilize the alternative provisions for meeting public access in TMC Section 18.44.08400(F). The terms and conditions of TMC Sections 18.44.100080(A) and (B) shall be deemed satisfied if the applicant and the City agree upon a master trail plan providing for public paths and trails within a parcel or group of parcels.~~

**Commented [CL51]:** This language duplicates the language in A 1 a. above and should be deleted from this section.

3. The provisions of this section do not apply to the following:

- a. Short plats of four or fewer lots;
- b. Where providing such access would cause unavoidable health or safety hazards;
- c. ~~Where an area is limited to authorized personnel and providing such access would create inherent and unavoidable security problems that cannot be mitigated through site design or fencing;~~ or
- d. Where providing such access would cause significant ecological impacts that cannot be mitigated.

**Commented [NG52]:** This provision was difficult to understand and enforce so we have proposed more specific language.

An applicant claiming an exemption under items 3(b) - (d) above must comply with the procedures in TMC Section 18.44.100080(F).

**B. General Standards.**

1. To improve public access to the Green/Duwamish River, sites shall be designed to provide:

- a. Safe, visible and accessible pedestrian and non-motorized vehicle connections between proposed development and the river’s edge, particularly when the site is adjacent to the Green River Trail or other approved trail system; and
- b. Public pathway entrances that are clearly visible from the street edge and identified with signage; and
- c. Clearly identified pathways that are separate from vehicular circulation areas. This may be accomplished through the use of ~~special distinct paving materials such as precast pavers, boroelite,~~ changes in color or distinct and detailed scoring patterns and textures.

**Commented [NG53]:** The City has developed a sign design to indicate shoreline access points.

**Commented [MP54]:** Brand name.

d. Site elements that are organized to clearly distinguish between public and private access and circulation systems.

2. Required public access shall be fully developed and available for public use at the time of occupancy in accordance with development permit conditions except where the decision maker determines an appropriate mechanism for delayed public access implementation is necessary for practical reasons. Where appropriate, a bond or cash assignment may be approved, on review and approval by the Director of Community Development, to extend this requirement for 90 days from the date the Certificate of Occupancy is issued.

3. Public access easements and related permit conditions shall be recorded on the deed of title or the face of the plat, short plat or approved site plan as a condition tied to the use of the land. Recording with the County shall occur prior to the issuance of an Occupancy Permit or final plat approval. Upon re-development of such a site, the easement may be relocated to facilitate the continued public access to the shoreline.

4. Approved signs indicating the public's right of access and hours of access, if restricted, shall be constructed, installed and maintained by the applicant in conspicuous locations at public access sites. Signs should be designed to distinguish between public and private areas. Signs controlling or restricting public access may be approved as a condition of permit approval.

5. Required access must be maintained throughout the life of the project.

6. Public access features shall be separated from residential uses through the use of setbacks, low walls, berms, landscaping, or other device of a scale and materials appropriate to the site.

7. Shared public access between developments is encouraged. Where access is to be shared between adjacent developments, the minimum width for the individual access easement may be reduced, provided the total width of easements contributed by each adjacent development equals a width that complies with Fire Department requirements and/or exceeds the minimum for an individual access.

8. Public access sites shall be connected directly to the nearest public area (e.g., street, public park, or adjoining public access easement). Where connections are not currently possible, the site shall be designed to accommodate logical future connections.

**C. Requirements for Shoreline Trails.** Where public access is required under TMC Section 18.44.100080(A)1 above, the requirement will be met by provision of a shoreline trail as follows:

1. **Development on Properties Abutting Existing Green River Trail.** An applicant seeking to develop property abutting the existing trail shall meet public access requirements by upgrading the trail along the property frontage to meet the standards of a ~~44~~12-foot-wide trail with 2-foot shoulders on each side. If a 12 foot wide trail exists on the property it shall mean public access requirements have been met if access to the trail exists within 1000 feet of the property.

2. **Development on Properties Where New Trails are Planned.** An applicant seeking to develop property abutting the river in areas identified for new shoreline trail segments shall meet public access requirements by dedicating an ~~18~~16-foot-wide trail easement to the City for public access along the river.

**D. Publicly-Owned Shorelines.**

1. Shoreline development by any public entities, including but not limited to the City of Tukwila, King County, port districts, state agencies, or public utility districts, shall include public access measures as part of each development project, unless such access is shown to be incompatible due to reasons of safety, security, impact to the shoreline environment or other provisions listed in this section.

2. The following requirements apply to street ends and City-owned property adjacent to the river.

a. Public right-of-way and "road-ends," or portions thereof, shall not be vacated and shall be maintained for future public access.

b. Unimproved right-of-ways and portions of right-of-ways, such as street ends and turn-outs, shall be dedicated to public access uses until such time as the portion becomes improved right-of-way. Uses shall be limited to passive outdoor recreation, ~~ear-top~~hand carry boat launching, fishing, interpretive/educational uses, and/or parking, ~~which that~~ accommodates these uses, and shall be designed so as to not interfere with the privacy of adjacent residential uses.

c. City-owned facilities within the Shoreline Jurisdiction shall provide new trails and trail connections to the Green River Trail in accordance with approved plans and this SMP.

**Commented [CL55]:** This trail width matches the Walk and Roll Plan standards but is not practical as it doesn't match the County's trail width standard or our Parks Dept. standard. As a result, we've had several variance requests for projects that couldn't meet the standard. I think we should go back to our earlier standard of 12 ft. paved with two-foot shoulders on either side.

**Commented [MP56]:** A wider trail may require fill along the shoreline AND inhibits the ability to create gentler slopes per Shoreline MP, which provide shallow water habitat as well as room for trees/native vegetation. Recommend not widening trail except in specific view/access locations.

d. All City-owned recreational facilities within the Shoreline Jurisdiction, unless qualifying for an exemption as specified in this chapter, shall make adequate provisions for:

- (1) Non-motorized and pedestrian access;
- (2) The prevention of trespass onto adjacent properties through landscaping, fencing or other appropriate measures;
- (3) Signage indicating the public right-of-way to shoreline areas; and
- (4) Mechanisms to prevent environmental degradation of the shoreline from public use.

**E. Public Access Incentives.**

1. The minimum yard setback for buildings, uses, utilities or development from non-riverfront lot lines may be reduced as follows:

a. Where a development provides a public access corridor ~~between~~ that connects off-site areas, or public shoreline areas to public shoreline areas, one side yard may be reduced to a zero lot line placement; or

b. Where a development provides additional public access area(s) equal in area to at least 2.5% of total building area, the front yard (the landward side of the development) may be reduced by 50%.

2. The maximum height for structures within the shoreline jurisdiction may be increased by ~~15~~ 30%, when:

- a. Development devotes at least 5% of its building or land area to public shoreline access; or
- b. Development devotes at least 10% of its land area to employee shoreline access.

~~3. The maximum height for structures under TMC Section 18.44.0570.C.3. and this section may be increased by a maximum of 25% when:~~

- ~~a. One of the criteria in TMC Section 18.44.100.E.2 is met; and~~
- ~~b. The applicant restores or enhances the entire shoreline buffer, including, but not limited to, paved areas no longer in use on the property to offset the impact of the increase in height. Buffer restoration/enhancement projects undertaken to meet the requirements of TMC Section 18.44.100.080(F) do not qualify as restoration or enhancement for purposes of the height incentive provided in this subsection.~~
- ~~c. No combination of incentives may be used to gain more than a 25% total height increase for a structure.~~

~~3.4. The maximum height for structures within the shoreline jurisdiction may be increased by 30% for properties that construct a 44~~ 12 ~~-foot-wide paved trail with a 2-foot-wide shoulder on each side for public access along the river in areas identified for new shoreline trail segments, or where, in the case of properties containing or abutting existing public access trails, the existing trail either meets the standard of a 44~~ 12 ~~-foot-wide trail with 2-foot-wide shoulders on either side or the property owner provides any necessary easements and improvements to upgrade the existing trail to that standard along the property frontage.~~

~~4. During the project review, the project proponent shall increased height shall be affirmatively demonstrated to that the increased height will:~~

- a. Not block the views of a substantial number of residences;
- b. Not cause environmental impacts such as; ~~but not limited to, shading of the river buffer or light impacts adversely affecting the river corridor; and~~
- c. Achieve no net loss of ecological function; ~~and-~~

~~d. Not combine incentives to increase the allowed building height above the maximum height in the parcel's zoning district. In no case shall the building height be greater than 115 feet pursuant to this provision.~~

**F. Exemptions from Provision of On-Site Public Access.**

1. Requirements for providing on-site general public access, as distinguished from employee access, will not apply if the applicant can demonstrate one or more of the following:

- a. Unavoidable health or safety hazards to the public exist such as active railroad tracks or hazardous chemicals related to the primary use that cannot be prevented by any practical means.
- b. The area is limited to authorized personnel and inherent security requirements of the use cannot be satisfied through the application of alternative design features or other solutions.

**Commented [NG57]:** This reasoning is similar to the prior incentive increase for landscaping. A 6.75 foot increase is of limited value but a 13.5 foot increase could allow for an additional building story.

**Commented [NG58]:** This duplicates the incentive at 18.44.050 C 3 d.

**Commented [NG59]:** We have not seen much use of these incentives, therefore this 25% limit is not necessary.

**Commented [MP60]:** Not necessarily bad from an environmental point-of-view; many flora/fauna thrive in shade environments

- c. The cost of providing the access, easement or other public amenity on or off the development site is unreasonably disproportionate to the total long-term cost of the proposed development.
  - d. Unavoidable environmental harm or net loss of shoreline ecological functions that cannot be adequately mitigated will result from the public access.
  - e. Access is not feasible due to the configuration of existing parcels and structures, such that access areas are blocked in a way that cannot be remedied reasonably by the proposed development.
  - f. Significant undue and unavoidable conflict between the proposed access and adjacent uses would occur and cannot be mitigated.
  - g. Space is needed for water-dependent uses or navigation.
2. In order to meet any of the above-referenced conditions, the applicant must first demonstrate, and the City determine in its findings through a Type II decision, 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;
  - b. Designing separation of uses and activities through fencing, terracing, hedges or other design features; or
  - c. Providing access on a site geographically separate from the proposal such as a street end cannot be accomplished.
3. If the above conditions are demonstrated, and the proposed development is not subject to the Parks Impact Fee, alternative provisions for meeting public access are required and include:
- a. Development of public access at an adjacent street end; or
  - b. Protection through easement or setbacks of landmarks, unique natural features or other areas valuable for their interpretive potential; or
  - c. Contribution of materials and/or labor toward projects identified in the Parks and Recreation Master Plan, the Shoreline Restoration Plan, or other City adopted plan; or
  - d. In lieu of providing public access under this section, at the Director's discretion, ~~the a private~~ applicant may provide restoration/enhancement of the shoreline jurisdiction to a scale commensurate with the foregone public access.

(Ord. 2346 §10, 2011)

**Commented [RL61]:** This section should not apply to public mitigation projects.

#### 18.44.110090 Shoreline Design Guidelines

The Green/Duwamish River is an amenity that should be valued and celebrated when designing projects that will be located along its length. The river and its tributaries support salmon runs and resident trout, including ESA-listed Chinook salmon, Bull Trout and Steelhead. If any portion of a project falls within the shoreline jurisdiction, then the entire project will be reviewed under these guidelines as well as the relevant sections of the Design Review Chapter of the Zoning Code (TMC Chapter 18.60). The standards of TMC Chapter 18.60 shall guide the type of review, whether administrative or by the Board of Architectural Review.

A. The following standards apply to development, uses and activities in the Urban Conservancy and High Intensity Environments and non-residential development in the Shoreline Residential Environment.

1. **Relationship of Structure to Site.** Development within the shoreline jurisdiction shall demonstrate compliance with the following:
- a. Respect and reflect the shape of the shoreline;
  - b. Orient building elements to site such that public river access, both visual and physical is enhanced;
  - c. Orient buildings to allow for casual observation of pedestrian and trail activity from interior spaces;
  - d. Site and orient buildings to provide maximum views from building interiors toward the river and the shoreline;
  - e. Orient public use areas and private amenities to the river;
  - f. Clearly allocate spaces, accommodating parking, vehicular circulation and buildings to preserve existing stands of vegetation or trees so that natural areas can be set aside, improved, or integrated into site organization and planning;

g. Clearly define and separate public from non-public spaces with the use of paving, signage, and landscaping.

2. **Building Design.** Development within the shoreline jurisdiction shall demonstrate compliance with the following:

a. To prevent building mass and shape from overwhelming the desired human scale along the river, development shall avoid blank walls on the public and river sides of buildings.

b. Buildings should be designed to follow the curve of the river and respond to changes in topography; buildings must not “turn their back” to the river.

c. Design common areas in buildings to take advantage of shoreline views and access; incorporate outdoor seating areas that are compatible with shoreline access.

d. Consider the height and scale of each building in relation to the site.

e. Extend site features such as plazas that allow pedestrian access and enjoyment of the river to the landward side of the buffer’s edge.

f. Locate lunchrooms and other common areas to open out onto the water-ward side of the site to maximize enjoyment of the river.

g. Design structures to take advantage of the river frontage location by incorporating features such as:

(1) plazas and landscaped open space that connect with a shoreline trail system;

(2) windows that offer views of the river; or

(3) pedestrian entrances that face the river.

h. View obscuring fencing is permitted only when necessary for documentable use requirements and must be designed with landscaping per the Vegetation Protection and Landscaping Section. Other fencing, when allowed, must be designed to complement the proposed and/or existing development materials and design; and

i. Where there are public trails, locate any fencing between the site and the landward side of the shoreline trail.

3. **Design of Public Access.** Development within the shoreline jurisdiction shall demonstrate compliance with the following:

a. Public access shall be barrier free, where feasible, and designed consistent with the Americans with Disabilities Act.

b. Public access landscape design shall use native vegetation, in accordance with the standards in the Vegetation Protection and Landscaping Section. Additional landscape features may be required where desirable to provide public/private space separation and screening of utility, service and parking areas.

c. Furniture used in public access areas shall be appropriate for the proposed level of development, and the character of the surrounding area. For example, large urban projects should provide formal benches; for smaller projects in less-developed areas, simpler, less formal benches or suitable alternatives such as boulders are appropriate.

d. Materials used in public access furniture, structures or sites shall be:

(1) Durable and capable of withstanding exposure to the elements;

(2) Environmentally friendly and take advantage of technology in building materials, lighting, paved surfaces, porous pavement, etc, wherever practical; and

(3) Consistent with the character of the shoreline and the anticipated use.

e. Public-Private Separation.

(1) Public access facilities shall look and feel welcoming to the public, and not appear as an intrusion into private property.

(2) Natural elements such as logs, grass, shrubs, and elevation separations are encouraged as means to define the separation between public and private space.

(Ord. 2346 §11, 2011)

**Commented [RL62]:** Large rocks have been used for “benches” on habitat projects. I think we should encourage this type of installation.

#### 18.44.120100 Shoreline Restoration

A. **Shoreline Substantial Development Permit Not Required.** Shoreline restoration projects shall be allowed without a Shoreline Substantial Development Permit when these projects meet the criteria established by WAC 173-27-040(o) and (p) and RCW 90.58.580.

B. **Changes in Shoreline Jurisdiction Due to Restoration.**

1. Relief may be granted from Shoreline Master Program standards and use regulations in cases where shoreline restoration projects result in a change in the location of the OHWM and associated Shoreline Jurisdiction on the subject property and/or adjacent properties, and where application of this chapter's regulations would preclude or interfere with the uses permitted by the underlying zoning, thus presenting a hardship to the project proponent.

a. Applications for relief, as specified below, must meet the following criteria:

- (1) The proposed relief is the minimum necessary to relieve the hardship;
- (2) After granting the proposed relief, there is net environmental benefit from the restoration project; and

(3) Granting the proposed relief is consistent with the objectives of the shoreline restoration project and with the Shoreline Master Program.

(4) Where a shoreline restoration project is created as mitigation to obtain a development permit, the project proponent required to perform the mitigation is not eligible for relief under the provisions of this section.

b. The Department of Ecology must review and approve applications for relief.

c. For the portion of property that moves from outside Shoreline Jurisdiction to inside Shoreline Jurisdiction as a result of the shoreline restoration project, the City may consider the following, consistent with the criteria in TMC Section 18.44.120100.B.1.a.

- (1) permitting development for the full range of uses of the underlying zoning consistent with the Zoning Code, including uses that are not water oriented;
- (2) waiving the requirement to obtain a shoreline substantial development permit if it is otherwise exempt from the requirement for a substantial development permit;
- (3) waiving the provisions for public access;
- (4) waiving the requirement for shoreline design review; and
- (5) waiving the development standards set forth in this chapter.

d. The intent of the exemptions identified above in subparagraphs B.1.c.(1) to B.1.c.(5) is to implement the restoration projects of the Shoreline Master Program Restoration Plan, which reflects the projects identified in the Water Resource Inventory Area (WRIA) 9 Plan pursuant to Policy 5.2 of the SMP.

2. Consistent with provisions in TMC Section 18.44.050—C. building heights within shoreline jurisdiction may be increased if the project proponent provides additional restoration and/or enhancement of the shoreline buffer, beyond what may otherwise be required in accordance with the standards of TMC Section 18.44.060, "Vegetation Protection and Landscaping." Additional Restoration and/or enhancement shall include:  
a. creation of shallow-water (max slope 5H:1V) off channel rearing habitat and/or  
b. removal of fish passage barriers to known or potential fish habitat, and restoration of the barrier site.

3. Consistent with the provisions of subparagraphs B.1.a, 1.b and 1.c above, the Shoreline Residential Environment Buffer, High Intensity or Urban Environment Buffer width may be reduced to no less than 25 feet measured from the new location of the OHWM for the portion of the property that moves from outside the Shoreline Jurisdiction to inside Shoreline Jurisdiction as a result of the shoreline restoration project, subject to the following standards:

a. The 25-foot buffer area must be vegetated according to the requirements of the Vegetation Protection and Landscaping Section or as otherwise approved by the City; and

b. The proponents of the restoration project are responsible for the installation and maintenance of the vegetation.

4. The habitat restoration project proponents must record with King County a survey that identifies the location of the OHWM location prior to implementation of the shoreline restoration project, any structures

that fall within the Shoreline Jurisdiction, and the new location of the OHWM once construction of the shoreline restoration project is completed.

5. Shoreline restoration projects must obtain all U.S. Army Corps of Engineers and Washington State Department of Fish and Wildlife approvals as well as written approval from the City.

(Ord. 2346 §12, 2011)

#### ~~18.44.130~~ 110 Administration

##### A. Applicability of Shoreline Master Program and Substantial Development Permit.

1. **Development in the Shoreline Jurisdiction.** Based on guidelines in the SMA for a Minimum Shoreline Jurisdiction, Tukwila's Shoreline Jurisdiction is defined as follows: The Tukwila Shoreline Jurisdiction includes the channel of the Green/Duwamish River, its banks, the upland area which extends from the OHWM landward for 200 feet on each side of the river, floodways and all associated wetlands within its floodplain. The floodway shall not include those lands that have historically been protected by flood control devices and therefore have not been subject to flooding with reasonable regularity.

2. **Applicability.** The Tukwila SMP applies to uses, change of uses, activities or development that occurs within the above-defined Shoreline Jurisdiction. All proposed uses and development occurring within the Shoreline Jurisdiction must conform to Chapter 90.58 RCW, the SMA, and this chapter whether or not a permit is required.

##### B. Relationship to Other Codes and Regulations

1. Compliance with this Master Program does not constitute compliance with other federal, state, and local regulations and permit requirements that may apply. The applicant is responsible for complying with all other applicable requirements.
2. Where this Master Program makes reference to any RCW, WAC, or other state or federal law or regulation, the most recent amendment or current edition shall apply.
3. In the case of any conflict between any federal, state, or other local law and this Master Program, the provision that is most protective of shoreline resources shall prevail, except when constrained by federal or state law, or where explicitly provided in this Master Program.
4. Relationship to Critical Areas Regulations.
  - A. For protection of critical areas where they occur in shoreline jurisdiction, this Master Program adopts by reference the City's Critical Areas Ordinance, which is incorporated into this Master Program with specific exclusions and modifications as set forth in TMC Section 18.44.070.
  - B. All references to the Critical Areas Ordinance are for the version adopted [CAO adoption date]. Pursuant to WAC 173-26-191(2)(b), amending the referenced regulations in the Master Program for those critical areas under shoreline jurisdiction will require an amendment to the Master Program and approval by the Department of Ecology.
  - C. Within shoreline jurisdiction, the Critical Areas Ordinance shall be liberally construed together with this Master Program to give full effect to the objectives and purposes of the provisions of this Master Program and Chapter 90.58 RCW.

**C. Developments not required to obtain shoreline permits or local reviews.** Requirements to obtain a substantial development permit, conditional use permit, variance, letter of exemption, or other review to implement the Shoreline Management Act do not apply to the following actions as described in WAC 173-27-044 and WAC 173-27-045:

1. Remedial actions. Pursuant to RCW 90.58.355, any person conducting a remedial action at a facility pursuant to a consent decree, order, or agreed order issued pursuant to chapter 70.105D RCW, or to the department of ecology when it conducts a remedial action under chapter 70.105D RCW.

2. Boatyard improvements to meet NPDES permit requirements. Pursuant to RCW 90.58.355, any person installing site improvements for storm water treatment in an existing boatyard facility to meet requirements of a national pollutant discharge elimination system storm water general permit.

3. WSDOT facility maintenance and safety improvements. Pursuant to RCW 90.58.356, Washington State Department of Transportation projects and activities meeting the conditions of RCW 90.58.356 are not required to obtain a substantial development permit, conditional use permit, variance, letter of exemption, or other local review.

4. Projects consistent with an environmental excellence program agreement pursuant to RCW 90.58.045--(v). Projects authorized through the Energy Facility Site Evaluation Council process, pursuant to chapter 80.50 RCW.

**DB. Substantial Development Permit Requirements.**

1. **Permit Application Procedures.** Applicants for a Shoreline Substantial Development Permit shall comply with permit application procedures in TMC Chapter 18.104.

2. **Exemptions.**

a. To qualify for an exemption, the proposed use, activity or development must meet the requirements for an exemption as described in WAC 173-27-040, except for properties that meet the requirements of the Shoreline Restoration Section, TMC Section 18.44.420~~100~~. The purpose of a shoreline exemption is to provide a process for uses and activities which do not trigger the need for a Substantial Development Permit, but require compliance with all provisions of the City's SMP and overlay district.

b. The Director may impose conditions to the approval of exempted developments and/or uses as necessary to assure compliance of the project with the SMA and the Tukwila SMP, per WAC 173-27-040(e). For example, in the case of development subject to a building permit but exempt from the shoreline permit process, the Building Official or other permit authorizing official, through consultation with the Director, may attach shoreline management terms and conditions to building permits and other permit approvals pursuant to RCW 90.58.140.

3. A substantial development permit shall be granted only when the development proposed is consistent with:

- a. The policies and procedures of the Shoreline Management Act.
- b. The provisions of Chapter 173-27, WAC; and
- c. This ~~the~~ Shoreline Master Program.

**EC. Shoreline Conditional Use Permit.**

1. **Purpose.** As stated in WAC 173-27-160, the purpose of a Conditional Use Permit (CUP) is to allow greater flexibility in the application of use regulations of this chapter in a manner consistent with the policies of RCW 90.58.020. In authorizing a conditional use, special conditions may be attached to the permit by the City or the Department of Ecology to prevent undesirable effects of the proposed use and/or assure consistency of the project with the SMA and the City's SMP. Uses which are specifically prohibited by the Shoreline Master Program may not be authorized with approval of a CUP.

2. **Application.** Shoreline Conditional Use Permits are a Type 4 Permit processed under TMC Chapter 18.104.

3. **Application requirements.** Applicants must meet all requirements for permit application and approvals indicated in TMC Chapter 18.104 and this chapter.

4. **Approval Criteria.**

a. Uses classified as shoreline conditional uses may be authorized, provided that the applicant can demonstrate all of the following:

- (1) The proposed use will be consistent with the policies of RCW 90.58.020 and the policies of the Tukwila Shoreline Master Program;
- (2) The proposed use will not interfere with the normal public use of public shorelines;



(3) The proposed use of the site and design of the project will be compatible with other permitted uses within the area and with uses planned for the area under the Comprehensive Plan and this chapter;

(4) The proposed use will cause no significant adverse effects to the shoreline environment in which it is to be located; and

(5) The public interest suffers no substantial detrimental effect.

b. In the granting of all Conditional Use Permits, consideration shall be given to the cumulative impact of additional requests for like actions in the area. For example, if Conditional Use Permits were granted to other developments in the area where similar circumstances exist, the total of the conditional uses shall also remain consistent with the policies of RCW 90.58 and all local ordinances and shall not produce substantial adverse effects to the shoreline environment.

**D. Shoreline Variance Permits.**

1. **Purpose.** The purpose of a Shoreline Variance Permit is strictly limited to granting relief from specific bulk, dimensional, or performance standards set forth in this chapter where there are extraordinary or unique circumstances relating to the physical character or configuration of property such that the strict implementation of this chapter will impose unnecessary hardships on the applicant or thwart the Shoreline Management Act policies as stated in RCW 90.58.020. Reasonable use requests that are located in the shoreline must be processed as a variance, until such time as the Shoreline Management Act is amended to establish a process for reasonable uses. Variations from the use regulations of this chapter are prohibited.

2. **Application requirements.** Applicants must meet all requirements for a Type 3 permit application and approvals indicated in TMC Chapter 18.104.

3. Shoreline Variance Permits should be granted in circumstances where denial of the permit would result in a thwarting of the policy enumerated in RCW 90.58.020. In all instances the applicant must demonstrate that extraordinary circumstances exist and the public interest will suffer no substantial detrimental effect.

4. **Approval Criteria.** A Shoreline Variance Permit for a use, activity or development that will be located landward of the ordinary high water mark and/or landward of any wetland may be authorized provided the applicant can demonstrate all of the following:

a. The strict application of the bulk, dimensional, or performance standards set forth in this chapter preclude or significantly interfere with a reasonable use of the property not otherwise prohibited by this chapter.

b. The hardship described in TMC Section 18.44.1130.D.E.4. is specifically related to the property and is the result of unique conditions such as irregular lot shape, size, or natural features and the application of this chapter, and not from the owner's own actions or deed restrictions; and that the variance is necessary because of these conditions in order to provide the owner with use rights and privileges permitted to other properties in the vicinity and zone in which the property is situated.

c. The design of the project will be compatible with other authorized uses within the area and with uses planned for the area under the Comprehensive Plan and SMP and will not cause adverse impacts to adjacent properties or the shoreline environment.

d. The variance will not constitute a grant of special privilege not enjoyed by other properties in the area.

e. The variance is the minimum necessary to afford relief.

f. The public interest will suffer no substantial detrimental effect.

g. In the granting of all variance permits, consideration shall be given to the cumulative impact of additional requests for like actions in the area such that the total of the variances would remain consistent with RCW 90.58.020 and not cause substantial adverse effects to the shoreline environment.

**5. Shoreline Variance Permits Waterward of OHWM.**

a. Shoreline variance permits for development and/or uses that will be located either waterward of the ordinary high water mark or within any ~~sensitive~~ critical area may be authorized only if the applicant can demonstrate all of the following:

Commented [CL63]: Same comment as for "b ." above..

Commented [CL64]: "b." and "c" apply to all Variance requests not just to permit waterward of the OHWM.

(1) The strict application of the bulk, dimensional or performance standards set forth in this Master Program preclude all reasonable permitted use of the property;

(2) The proposal is consistent with the criteria established under TMC Section 18.44.1130.D.F.4., "Approval Criteria;" b. through g. and

(3) The public rights of navigation and use of the shorelines will not be adversely affected by the granting of the variance.

~~b. In the granting of all variance permits, consideration shall be given to the cumulative impact of additional requests for like actions in the area such that the total of the variances would remain consistent with RCW 90.58.020 and not cause substantial adverse effects to the shoreline environment.~~

~~c. Variances from the use regulations of this chapter are prohibited.~~  
**C.E. Non-Conforming Development.**

1. **Non-Conforming Uses.** Any non-conforming lawful use of land that would not be allowed under the terms of this chapter may be continued as an allowed, legal, non-conforming use, defined in TMC Chapter 18.06 or as hereafter amended, so long as that use remains lawful, subject to the following:

a. No such non-conforming use shall be enlarged, intensified, increased, moved or extended to occupy a greater use of the land, structure or combination of the two, than was occupied at the effective date of adoption of this chapter except as authorized in TMC Section 18.66.120 or upon approval of a conditional use permit.

~~b. No non-conforming use shall be moved or extended in whole or in part to any other portion of the lot or parcel occupied by such use on the effective date of adoption of this chapter.~~

b. If any such non-conforming use ceases for any reason for a period of more than 24 consecutive months the non-conforming rights shall expire and any subsequent use shall conform to the regulations specified by in this chapter for the shoreline environment in which such use is located, unless re-establishment of the use is authorized through a Type 2 permit which must be applied for within the two-year period. Water-dependent uses should not be considered discontinued when they are inactive due to dormancy, or where the use is typically seasonal. Upon request of the owner, prior to the end of the 24 consecutive months and upon reasonable cause shown, the City Council may grant an extension of time beyond the 24 consecutive months using the criteria set forth in TMC Section 18.44.1030.E.G.4.

c. If a change of use is proposed to a use determined to be non-conforming by application of provisions in this chapter, the proposed new use must be a permitted use in this chapter or a use approved under a Type 2 permit with public notice process. For purposes of implementing this section, a change of use constitutes a change from one permitted or conditional use category to another such use category as listed within the Shoreline Use Matrix.

d. A structure that is being or has been used for a non-conforming use may be used for a different non-conforming use only upon the approval of a Type 2 permit subject to public notice. Before approving a change in non-conforming use, the following findings must be made:

- (1) No reasonable alternative conforming use is practical.
- (2) The proposed use will be at least as consistent with the policies and provisions of the SMP and as compatible with the uses in the area as the non-conforming use.
- (3) The use or activity is enlarged, intensified, increased or altered only to the minimum amount necessary to achieve the intended functional purpose.
- (4) The structure(s) associated with the non-conforming use shall not be expanded in a manner that increases the extent of the non-conformity.
- (5) The change in use will not create adverse impacts to shoreline ecological functions and/or processes.

(6) The applicant restores and/or enhances the entire shoreline buffer, including but not limited to, paved areas no longer in use on the property, to offset the impact of the change of use per the vegetation management standards of this chapter. This may include the restoration of paved areas to vegetated area if no longer in use.

~~(7) The use complies with the Type 2 permit process of TMC Chapter 18.104.~~

~~(8) The preference is to reduce exterior uses in the buffer to the maximum extent possible.~~

**Commented [CL65]:** "b." and "c" apply to all Variance requests not just to permit waterward of the OHWM.

**Commented [CL66]:** Same comment as for "b ." above..

**Commented [NG67]:** This provision covers existing animal rendering facilities.

**Commented [NG68]:** Covered by a above.

**Commented [NG69]:** This is addressed in e above.

2. **Non-Conforming Structures.** Where a lawful structure exists on the effective date of adoption of this chapter that could not be built under the terms of this chapter by reason of restrictions on height, buffers or other characteristics of the structure, it may be continued as an allowed, legal structure so long as the structure remains otherwise lawful subject to the following provisions:

a. Such structures may be repaired, maintained, upgraded and altered provided that:

(1) The structure may not be enlarged or altered in such a way that increases its degree of nonconformity or increases its impacts to the functions and values of the shoreline environment except as authorized in TMC Section 18.66.120; and

(2) The cost of the alterations may not exceed an aggregate cost of 50% of the value of the building or structure in any 3-year period based upon its most recent assessment, unless the amount over 50% is used to make the building or structure more conforming, or is used to restore to a safe condition any portion of a building or structure declared unsafe by a proper authority.

b. Should such structure be destroyed by any accidental means, the structure may be reconstructed to its original dimensions and location on the lot provided application is made for permits within 12 months of the date the damage occurred and all reconstruction is completed within two years of permit issuance. In the event the property is redeveloped, such redevelopment must be in conformity with the provisions of this chapter.

c. Should such structure be moved for any reason or any distance, it must be brought as closely as practicable into conformance with the Master Program and the Shoreline Management Act ~~whatsoever, it shall thereafter conform to the regulations of this chapter after it is moved.~~

d. When a non-conforming structure, or structure and premises in combination, is vacated or abandoned for 24 consecutive months, the structure, or structure and premises in combination, shall thereafter be required to be in conformance with the regulations of this chapter. Upon request of the owner, prior to the end of the 24 consecutive months and upon reasonable cause shown, ~~the City Council may grant an extension of time beyond the 24 consecutive months~~ may be granted using the criteria in TMC Section 18.44.1130 ~~E.G. 4.~~

e. Residential structures located in any Shoreline Residential Environment and in existence at the time of adoption of this chapter shall not be deemed nonconforming in terms of height, residential use, or location provisions of this title. Such buildings may be rebuilt after a fire or other natural disaster to their original dimensions, location and height, but may not be changed except as provided in the non-conforming uses section of this chapter.

f. Single-family structures in the Shoreline Residential Environment that have legally non-conforming setbacks from the OHWM per the SMP buffer shall be allowed to expand the ground floor only along the existing building line(s) as long as the existing distance from the nearest point of the structure to the OHWM is not reduced and the square footage of new intrusion into the buffer does not exceed 50% of the square footage of the current intrusion. As a condition of building permit approval, a landscape plan showing removal of invasive plant species within the entire shoreline buffer and replanting with appropriate native species must be submitted to the City. Plantings should be maintained through the establishment period.

~~g. A non-conforming use, within a non-conforming structure, shall not be allowed to expand into any other portion of the structure.~~

3. For the purposes of this section, altered or partially reconstructed is defined as work that does not exceed 50% of the assessed valuation of the building over a three-year period.

4. **Requests for Time Extension—Non-conforming Uses and Structures.**

a. A property owner may request, prior to the end of the 24 consecutive months, an extension of time beyond the 24 consecutive months. Such a request shall be considered as a Type 2 permit under TMC Chapter 18.104 and may be approved only when:

(1) For a non-conforming use, a finding is made that no reasonable alternative conforming use is practical.

(2) For a non-conforming structure, special economic circumstances prevent the lease or sale of said structure within 24 months.

(3) The applicant restores and/or enhances the shoreline buffer on the property to offset the impact of the continuation of the non-conforming use. For non-conforming uses, the amount of buffer to be

**Commented [CL70]:** The process identified here conflicts with #4 below. My view is the Type 2 permit is a more reasonable process to use.

**Commented [NG71]:** It is not clear what the environmental benefit is to restricting uses within an existing structure.

restored and/or enhanced will be determined based on the percentage of the existing building used by the non-conforming use for which a time extension is being requested. Depending on the size of the area to be restored and/or enhanced, the Director may require targeted plantings rather than a linear planting arrangement. The vegetation management standards of this program shall be used for guidance on any restoration/enhancement. For non-conforming structures, for each six-month extension of time requested, 15% of the available buffer must be restored/enhanced.

b. Conditions may be attached to the permit that are deemed necessary to assure compliance with the above findings, the requirements of the Master Program and the Shoreline Management Act and to assure that the use will not become a nuisance or a hazard.

5. **Building Safety.** Nothing in this SMP shall be deemed to prevent the strengthening or restoring to a safe condition of any non-conforming building or part thereof declared to be unsafe by order of any City official charged with protecting the public safety.

a. Alterations or expansion of a non-conforming structure that are required by law or a public agency in order to comply with public health or safety regulations are the only alterations or expansions allowed.

b. Alterations or expansions permitted under this section shall be the minimum necessary to meet the public safety concerns.

6. **Non-Conforming Parking Lots.**

a. Nothing contained in this chapter shall be construed to require a change in any aspect of a structure or facility covered thereunder including, without limitation, parking lot layout, loading space requirements and curb-cuts, for any structure or facility which existed on the date of adoption of this chapter.

b. If a change of use takes place or an addition is proposed that requires an increase in the parking area by an increment less than 100%, the requirements of this chapter shall be complied with for the additional parking area.

c. If a property is redeveloped, a change of use takes place or an addition is proposed that requires an increase in the parking area by an increment greater than 100%, the requirements of this chapter shall be complied with for the entire parking area.

d. If no change in parking lot area is proposed, a non-conforming parking lot may be upgraded to improve water quality or meet local, state, and federal regulations.

7. **Non-Conforming Landscape Areas.**

a. Adoption of the vegetation protection and landscaping regulations contained in this chapter shall not be construed to require a change in the landscape improvements for any legal landscape area that existed on the date of adoption of this chapter, unless and until the property is redeveloped or alteration of the existing structure is made beyond the thresholds provided herein.

b. At such time as the property is redeveloped or the existing structure is altered beyond the thresholds provided herein and the associated premises does not comply with the vegetation protection and landscaping requirements of this chapter, a landscape plan that conforms to the requirements of this chapter shall be submitted to the Director for approval.

H. **Revisions to Shoreline Permits**

1. Revisions to previously issued shoreline permits shall be reviewed under the SMP in effect at the time of submittal of the revision, and not the SMP under which the original shoreline permit was approved and processed in accordance with WAC 173-27-100.

I. **Time Limits on Shoreline Permits**

1. Consistent with WAC 173-27-090, shoreline permits are valid for two years, and the work authorized under the shoreline permit must be completed in five years. Construction activity must begin within this two-year period. If construction has not begun within two years, a one-time extension of one year may be approved by the Director based on reasonable factors. The permit time period does not include the time during which administrative appeals or legal actions are pending or due to the need to obtain any other government permits and approvals for the project.

2. Upon a finding of good cause, based on the requirements and circumstances of a proposed project, and consistent with the City's Shoreline Master Program, the City may adopt a different time limit

**Commented [NG72]:** We have a lot of parking areas in the shoreline buffer. We have debated how this section guides their use when the site is redeveloped or changes use.

**Commented [RL73]:** We need to allow non-conforming parking lot upgrades to improve water quality or meet local, state, and federal regulation. This could include paving gravel or dirt parking, storm systems meeting current requirements, or other BMPs.

**Commented [NG74]:** We realized we didn't have criteria to review this request when Tukwila South made a request for a time extension.

We had at least one revision in the Boeing DSOA that took a fair amount of time to review and issue a revised permit.

**Commented [MD75R74]:** No additional criteria is proposed in this section, instead it is just reiterating what WAC 173-27-100 and RCW 90.58.143 state. RCW 90.58.058 is what TMC (1) (2) is stating and it is included under WAC 173-27-100 (6). Suggest just referencing WAC and not hardwiring it into our code.

**Commented [CL76]:** WAC 173-27-090

**Commented [CL77]:** 173-27-090 (1) – this would address the problem we ran into with Tukwila South's shoreline substantial development permit.

for a shoreline substantial development permit as part of an action on a shoreline substantial development permit.

(Ord. 2346 §13, 2011)

#### 18.44.140~~120~~ Appeals

Any appeal of a decision by the City on a Shoreline Substantial Development Permit, Shoreline Conditional Use or Shoreline Variance must be appealed to the Shoreline Hearing Board.

(Ord. 2346 §14, 2011)

#### 18.44.150~~130~~ Enforcement and Penalties

A. **Violations.** The following actions shall be considered violations of this chapter:

1. To use, construct or demolish any structure, or to conduct clearing, earth-moving, construction or other development not authorized under a Substantial Development Permit, Conditional Use Permit or Variance Permit, where such permit is required by this chapter.
2. Any work which is not conducted in accordance with the plans, conditions, or other requirements in a permit approved pursuant to this chapter, provided that the terms or conditions are stated in the permit or the approved plans.
3. To remove or deface any sign, notice, complaint or order required by or posted in accordance with this chapter.
4. To misrepresent any material fact in any application, plans or other information submitted to obtain any shoreline use or development authorization.
5. To fail to comply with the requirements of this chapter.

B. **Enforcement.** It shall be the duty of the Director to enforce this chapter subject to the terms and conditions of TMC Chapter 8.45.

C. **Inspection Access.**

1. For the purpose of inspection for compliance with the provisions of a permit or this chapter, authorized representatives of the Director may enter all sites for which a permit has been issued.
2. Upon completion of all requirements of a permit, the applicant shall request a final inspection by contacting the planner of record. The permit process is complete upon final approval by the planner.

D. **Penalties.**

1. Any violation of any provision of the SMP, or failure to comply with any of the requirements of this chapter shall be subject to the penalties prescribed in Chapter 8.45 of the Tukwila Municipal Code ("Enforcement") and shall be imposed pursuant to the procedures and conditions set forth in that chapter.
2. Penalties assessed for violations of the SMP shall be determined by TMC Chapter 8.45.120~~100~~, Penalties.
3. It shall not be a defense to the prosecution for failure to obtain a permit required by this chapter, that a contractor, subcontractor, person with responsibility on the site, or person authorizing or directing the work, erroneously believed a permit had been issued to the property owner or any other person.

#### 4. Penalties for Tree Removal

- a. Each unlawfully removed or damaged tree shall constitute a separate violation.
- b. The amount of the penalty shall be \$1,000 per tree or up to the marketable value of each tree removed or damaged as determined by an ISA certified arborist. The Director may elect not to seek penalties or may reduce the penalties if he/she determines the circumstances do not warrant imposition of any or all of the civil penalties.
- c. Any illegal removal of required trees shall be subject to obtaining a tree permit and replacement with trees that meet or exceed the functional value of the removed trees. In addition, any shrubs and groundcover removed without City approval shall be replaced.
- d. To replace the tree canopy lost due to the tree removal, additional trees must be planted on-site. Payment may be made into the City's Tree Fund if the number of replacement trees cannot be accommodated on-site. The number of replacement trees required will be based on the size of the tree(s) removed as stated in TMC 18.44.060 B 4.

**Commented [NG78]:** This is consistent with the penalties for unauthorized tree removal outside of the shoreline.

E. **Remedial Measures Required.** In addition to penalties provided in TMC Chapter 8.45, the Director may require any person conducting work in violation of this chapter to mitigate the impacts of unauthorized work by carrying out remedial measures.

1. Remedial measures must conform to the policies and guidelines of this chapter and the Shoreline Management Act.

2. The cost of any remedial measures necessary to correct violation(s) of this chapter shall be borne by the property owner and/or applicant.

F. **Injunctive Relief.**

1. Whenever the City has reasonable cause to believe that any person is violating or threatening to violate this chapter or any rule or other provisions adopted or issued pursuant to this chapter, it may, either before or after the institution of any other action or proceeding authorized by this ordinance, institute a civil action in the name of the City for injunctive relief to restrain the violation or threatened violation. Such action shall be brought in King County Superior Court.

2. The institution of an action for injunctive relief under this section shall not relieve any party to such proceedings from any civil or criminal penalty prescribed for violations of the Master Program.

G. **Abatement.** Any use, structure, development or work that occurs in violation of this chapter, or in violation of any lawful order or requirement of the Director pursuant to this section, shall be deemed to be a public nuisance and may be abated in the manner provided by the Tukwila Municipal Code 8.45.105~~100~~.  
(Ord. 2346 §15, 2011)

**18.44.160~~140~~ Liability**

A. Liability for any adverse impacts or damages resulting from work performed in accordance with a permit issued on behalf of the City within the City limits shall be the sole responsibility of the owner of the site for which the permit was issued.

B. No provision of or term used in this chapter is intended to impose any duty upon the City or any of its officers or employees that would subject them to damages in a civil action.

(Ord. 2346 §16, 2011)

**AMENDMENTS TO OTHER ZONING CODE SECTIONS**

**18.52.030 Shoreline Landscape Requirements**

Additional landscape requirements apply in the Shoreline Overlay District, as directed by TMC Section 18.44.060, Vegetation Protection and Landscaping.

**18.60.050 Board of Architectural Review**

H. Shoreline Design Criteria. The criteria contained in the Shoreline Design Guidelines (TMC Section 18.44.090) shall be used whenever the provisions of this title require a design review decision on a proposed or modified development in the Shoreline Overlay District.

**18.104.010 Classification of Project Permit Applications**

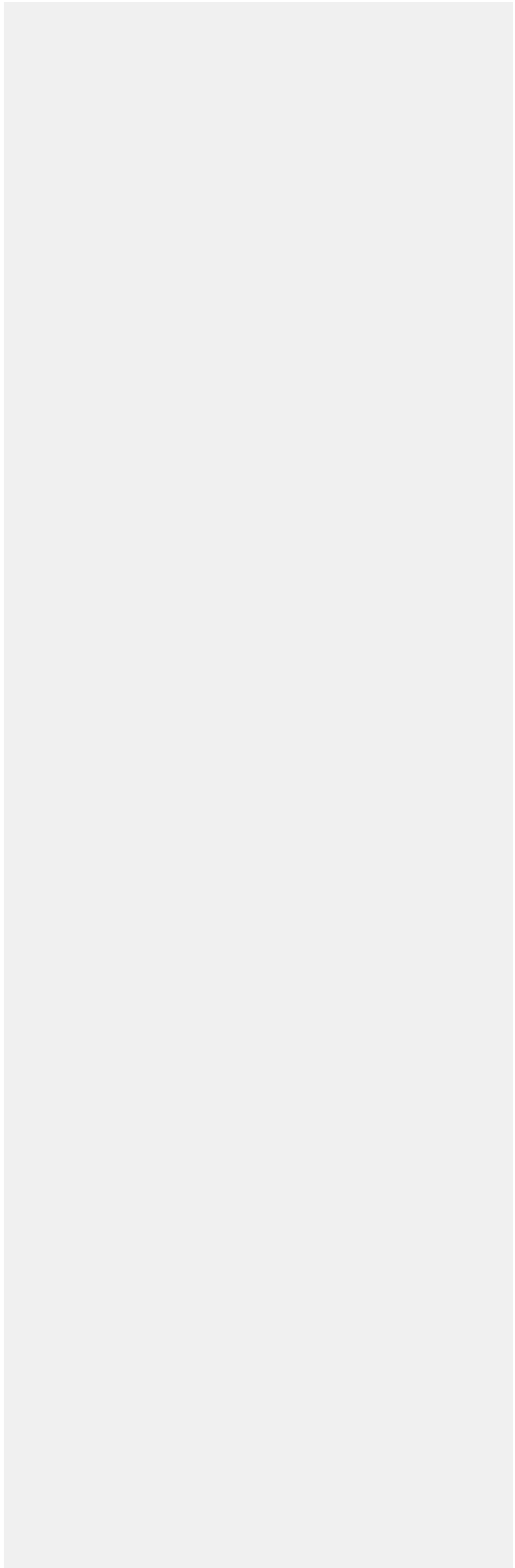
TYPE 2 DECISIONS

TYPE OF PERMIT	INITIAL DECISION MAKER	APPEAL BODY
<u>Shoreline buffer reduction,</u>	<u>Community Development Director</u>	<u>State Shoreline Hearings Board</u>
<u>Extension of time for continuing a shoreline nonconforming use or structure</u>	<u>Community Development Director</u>	<u>State Shoreline Hearings Board</u>

TYPE 3 DECISIONS

TYPE OF PERMIT	INITIAL DECISION MAKER	APPEAL BODY
<u>Shoreline Conditional Use Permit</u>	<u>Hearing Examiner</u>	<u>State Shoreline Hearings Board</u>

City of Tukwila Shoreline Update







## TUKWILA SHORELINE MASTER PROGRAM



December 14, 2009

Revised Per Ecology Letter March 24, 2011

Showing Proposed 2019 Edits

Prepared by Tukwila Department of Community Development  
with the assistance of ESA Adolfson and The Watershed Company



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## TABLE OF CONTENTS

1.	INTRODUCTION .....	1
1.1	Purpose and Background .....	1
1.2	Shoreline Jurisdiction.....	1
2.1	SMP Components .....	5
2.2	SMP Elements.....	5
2.3	History of SMP Planning in Tukwila.....	5
2.4	Current SMP Update Process.....	7
3.	DEFINITIONS.....	7
4.	SHORELINE INVENTORY AND CHARACTERIZATION - SUMMARY .....	8
4.1	Watershed Context and Shoreline Modifications .....	8
4.2	Biological Resources and Shoreline Functions.....	9
4.3	Land Use .....	10
4.4	Restoration Opportunities and Potential Use Conflicts .....	12
4.5	Conclusions.....	14
5.	SHORELINE RESTORATION PLAN - SUMMARY .....	16
5.1	Background .....	16
5.2	Assessment of Shoreline Functions .....	16
5.3	Plans, Programs, and Completed Projects .....	18
5.4	Restoration Opportunities .....	18
5.5	Potential Projects and Priorities .....	19
6.	SHORELINE GOALS AND POLICIES.....	20
7.	SHORELINE ENVIRONMENT DESIGNATIONS.....	20
7.1	Pre 2009 Regulatory Framework .....	20
7.2	Key Findings of the Shoreline Inventory / Characterization Report and Restoration Plan .....	21
7.3	State Environment Designation System.....	22
7.4	Environment Designations.....	23

7.5	Determination of Shoreline Buffers.....	29
7.6	Shoreline Residential Environment .....	34
7.7	Urban Conservancy Environment.....	36
<b>7.8</b>	<b>High Intensity Environment .....</b>	<b>40</b>
	Section 7.9 Aquatic Environment.....	42
8.	SHORELINE USE REGULATIONS AND DEVELOPMENT STANDARDS .....	42
9.	ENVIRONMENTALLY CRITICAL AREAS WITHIN THE SHORELINE JURISDICTION. ....	43
9.1	Applicable Critical Areas Regulations.....	43
9.2	Purpose.....	44
10.	PUBLIC ACCESS TO THE SHORELINE.....	46
11.	SHORELINE DESIGN GUIDELINES.....	48
12.	SHORELINE RESTORATION.....	48
13.	ADMINISTRATION.....	49
13.1	Applicability of Shoreline Master Program and Substantial Development Permit .....	49
13.2	Relationship to Other Codes and Regulations .....	50
14.	APPEALS .....	51
15.	MASTER PROGRAM REVIEW AND AMENDMENTS .....	51
16.	LIABILITY.....	51

**LIST OF FIGURES**

**Figure 1. Pre 2009 Tukwila SMP Shoreline Management Zones (1974 SMP; TMC 18.44) ..... 21**  
**Figure 2. Briscoe Levee Profile ..... 33**  
**Figure 3. Schematic of Shoreline Residential Environment and Buffer ..... 36**  
**Figure 4. Schematic of Shoreline Jurisdiction and Buffers for the Urban Conservancy Environment in Areas without Levees ..... 38**  
**Figure 5. Schematic of Shoreline Jurisdiction and Buffers for the Urban Conservancy Environment in Areas with Levees ..... 39**  
**Figure 6. Schematic of Buffer Reduction Through Placement of Fill on Levee Back Slope ..... 40**  
**Figure 7. Schematic Showing the Proposed Shoreline Jurisdiction and Buffer for the High Intensity Environment ..... 41**

**LIST OF TABLES**

**Table 1. General Restoration Potential within the Shorelines of Tukwila ..... 17**  
**Table 2. State Recommended Environment Designation System - WAC 173-26-211 (5) ..... 23**  
**Table 3. Summary of Buffer Widths for Land Use Zones and Shoreline Ecological Conditions ..... 25**

**LIST OF MAPS**

**Map 1. Potential Annexation Areas and Annexation History ..... 5**  
**Map 2. Transition Zone ..... 29**  
**Map 3. Shoreline Environments ..... 55**  
**Map 4. Shoreline Armoring ..... 87**  
**Map 5. Sensitive Areas in the Shoreline ..... 109**  
**Map 6. Shoreline Public Access ..... 137**

**APPENDICES**

- A. Shoreline Inventory and Characterization Report
- B. Shoreline Restoration Plan

## 1. INTRODUCTION

### 1.1 Purpose and Background

This document presents the Shoreline Master Program (SMP) for the City of Tukwila. It is an update to Tukwila's existing SMP, originally adopted in 1974. The SMP is intended to guide new shoreline development, redevelopment and promote reestablishment of natural shoreline functions, where possible. It was prepared in conformance with the Washington State Shoreline Management Act (Chapter 90.58 RCW) and its implementing regulations (WAC 173-26).

This Shoreline Master Program reflects changes in local conditions and priorities and the evolving State regulatory environment.

This Shoreline Master Program presents background information on the Shoreline Management Act, describes shoreline jurisdiction in Tukwila, summarizes the amendment process carried out to date, presents a summary of the Shoreline Inventory and Characterization, presents a summary of the Shoreline Restoration Plan, proposes shoreline environments, and establishes goals, policies and regulations, which apply to all activities on all affected lands and waters within the shoreline jurisdiction. In addition, there is a chapter that establishes design guidelines. Maps are provided to illustrate shoreline jurisdiction and environments. The Shoreline Inventory and Characterization Report is provided in Appendix A. The Restoration Plan is provided in Appendix B. A Cumulative Impacts Analysis is provided as a stand-alone document.

### 1.2 Shoreline Jurisdiction

#### A. Jurisdiction under the Shoreline Management Act

The Shoreline Management Act, or SMA, (RCW 90.58) establishes regulations for the management and protection of the state's shoreline resources and requires planning for reasonable and appropriate uses. The Act calls for a joint planning effort between state and local jurisdictions, requiring local government to develop its own Shoreline Master Program based on state guidelines.

The SMA requires that local governments establish shoreline jurisdiction for those bodies of water and lands that are considered to be "shorelines of the state" or "shorelines of statewide significance." Shorelines of the state include rivers with a mean annual flow of at least 20 cubic feet per second (cfs). Shorelines of statewide significance in western Washington include rivers with a mean annual flow of at least 1,000 cubic feet per second (cfs). The minimum shoreline environment required by the SMA includes all lands 200 feet from the "ordinary high water mark" or floodway of a state shoreline,

**Commented [NG1]:** This narrative has been updated to reflect the current SMP.

whichever is greater, and all wetlands associated with these state shorelines and located within the 100-year floodplain. The following graphic illustrates the jurisdiction of the Shoreline Management Act.

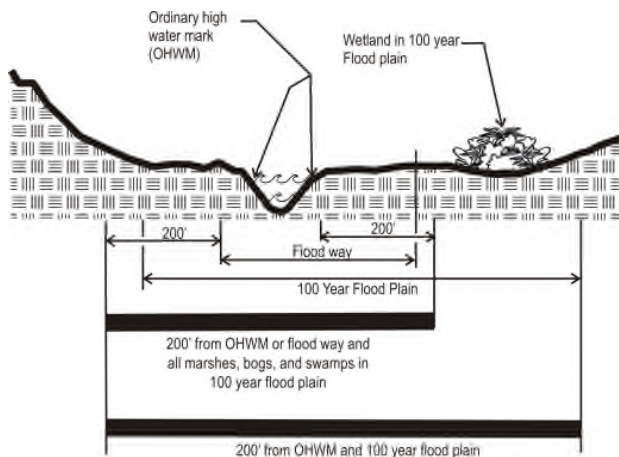


Figure 1.1 Lands and waters under the jurisdiction of the Shoreline Management Act

**B. Shoreline Jurisdiction in Tukwila**

The Green/Duwamish River is the only "shoreline of statewide significance" in the city (RCW 98.58.030). A small portion of the Black River, a shoreline of the state, is also located in Tukwila. Throughout the SMP document, the term "Shoreline Jurisdiction" is used to describe the water and land areas subject to shoreline jurisdiction in Tukwila. Based on SMA guidelines for shoreline jurisdiction, Tukwila's Shoreline Jurisdiction is defined as follows:

*The Tukwila Shoreline Jurisdiction includes the channel of the Green/Duwamish River and the Black River, its banks, the upland area which extends from the ordinary high water mark landward for 200 feet on each side of the river, floodways and all associated wetlands within its floodplain. For the purpose of determining shoreline jurisdiction only, the floodway shall not include those lands that have historically been protected by flood control devices and, therefore, have not been subject to flooding with reasonable regularity.*

The Tukwila SMP applies to all development activity occurring within the Shoreline Jurisdiction, which corresponds to the Shoreline Overlay District as established by

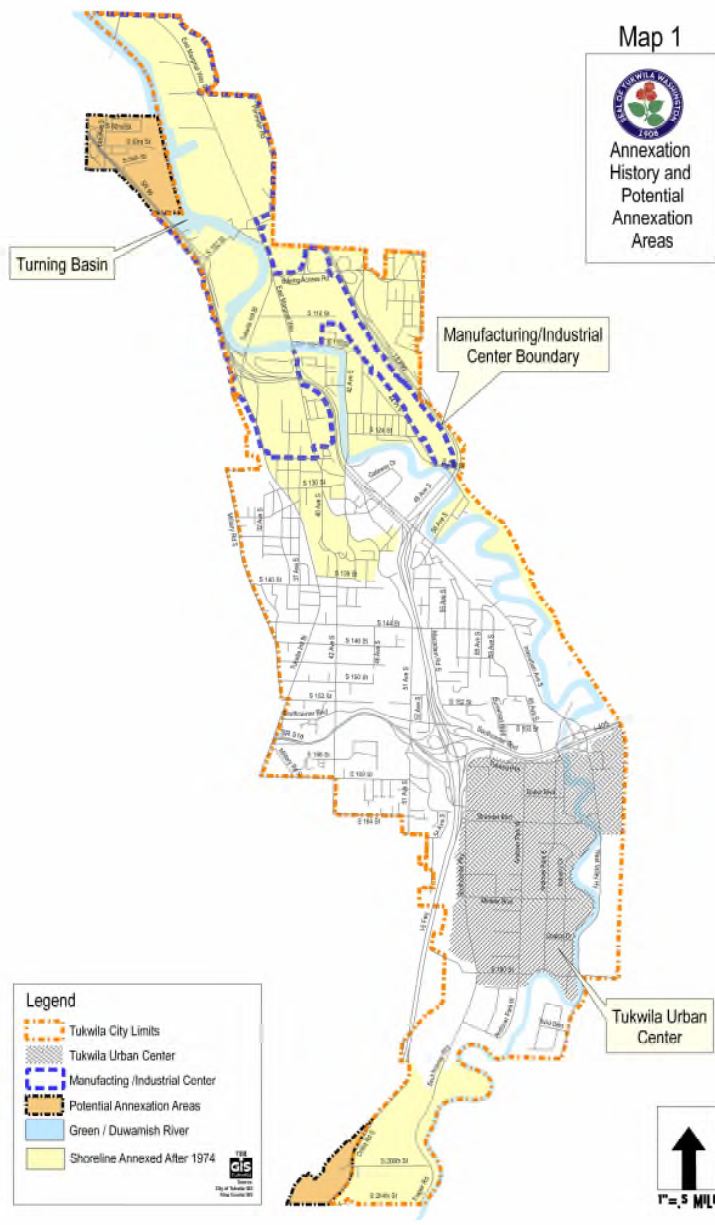
Chapter 18.44 of the Tukwila Municipal Code.

All proposed uses and activities under its jurisdiction must be reviewed for compliance with the goals, policies and regulations referenced herein. All proposed uses and development occurring within shoreline jurisdiction must conform to chapter 90.58 RCW, the Shoreline Management Act and this Master Program whether or not a permit is required.

This Master Program includes the two proposed annexation areas indicated in the Comprehensive Plan (Map 1). The north annexation area is located between the Green/Duwamish River on the east, Military Road to the west, and from S. 128th Street north to S. 96th Street. The south annexation area is located between I-5 and the Green River, south of the City limits to S. 204th Street. Adoption of shoreline policies and environment designations for newly annexed areas would require an amendment to the Shoreline Master Program. To avoid having to amend the SMP later, these potential annexation areas are considered here and the environmental designations and regulations will apply upon annexation.

In response to regional policies of the King County Growth Management Planning Council, Tukwila designated two key areas as its Urban Center and its Manufacturing Industrial Center (MIC). The Southcenter area, from I-405 south to S. 180<sup>th</sup> Street was designated the "Urban Center," and the Duwamish Corridor, an area where existing industrial-employment is concentrated, was designated as Tukwila's "Manufacturing Industrial Center." Both of these areas have lands adjacent to the Green River and are identified on **Map 1**.

The City Council adopted a Strategic Implementation Plan for the MIC on November 2, 1998. The Plan includes an analysis of existing conditions along the shoreline, narratives of various habitats, current regulations, proposed requirements and prototypes for future development along the shoreline in the MIC. The Strategic Plan was prepared in conjunction with a Planned Action Environmental Impact Statement that analyzed development alternatives in the MIC area and streamlined SEPA review for development in that corridor for the past 20 years. Where changed circumstances dictate, the SMP will provide updated guidance and regulations for the MIC area. The MIC area has significant potential for redevelopment.





## 2. TUKWILA'S SHORELINE MASTER PROGRAM

### 2.1 **SMP Components**

To comply with the SMA, Tukwila has included the following components in this Shoreline Master Program (SMP):

- Outreach including a citizen participation process, coordination with state agencies, Indian tribes, and other local governments (see Section 2.4 below)
- Inventory, analysis and characterization of shoreline conditions, environmental functions and ecosystem-wide processes
- Analysis of potential shoreline restoration opportunities
- Establishment of shoreline environments
- Goals and policies that have been adopted in the Shoreline Element of the Comprehensive Plan
- Development regulations that have been codified in TMC 18.44 and 18.45
- Shoreline Design Guidelines that have been codified in TMC 18.44
- Evaluation and consideration of cumulative impacts

### 2.2 **SMP Elements**

The SMA includes eight main issues, or "elements," to be addressed in each local shoreline master program (RCW 90.58.100). To implement these elements, shoreline policies and regulations are to be developed for each. The policies are found in the Shoreline Element of the Comprehensive Plan and the regulations in Chapters 18.44 and 18.45 of the Zoning Code. The elements required by the SMA are:

- Economic Development
- Public Access
- Recreation
- Circulation
- Shoreline Uses
- Conservation
- Historical, cultural, educational and scientific element
- Preventing or minimizing flood damage

Consistent with the Growth Management Act requirement to integrate the SMP and the Comprehensive Plan, the City incorporated the required elements of a SMP noted above into its Plan. Further direction for implementation of the required elements of SMPs is provided through Zoning Code and Design Review requirements.

### 2.3 **History of SMP Planning in Tukwila**

Tukwila's Shoreline Master Program (SMP) was first adopted in 1974, in response to the

**Commented [NG2]:** This reflects the elimination of duplicate language between this SMP and the Comprehensive Plan and Zoning Code. Removing the duplicate language will streamline this document and prevent inconsistencies.

**Commented [NG3]:** The background information has been condensed now that we have moved to the next update cycle.

passage of the Shoreline Management Act (RCW 90.58). The SMP was later updated through minor amendments in 1982 and 1987, none of which required the adoption of a new SMP.

In 1992-93, as part of the preparation for a major revision to the City's Comprehensive Plan, the City completed a Shorelines Background Report (1993), with the participation of the Tukwila Tomorrow Citizen's Committee. This report established the basis for the shoreline comprehensive plan goals and policies adopted in 1995.

Staff began the process to prepare a new SMP in 1999, based on the draft shoreline guidelines that were in the process of adoption by the Department of Ecology at the time.

A grant from the Washington State Department of Ecology provided funding for a Shoreline Inventory of all parcels within the 200 foot Shoreline jurisdiction and a Shoreline Design Manual.

New shoreline regulations approved by Ecology in 2000 were immediately appealed and ultimately invalidated by the Shoreline Hearings Board in 2001. As a result, the City opted to defer completing its SMP update process until new guidelines were issued by Ecology, which occurred in 2003.

In 2005, Tukwila received a grant (SMA Grant No. 0600234) to complete a comprehensive update, including new technical analyses of shoreline conditions, restoration planning, and the preparation of revised SMP goals, policies, and regulations.

In order to capitalize on previous citizens' involvement in the planning process, the City decided to start the SMP update with the work begun in 1999, with revisions to address new Ecology regulations and guidance, as well as changed conditions in the City's shoreline area.

The development of any SMP, as required by new shoreline regulations, involves three specific steps

- Shoreline inventory and characterization, preparation of a restoration plan, preparation of a cumulative impacts analysis;
- Citizen involvement in development of policies and regulations; and
- Review by interested parties, including adjacent jurisdictions.

As part of this 2009 SMP update process, the City:

- Continued the previously started citizen involvement program utilizing the Planning Commission, which serves as the City's permanent citizen advisory body for land use issues, holding Open Houses and public hearings
- Coordinated and shared information with neighboring jurisdictions
- Updated and expanded the Shoreline Inventory and mapping (included as

- Appendix A to this document)
- Prepared a Shoreline Restoration Plan (Appendix B)
- Proposed shoreline environment designations
- Proposed shoreline development policies
- Proposed shoreline development regulations
- Prepared a draft Cumulative Impacts Analysis
- Coordinated with Department of Ecology, submitting a staff draft SMP for review and comment and meeting with Ecology staff

#### 2.4 Current SMP Update Process

The City of Tukwila completed a comprehensive update to its Shoreline Master Program in 2009, with additional revisions made in 2011. Washington state law requires jurisdictions to periodically review and update their SMPs every eight years in accordance with the SMA and its current guidelines and legislative rules to attain state approval. The City of Tukwila’s update started with an open house the fall of 2018 and will be complete in 2019.

This periodic update is focused on:

- Reviewing relevant legislative updates since 2009 and incorporating any applicable amendments.
- Ensuring consistency with recently adopted regulations for critical areas and flood hazard areas.
- Streamlining and eliminating duplication in the documents.
- Addressing a limited number of policy questions such as a required levee profile, use of flood walls and incentives for public access.

This periodic update will not:

- Re-evaluate the ecological baseline which was established as part of the 2009 comprehensive update.
- Extensively assess no net loss criteria other than to ensure that proposed amendments do not result in degradation of the baseline condition.
- Change shoreline jurisdiction or environment designations.

### 3. **DEFINITIONS**

Definitions used in the administration of the Shoreline Master Program and are incorporated into the Definitions Chapter of the Zoning Code, TMC 18.06.

**Commented [NG4]:** This level of detail is no longer needed.

**Commented [NG5]:** Updates to the definition of substantial development and other changes to match current State regulations are found in the ordinance updating TMC 18.44.

#### **4. SHORELINE INVENTORY AND CHARACTERIZATION - SUMMARY**

Local jurisdictions updating their Shoreline Master Program (SMP) are required to prepare an inventory and characterization of the shoreline resources within their boundaries. As part of the City's prior SMP update, a Draft Inventory and Characterization Report and Map Folio was prepared in December 2006, and finalized in the spring of 2007 following technical review by Ecology and King County. The final report and map folio are included as Appendix A to this SMP. While the report has been finalized, the City continues to utilize the most recent information available, such as the recently updated FEMA Revised Preliminary Digital Flood Insurance Rate Maps (DFIRM), which were issued after the completion of the Inventory and Characterization report.

The purpose of the inventory and characterization report was to conduct a baseline inventory of conditions for water bodies regulated as "shorelines of the state" located in the City of Tukwila. The area regulated under Tukwila's SMP is approximately 12.5 linear miles along the banks of the Green/Duwamish River.

For the baseline inventory, the river shoreline was divided into four reaches: 1) Reach G1-PAA (southern Potential Annexation Area); 2) Reach G1 (from the southern City boundary downstream to the Black River/Green River confluence); 3) Reach G2 (from the Black River/Green River confluence downstream to the northern City limits); and 4) Reach G2-PAA (the northern Potential Annexation Area). The reaches are depicted on **Map 3**.

The shoreline characterization identifies existing conditions, identifies current uses and public access, evaluates functions and values of resources in the shoreline jurisdiction, and explores opportunities for conservation and restoration of ecological functions. The findings are intended to provide a framework for updates to the City's shoreline management goals, policies, and development regulations. Key findings of the inventory and characterization are summarized below.

##### **4.1 Watershed Context and Shoreline Modifications**

The City of Tukwila includes approximately 12.5 miles of the Green/Duwamish River and is situated in the Puget Sound Lowlands at the transition from the fresh water Green River to the tidally influenced Duwamish estuary ecosystem. The Green River basin is part of the Green/Duwamish Water Resource Inventory Area (WRIA 9).

Historically, the Green/Duwamish River drained a significantly larger area than it does today. The Green/Duwamish River has undergone extensive modifications in the past to reduce channel migration and limit the extent and duration of valley flooding. The modifications include both natural river course changes and major engineering projects in

the early part of the 20<sup>th</sup> century that diverted the White, Black and Cedar Rivers to neighboring basins. As a result, the overall freshwater discharge in the Green/Duwamish River has been reduced to around a third of the pre-diversion era.

Seven pump stations also modify flows into the Green and Duwamish Rivers. Three of the pump stations, Black River, P-17, and Segale, are operated by the Green River Flood Control District, and four stations, Lift Stations 15, 17, 18, and 19 are operated by the City of Tukwila. The Black River pump station is the largest station discharging flows to the Duwamish River. This station is approximately 1,000 feet upstream of the Green – Black River confluence, and is intended to both block floodwaters from the Green from inundating the Black River and Springbrook Creek in the City of Renton, and also regulates flows from Springbrook Creek into the Duwamish River. The P-17 pump station drains the P-17 Pond that collects surface water from a majority of the Urban Center. The Segale pump station was installed to regulate soil saturation and piping during high river events but does not add new flows to the river. The remaining City pump stations only operate when gravity discharge to the river is prevented by high river events.

Levees and/or revetments were constructed along much of the Green/Duwamish River through the City of Tukwila to increase bank strength and reduce flooding. In addition, flows within the Green/Duwamish River were greatly modified by the construction of the Howard A. Hansen Dam and installation of water diversions. These modifications significantly reduced the severity of floods that historically covered much of the valley bottom. The condition of the current system of levees and revetments is a growing source of concern for King County and the cities involved, as many of the levees are aging and do not meet current standards for either flood conveyance or stability. Aside from the Tukwila 205 certified levee on the left bank of the river in the Urban Center, other levees in the City do not meet COE standards and are mapped as floodplain. These include portions of the newly annexed Tukwila South area and levees along the right bank of the river. Current development proposals in Tukwila South include the relocation of the cross-valley levee and reconstruction of the non-certified levees to meet COE standards. The permitting for this work is on-going.

#### **4.2 Biological Resources and Shoreline Functions**

The Green/Duwamish River within the City of Tukwila provides important habitat for several fish and some wildlife species, such as osprey. The aquatic environment within the channel is an important corridor located at the transition from the freshwater riverine environment to tidal estuarine environment of Elliott Bay. Almost every species of anadromous fish migrates through this transition zone. The entire length of the Green/Duwamish River within the City of Tukwila has been declared “critical habitat” for Chinook salmon and bull trout. Both species are listed as threatened under the Federal Endangered Species Act.

One particularly important feature of Tukwila's shorelines is the habitat functions provided by the transition zone between fresh and salt water associated with the Duwamish estuary. In Tukwila, this area generally extends from the East Marginal Way bridge to the city's northern limits. The transition zone between fresh and salt water has effectively been pushed upstream from its historic location due to: (1) a significant reduction (70%) of fresh water flowing into the Duwamish estuary (owing to the diversion of the White and Cedar/Black Rivers), (2) channel dredging, and (3) reduction of flows as a result of the construction of the Howard A. Hanson Dam. The establishment of heavy industrial uses in the transition zone has replaced wetlands with impervious surfaces, and the stream banks have been replaced by levees and other armoring, eliminating edge habitat which slows flows and creating unrestrained rapid downstream flows. Spatial structure, residence time, and the habitat available for fish refugia and rearing functions in the Duwamish estuary have therefore been reduced and constrained. High densities of fish have been observed utilizing what is left of this specific habitat. At the watershed scale, overall increases in salmonid survival rates are dependent on the availability of sufficient transition zone habitat to accommodate fish while they adjust from fresh to salt water (WRIA 9 Steering Committee, 2005).

Modifications to the river system have resulted over time in reduced levels of ecosystem functioning, including hydrology, water quality, riparian habitat, and in-stream habitat. Changes to hydrology are the result of modified flow regime due to dam construction, diversion, and urban development. River management and levees have reduced the connection between the rivers and their floodplains, changing the spatial extent of habitats, and increasing the potential for negative water quality impacts. Disturbances to the channel banks have resulted in areas that are dominated by non-native invasive species. Wood, in the form of riparian trees and in-channel wood, is generally lacking throughout the system, which negatively impacts riparian and aquatic habitats.

### **4.3 Land Use**

#### **A. A History of the Green/Duwamish River and Tukwila's Shoreline: Origins of Land Development Patterns**

The Green River drains 492 square miles extending from the western Cascade Mountains to Elliott Bay. The City of Tukwila lies at the lower ¼ of the overall watershed. As the Green River flows into the southern boundary of the City of Tukwila, it has drained approximately 440 square miles, or about 78 percent of its total drainage basin. Approximately 12.5 river miles of the Green/Duwamish River are included within the City of Tukwila, from about River Mile (RM) 16 to RM 3.7.

The Green/Duwamish River channel has been highly modified during the last 150 years. Modifications range from the installation of levees and revetments to straightening and dredging for navigation purposes. In general, the level of physical modification to the system increases with distance downstream, culminating at the artificial Harbor Island that

supports industrial activities at the Port of Seattle. Several turning basins are maintained by periodic dredging throughout the straightened reach. The highly modified portion of the Green/Duwamish has also been the location of significant discharge of pollutants, resulting in portions of the river being designated as Federal Superfund sites. Remediation, source control and disposal activities are ongoing throughout the area.

Prior to European settlement of the Lower Green River Valley, the floodplain likely consisted of a highly interspersed pattern of active and temporarily abandoned meandering channels, secondary channels, logjams, riparian forest, and scrub-shrub wetlands. The proportion of open channel to forest in the floodplain appears to have varied depending on the severity and timing of floods. High flows resulted in wider channels and the creation of new channels across the floodplain. Accounts of the channel systems indicate that major floods resulted in channel avulsion (abrupt change in the course of a river), rerouting around logjams, and the formation of new logjams. The area presently occupied by the City of Tukwila appeared historically to contain oxbow channels, secondary and backwater channels, and extensive floodplain wetlands.

As part of regional flood control and river management efforts, significant watershed-scale changes occurred to the major river drainages south of Elliott Bay, including changes to the alignments and discharge points of the Cedar, Black, Green and White Rivers. In general, these changes have reduced the amount of water flowing through the Green/Duwamish River to about one third of historic conditions.

Land use changes between European settlement and the current day have occurred in two general phases. From the mid 1800s to World War II, agriculture and timber harvesting dominated the Lower Green River Valley. Population densities in the Lower Green River Valley remained low until the Howard A. Hanson Dam project was completed in 1962, providing flood protection for the valley. Levees have also been constructed along the banks of the Green/Duwamish River, ranging from federally-certified levees to non-engineered agricultural berms. Since the dam and levee systems have significantly decreased the extent of flooding within the Lower Green River Valley, land development and urbanization have occurred. For more discussion on the character of the Green/Duwamish River and an inventory of river conditions, see the Shoreline Inventory and Characterization Report, prepared by ESA/Adolfson, May, 2007 found in Appendix A.

Historically, the Green/Duwamish River valley was known for its farmland. Farming was established in the early 1900's after forested areas were cleared and transportation to the area was improved. In 1906, construction of the Lake Washington ship canal eliminated flows of the Black River into the valley, reducing valley flooding. As a result, the river valley developed into highly productive farmland for the region.

In the early 1950's, the Port of Seattle proposed to convert much of the Green/Duwamish River valley to intensive industrial uses. These plans included converting the river into a shipping canal, possibly reaching as far south as the City of Auburn. Valley landowners countered this proposal by annexing large tracts of land into Tukwila to retain more control

over future land use decisions. With the construction of Howard Hanson Dam in 1962 on the upper Green River, flooding in the valley was further reduced. Much of the river is now contained within levees and surrounded by commercial and industrial development.

The Port's actions in the northern part of the River and drastic reduction in river flooding have had a major influence on the development of the river valley. Today, Tukwila's portion of the Green/Duwamish River is known as a center for retail, commercial and industrial uses. The river remains inaccessible to shipping activity south of the Turning Basin, where it can be accessed primarily by small water craft, kayaks and canoes only. Land uses along the river are mostly commercial and industrial activities, with a few residential areas. With the designation of the Southcenter area as an Urban Center and the Duwamish Corridor as a Manufacturing Industrial Center (MIC), this development pattern is expected to continue, and to intensify as redevelopment occurs.

#### **B. Riverbank Vegetation**

The natural environment along the river has been significantly altered from its original riparian corridor by intense urban development and river bank modification due to the construction of levees, revetments or other shoreline armoring. Most native stands of trees are gone, but have been replaced by new trees and plants in some areas. Landscaping with native and non-native plantings have also been completed in conjunction with new development along the corridor. Birds and small mammals are supported in both habitats. While more natural habitat is found up stream, re-development of the shoreline has the potential to provide appropriate landscaping and restoration of habitat that are more attractive to wildlife, people and a more environmentally sensitive form of development

#### **C. Public Access**

The regional Green River Trail provides public access to existing shoreline amenities and plans anticipate future linkages to Seattle's system. As redevelopment occurs, there will be opportunities to provide other types of public access, including viewing platforms, boat ramps and fishing areas.

#### **4.4 Restoration Opportunities and Potential Use Conflicts**

Past restoration work focused on the Green/Duwamish River (in Water Resource Inventory Area 9) has resulted in good data collection and identification of potential restoration opportunities. Significant restoration activities along the Green/Duwamish River are already underway in the form of the multi-agency Green River Ecosystem Restoration Project. Several opportunities have been identified on the river as part of the recently adopted King County Flood Hazard Management Plan. Restoration opportunities focus on several key elements:

- Removing non-native, invasive plant species and re-vegetating with native



riparian forest species;

- Removing artificial debris and walls that harden channel banks;
- Integrating the reconnection of floodplains, levee setbacks, and other ecosystem restoration techniques with future flood and river management efforts; and
- Property acquisition to allow for levee setbacks, side channel reconnection, and channel migration.

Two key issues illustrate constraints to implementing restoration and potential use conflicts in Tukwila: 1) levee maintenance and management; and 2) existing development patterns and anticipated redevelopment.

Discussion of shoreline planning for the Green River in Tukwila must acknowledge the fact that, in light of the existing system of levees (including the federally certified “205” levees) and revetments, the City cannot act alone. There are a variety of regulatory jurisdictions outside of the City with different responsibilities for maintenance and management of the levee system, including the U.S. Army Corps of Engineers (the Corps), the Federal Emergency Management Agency (FEMA), King County River and Floodplain Management Unit (acting as part of the Green River Flood Control Zone District), and private property owners. The City of Tukwila Public Works Department has overall responsibility for maintenance of all levees, including the federally certified levee, which extends from about the I-405 crossing to the south City limits. The actual maintenance work on this levee is contracted by the City to King County.

The restoration of native tree and shrub species along the levees would increase riparian habitat ecological functioning of this reach of the Green/Duwamish River, benefiting salmonids as well as other species. However, the Corps of Engineers (responsible for certifying the federal levee) believes that the root system of these trees could destabilize levees, resulting in water piping (e.g., water infiltrating into and through levees along root pathways at higher rates than it could through root free soil) at high flows, and potential levee failure if trees fall. For the Vegetation Free Zone of the levee, current Corps guidance only allows grass as vegetative cover on the levees (USACOE, Engineering Manual 1110-2-301). Current guidance also specifies a root-free zone where plantings can occur, but roots will generally not penetrate this structural zone. Therefore, under current regulations, to meet the requirements for federal levee certification, some vegetation was recently removed and ongoing vegetation management will be required to maintain the levee certification.

Under the SMA, removing trees and vegetation from the riparian zone of shoreline of the state is in conflict with policies for vegetation conservation and enhancement. A possible solution is to step back and re-slope the levees to create mid-slope benches where vegetation can be planted that will not interfere with the levee prism as the levee system is reconstructed to improve its stability. This would require additional easement area beyond the existing maintenance easements that have been acquired along the length of

the system.

The existing development pattern also represents constraints to implementing restoration projects, including levee setbacks, off-channel habitat restoration, wetland and stream restoration, and riparian zone enhancements. Most of Tukwila is fully developed, with portions having a dense, urbanized land use pattern. The City's first SMP, in place since 1974, established a 40-foot setback from the mean high water line. In places that have not been redeveloped under current regulations there is little more than this 40-foot zone that is not intensely developed. Some places have somewhat more open space and less development and thus have greater flexibility to accommodate potential habitat restoration actions. The City's vision for future land use, based on its comprehensive plan, includes maintenance and further development of its urban character, particularly its identity as a regionally significant center for manufacturing, industrial, and commercial development. A challenge lies ahead in determining how best to accommodate new and redevelopment near the shoreline in a manner consistent with both the Comprehensive Plan and the Shoreline Master Program in order to achieve "no net loss" of shoreline function.

#### 4.5 Conclusions

Like many rivers in the Puget Sound region, the course and dynamics of the Green/Duwamish River has changed significantly as a result of development and alteration of its watershed over the past century or so. Characteristic of many cities in the region, Tukwila has grown and become highly urbanized. Continued growth is anticipated and the City is planning for that growth. To a significant degree, the City has envisioned and maintained a development pattern that preserved public access to the Green River and assured setbacks of new buildings from the shoreline. Issues of concern today are focused on reconstructing existing levees and revetments to protect existing development from flood hazards, an effort that will take place over a number of years in coordination with the King County Flood Control Zone District, King County and state and federal agencies. There are many opportunities for conservation and restoration actions in the City to restore or replace habitat while managing natural hazard areas.

**Commented [NG6]:** The current map is outdated, the transition zone was expanded to river mile 9 in the Duwamish Blueprint based on new understanding of the use of the upper reach by larger juveniles later in the year.



Revised Map 2 – Duwamish River Transition Zone

## **5. SHORELINE RESTORATION PLAN - SUMMARY**

### **5.1 Background**

The state guidelines require that local governments develop SMP policies that promote "restoration" of impaired shoreline ecological functions and a "real and meaningful" strategy to implement restoration objectives. The City's shoreline inventory and characterization report identifies which shoreline ecological functions and ecosystem processes have been impaired. Local governments are further encouraged to contribute to restoration by planning for and supporting restoration through the SMP and other regulatory and non-regulatory programs. As part of the SMP update process, the City developed a Draft Shoreline Restoration Plan in February 2007. The draft plan was finalized in May, 2008 following technical review by King County and Ecology and has since been updated to include additional potential projects, address Ecology comments and refocus priorities to projects within the Transition Zone. It is included as Appendix B to the SMP.

The restoration plan builds on the Inventory and Characterization Report and provides a framework to:

- Identify primary goals for ecological restoration of the Green/Duwamish ecosystem;
- Identify how restoration of ecological function can be accomplished;
- Suggest how the SMP update process may accomplish the restoration of impaired shoreline functions associated with the Green/Duwamish ecosystem; and
- Prioritize restoration projects so that the highest value restoration actions may be accomplished first.

### **5.2 Assessment of Shoreline Functions**

As summarized in the previous section, the Inventory and Characterization analysis examined riverine and estuarine ecosystem processes that maintain shoreline ecological functions, and identified impaired ecological functions. The inventory report identified key ecosystem processes, and provided a qualitative assessment of their levels of functioning at both a watershed and city reach scale. Key ecosystem functions identified in the inventory, their level of alteration, and potential restoration actions are summarized in Table 1.

As noted in the Inventory and Characterization Report and summarized in the Shoreline Inventory and Characterization Summary Section, many of the alterations to shoreline functions and ecosystem processes in the Green/Duwamish River are due to watershed

scale issues within the upper watershed which cannot be fully restored or addressed in the lower river section through Tukwila. However, hydrologic, water quality, and habitat restoration measures in the City do have the potential to improve the overall functioning of this important section of the Green/Duwamish River ecosystem that includes the transition zone from fresh to salt water.

**Table 1. General Restoration Potential within the Shorelines of Tukwila**

Function Category	Function	Alterations to natural functioning	Potential Restoration Action within the City
Hydrologic	Channel -Floodplain Interaction	Presence of flood protection structures (e.g., levees, river bank revetments, flood gates) and significant fill and development along the shoreline limit channel-floodplain interactions in Tukwila.	<ol style="list-style-type: none"> <li>1. Modify current levees and revetments to increase channel and floodplain interaction;</li> <li>2. Excavate back or side channels;</li> </ol>
Hydrologic	Upland sediment generation	Fine sediment contribution to the river is increased due to build-up and wash-off from surrounding urban land uses.	Implement enhanced stormwater BMPs for fine sediment removal in stormwater runoff.
Water Quality	Retention of particulates and contaminants	Levees and revetments are virtually continuous along the riverbanks, limiting the potential to retain particulates or contaminants contained in stormwater sheet flows in the fluvially dominated reaches. Particulates, including sediment, are retained in the tidally dominated reaches, as evidenced by the need to dredge the estuary turning basin.	<ol style="list-style-type: none"> <li>1. Modify current levees and revetments to increase channel and floodplain area;</li> <li>2. Install native riparian species to increase bank roughness.</li> </ol>
Water Quality	Nutrient cycling	As channel-floodplain interaction was reduced, the channel became a conduit for nutrients, offering little opportunity for contact time with soils.	<ol style="list-style-type: none"> <li>1. Increase riverine wetland area;</li> <li>2. Install native riparian plant species.</li> <li>3. Set back banks (revetments and levees).</li> </ol>
Large Woody Debris (LWD) and Organics	Maintain characteristic plant community	The majority of the shoreline within the City of Tukwila is currently dominated by non-native invasive weed species (Himalayan blackberry, reed canary-grass, and Japanese knotweed). Some higher quality areas of cottonwood, alder, and willow exist in riparian areas bordering open space, parkland, and residential zones.	<ol style="list-style-type: none"> <li>1. Remove invasive plants and install native riparian species;</li> <li>2. Incorporate LWD into bank stabilization and restoration projects;</li> <li>3. Institute programmatic weed control activities along shoreline.</li> <li>4. Promote bioengineering techniques for shoreline stabilization projects.</li> </ol>
LWD and Organics:	Source of LWD	Despite the lack of many sources for LWD, there are some large cottonwoods and big leaf maples occur along the levees and revetment system.	<ol style="list-style-type: none"> <li>1. Install native riparian species;</li> <li>2. Incorporate LWD into bank stabilization and restoration projects.</li> </ol>

### 5.3 Plans, Programs, and Completed Projects

The importance of the Green/Duwamish ecosystem within the Puget Sound has resulted in significant focus on this area in terms of restoration potential. With the federal listing of Chinook and bull trout as endangered species, watershed planning in the region (e.g., WRIA 9) has focused on developing a Salmon Habitat Plan (WRIA 9, 2005), to which the City of Tukwila is a party. The plan establishes goals, objectives, and programmatic and site specific actions to address restoration of habitat critical to salmon species in the Green/Duwamish watershed.

Tukwila has already engaged in the greater regional restoration effort for the Green/Duwamish River. The City Council has ratified the WRIA 9 Plan and contributes resources to maintain operating staff. Tukwila has worked within the larger Green/Duwamish River Ecosystem restoration project to acquire or donate properties that are either currently functioning (Cecil B. Moses Park, Codiga Farm), or have the potential for restoration (North Winds Weir, Duwamish Gardens). WRIA 9 and other regional partners are currently working together to monitor baseline conditions. Several projects from the WRIA 9 Plan are included on the City's Capital Improvement Program list; other projects will be added as CIP projects are completed and funds are identified for new projects.

The restoration plan identifies several projects that have already been completed in the Green/Duwamish River. These projects provide an excellent opportunity to learn about what river restoration measures are the most effective. For example, it appears that the back channel that was excavated at Codiga Farm provides important habitat for migrating juvenile fish.

### 5.4 Restoration Opportunities

Based on the key ecosystem functions that are currently altered, there appear to be five specific types of restoration actions that will most benefit the Green/Duwamish ecosystem in Tukwila. These actions are intended to boost the levels of ecosystem functioning as part of a self-sustaining ecosystem that will limit the need for future manipulation. While these projects are intended to restore many ecosystem functions, the restoration activities will occur in the highly urban valley bottom, and as a result, cannot fully achieve pre-disturbance channel conditions. In addition, some restoration actions must occur at the watershed scale, which will restore ecosystem functions that cannot be addressed solely within Tukwila or as part of the SMP.

- **Enlarging channel cross-sectional area.** This action could include setting back levees and re-sloping banks to reduce steepness. These actions will increase flood storage, allow for more stable levees, restore some floodplain area, provide a larger intertidal zone in this important transitional area, and provide a more natural transition from aquatic to upland habitats. The Transition Zone is identified in **Map 2**.

- **Enhancing existing habitats.** These actions could include the removal of non-native invasive vegetation, installation of native riparian vegetation, and installation of LWD below Ordinary High Water. This action will improve the functioning of the aquatic, riverine wetland, and riparian habitats that currently exist along the Green/Duwamish River.
- **Creating off-channel habitat areas.** This action would create off channel areas through the excavation of historic fill or floodplain materials to create back channels as fish foraging and refugia areas.
- **Reconnecting wetland habitat to the river.** This action would reconnect an old oxbow wetland to the river, allowing for off-channel habitat (Nelson Side Channel).
- **Removing fish barriers where tributary streams discharge to the river.** This action would remove flap gates and install fish-friendly flap gates at the mouths of Tukwila's three major streams (Gilliam, Southgate and Riverton) and possibly restore habitat area at these locations in the shoreline jurisdiction.

## 5.5 Potential Projects and Priorities

The restoration plan summarizes 26 potential projects as specific restoration projects within the shorelines of Tukwila. Most of the restoration projects are part of ongoing restoration planning through the WRIA 9 watershed planning process. Additionally, opportunities exist to enhance riparian vegetation along the majority of the Green/Duwamish River.

The restoration plan provides a preliminary qualitative (high, medium, low) project ranking system. Within this ranking system, the highest priority location for restoration projects is within the transition zone. The Transition Zone is mapped in **Map 2**.

High priority projects will typically:

- Address both hydrologic and habitat ecosystem functions;
- Have opportunity for multiple funding sources;
- Include freshwater tributary channels; and/or
- Not require additional property acquisition.

Medium priority projects will typically:

- Address limited ecosystem functions; and
- Be eligible for multiple funding sources, and/or require property acquisition.

Low priority projects will typically:

- Only focus on habitat enhancement;
- Will be used as mitigation to offset impacts elsewhere; or
- Not be eligible for multiple funding sources.

## 6. **SHORELINE GOALS AND POLICIES**

The goals and policies that lead and inspire Tukwila’s shoreline actions are found in the Shoreline Element of the City’s 2015 Comprehensive Plan. These, along with the narrative in that Chapter, were updated based on the 2009 SMP and 2011 revisions approved by the Department of Ecology.

**Commented [NG7]:** The proposal is to delete the duplicate listing of goals and policies from the Shoreline Element. Minor edits to the Element are needed to match the 2011 revisions approved by DOE and will be found in a separate ordinance.

## 7. **SHORELINE ENVIRONMENT DESIGNATIONS**

The City of Tukwila’s Shoreline Master Program (SMP) establishes a system to classify shoreline areas into specific “environment designations.” This system of classifying shorelines is established by the Shoreline Management Act (RCW 90.58) and Master Program Guidelines (WAC 173-26-211). The purpose of shoreline environment designations is to provide a uniform basis for applying policies and use regulations within similar shoreline areas. Generally, shoreline designations should be based on existing and planned development patterns, biological and physical capabilities and limitations of the shoreline, and a community’s vision or objectives for its future development.

### 7.1 **Pre 2009 Regulatory Framework**

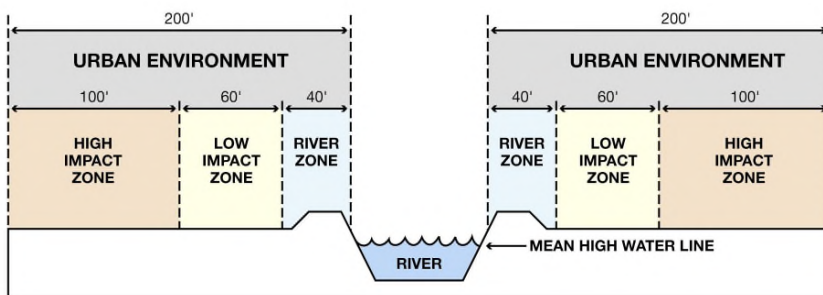
Tukwila’s first SMP adopted in 1974, designated all shorelines as “Urban.” At the time the 1974 SMP was developed, all of the land in Tukwila’s shoreline jurisdiction was either zoned commercial/industrial or was developed with urban uses. The SMP defined the Urban Environment as “areas to be managed in high intensive land uses, including residential, commercial, and industrial development and accessory uses, while providing for restoration and preservation to ensure long-term protection of natural and cultural resources within the shoreline” (Tukwila, 1974). The SMP further stated that the management objectives for the shoreline “are directed at minimizing adverse impacts on the river and shoreline ecology, maximizing the aesthetic quality and recreational opportunities of the river shore, and recognizing the rights and privileges of property owners” (Tukwila, 1974). Within the Urban Environment, Tukwila’s SMP employed a tiered system of regulations based on the distance from the Green/Duwamish River mean high water mark (MHWM). These tiered management zones are generally described below and illustrated on Figure 1:

- River Environment/Zone: a 40-foot wide zone extending landward from MHWM and having the most environmentally protective regulations;
- Low-Impact Environment/Zone: the area between the River Environment and 100 feet from the MHWM; and
- High-Impact Environment/Zone: the area between 100 and 200 feet from the MHWM.

The City also administered the King County Shoreline Master Program for the areas



which had been annexed since the adoption of the City's SMP in 1974. These areas were designated Urban and the setbacks from Ordinary High Water Mark varied from 20 feet to 50 feet depending on whether the use was water dependent, single family or commercial/industrial. See **Annexation History, Map 1** for an identification of the areas where the City administered the County's SMP.



**Figure 1. Pre 2009 Tukwila SMP Shoreline Management Zones (1974 SMP; TMC 18.44)**

## 7.2 Key Findings of the Shoreline Inventory / Characterization Report and Restoration Plan

This section summarizes findings from the Inventory and Characterization Report and Restoration Plan elements of the SMP update (Appendices A and B). These findings inform the goals, policies, regulations, and the development and application of environment designations. In this context, the key findings can be summarized as follows:

- The Green/Duwamish River throughout Tukwila is a critical resource, particularly in the Transition Zone portion of the river that extends from river mile 10 upstream from the Interstate 5 bridge through the north City limits (see **Map 2**), where juvenile salmon adjust from fresh to salt water habitat. The river provides migratory habitat for numerous fish species, as well as riparian habitat for a variety of wildlife.
- The river is a critical resource for Muckleshoot Indian Tribe fishing.
- The river is a critical resource for some water dependent uses north of the Turning Basin.
- The river is an important recreational resource for sport fishing, small water craft and Green River Trail users.
- At an ecosystem scale, the habitat is largely homogenous throughout the city. In addition, many ecosystem processes are largely controlled by up-river characteristics, particularly the Howard Hanson Dam and are little affected by

actions in the City, except for such functions as water quality (especially fine sediment capture and filtering of contaminants in stormwater), local surface hydrology (stormwater from increasing amounts of impervious surfaces and contribution to peak flows of the river), riparian habitat, and temperature control (shading from riparian habitat). With the exception of the functions provided by the transitional mixing zone from salt to fresh water, habitat conditions and functions are relatively similar throughout the shoreline. The transition zone needs greater protection and restoration focus than other sections of the shoreline in the city.

- Restoration opportunities are numerous and spatially distributed throughout Tukwila's shoreline. Activities that provide restoration of both floodplain functions and habitat functions should be prioritized, particularly those projects in the transition zone. Policies should promote and regulations should enable the City to accomplish restoration goals and actions.

### **7.3 State Environment Designation System**

State Master Program Guidelines (WAC 173-26-211) establish the environment designation system for shorelines regulated by the Shoreline Management Act. The guidelines (WAC 173-26-150 and 176-26-160) give local jurisdictions the option to plan for shorelines in designated Urban Growth Areas (UGA) and Potential Annexation Areas (PAA) as well. The City can "pre-designate" shoreline environments in its designated PAA as part of this planning process. However, shorelines in the PAA would continue to be regulated under the provisions of the King County SMP until the City annexes those areas. The County's SMP designates the City's North PAA and the South PAA as High Intensity.

The guidelines (WAC 173-26-211(4)(b)) recommend six basic environment designations: high intensity; shoreline residential; urban conservancy; rural conservancy; natural; and aquatic. Local governments may establish a different designation system, retain their current environment designations and/or establish parallel environments provided the designations are consistent with the purposes and policies of the guidelines (WAC 173-26-211(4)(c)). The guidelines also note that local shoreline environment designations should be consistent with the local comprehensive plan (WAC 173-26-211(3)).

For each environment designation, jurisdictions must provide a purpose statement, classification criteria, management policies and environment specific regulations. Table 2 describes the purpose for each of the recommended designations in the state guidelines. For each designation, the potential applicability to Tukwila is noted.

**Table 2. State Recommended Environment Designation System - WAC 173-26-211 (5)**

<b>Environment Designation</b>	<b>Purpose</b>	<b>Applicability to Tukwila</b>
<b>Aquatic</b>	The purpose of the "aquatic" environment is to protect, restore, and manage the unique characteristics and resources of the areas waterward of the ordinary high-water mark.	This designation will be used for the area waterward of the ordinary high water mark which includes the water surface along with the underlying lands and the water column.
<b>Natural</b>	The purpose of the "natural" environment is to protect those shoreline areas that are relatively free of human influence or that include intact or minimally degraded shoreline functions intolerant of human use.	While the Green River shorelines in Tukwila provide some important ecological functions, the river and adjacent uplands throughout Tukwila have been significantly altered by dense urban development and are generally armored or otherwise modified.
<b>Rural Conservancy</b>	The purpose of the "rural conservancy" environment is to protect ecological functions, conserve existing natural resources and valuable historic and cultural areas in order to provide for sustained resource use, achieve natural floodplain processes, and provide recreational opportunities.	Not applicable to Tukwila. All of the City's shorelines are urbanized. Potential annexation areas are either urbanized or proposed for intensive development.
<b>Urban Conservancy</b>	The purpose of the "urban conservancy" environment is to protect and restore ecological functions of open space, floodplain and other sensitive lands where they exist in urban and developed settings, while allowing a variety of compatible uses.	This designation is applicable in that the Green River is an important natural resource. The most significant shoreline function provided in Tukwila is related to fish and wildlife habitat. Open space is limited by the existing development pattern and floodplains are largely disconnected by a series of levees, revetments, and other infrastructure.
<b>Shoreline Residential</b>	The purpose of the "shoreline residential" environment is to accommodate residential development and appurtenant structures that are consistent with this chapter. An additional purpose is to provide appropriate public access and recreational uses.	This designation is most applicable for those portions of Tukwila's shorelines where the existing and planned development pattern is for low density (i.e., predominantly single-family) residential uses or public recreation uses.
<b>High-Intensity</b>	The purpose of the "high-intensity" environment is to provide for high-intensity water-oriented commercial, transportation, and industrial uses while protecting existing ecological functions and restoring ecological functions in areas that have been previously degraded.	This designation is applicable along only part of Tukwila's shorelines, in the Manufacturing and Industrial Center (MIC) north of the Turning Basin. Water-dependent uses are currently limited, as only a small portion of the river in Tukwila is navigable for commercial purposes, and much of the river has levees, thus restricting use immediately adjacent to the river.

**7.4 Environment Designations**

The Natural and Rural Conservancy Environments are not well suited to a highly developed, urbanized river that is navigable for only a small portion of the system and is

significantly constrained by levees for flood management, such as the Green/Duwamish River in Tukwila. The City's **Shoreline Environments**, which are identified on **Map 3**, are:

- Shoreline Residential Environment
- Urban Conservancy Environment
- High Intensity Environment, and
- Aquatic Environment

The City designated a buffer to replace the prior system of parallel shoreline management zones. Instead of the prior River Environment, a minimum buffer was established for each shoreline environment and allowed uses were designated for the buffer area along the river and the remaining shoreline jurisdiction. This system is intended to facilitate the City's long-range objectives for land and shoreline management, including:

- Ensuring no net loss of ecological shoreline functions;
- Providing for habitat protection, enhancement, and restoration to improve degraded shoreline ecological functions over time and protection of already restored areas;
- Allowing continued and increased urban development in recognition of Tukwila's role as a regionally significant industrial and commercial center; and
- Providing for improved flood control in coordination with King County and the Army Corps of Engineers.

Table 3, on the following page, provides a summary of the characteristics of the river shoreline in Tukwila to set the stage for the discussion in Section 7.5 on the determination of shoreline buffers.

**Table 3. Summary of Buffer Widths for Land Use Zones and Shoreline Ecological Conditions**

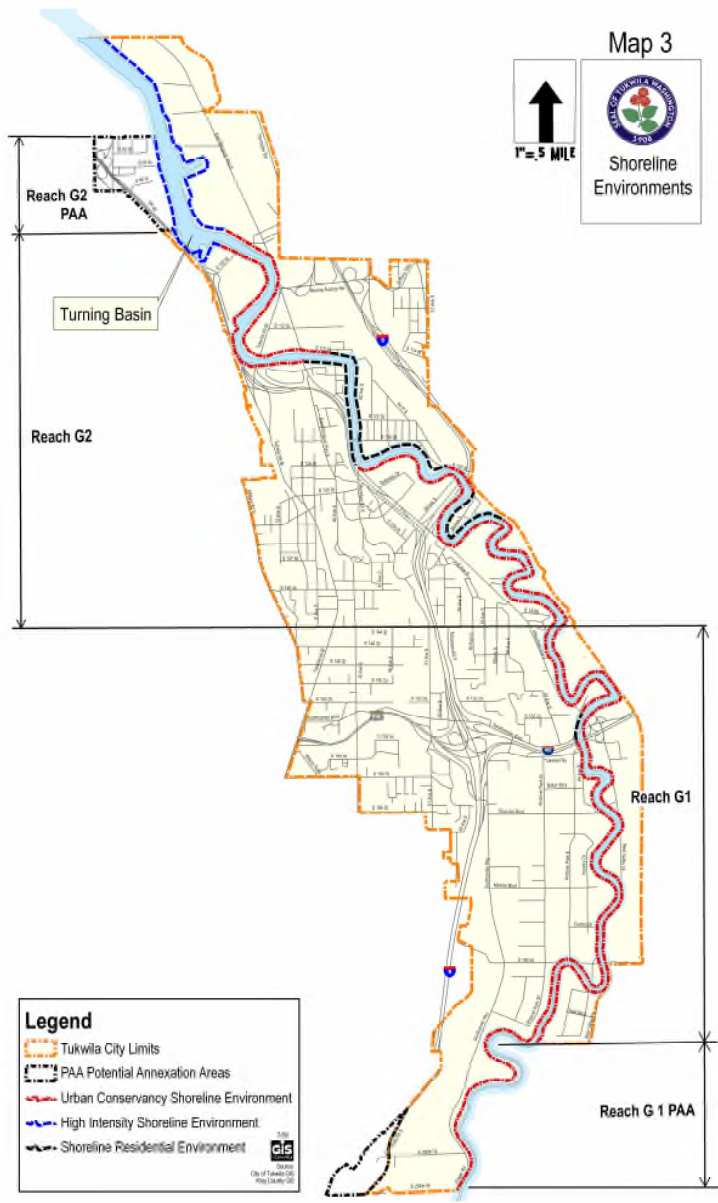
<b>Area</b>	<b>Characteristics</b>	<b>Environment</b>	<b>Buffer</b>	<b>Modification</b>
MIC/H & MIC/L Zoned property from North City Limits to EMWS Bridge, and North Potential Annexation Area	Fresh/Salt water Transition Zone, Lower flooding risk, Less than 20' difference from OHWM to top of bank, tidal influence	High Intensity	100'	<p>The Director may reduce the standard buffer on a case-by-case basis by up to 50% upon construction of the following cross section:</p> <ul style="list-style-type: none"> <li>- 1. reslope bank from OHWM (not toe) to be no steeper than 3:1, using bioengineering techniques</li> <li>- 2. Minimum 20' buffer landward from top of bank</li> <li>- 3. Bank and remaining buffer to be planted with native species with high habitat value</li> </ul> <p>Comment: Maximum slope is reduced due to measurement from OHWM and to recognize location in the Transition Zone where pronounced tidal influence makes work below OHWM difficult. Any buffer reduction proposal must demonstrate to the satisfaction of the Director that it will not result in direct, indirect or long-term adverse impacts to the river. In all cases a buffer enhancement plan must also be approved and implemented as a condition of the reduction. The plan must include using a variety of native vegetation that improves the functional attributes of the buffer and provides additional protection for the shoreline ecological functions.</p>
LDR Zoned property w/o levees from EMWS to I-405	Moderate flooding risk, Less than 25' difference from OHWM to top of bank, tidal influence on northern section	Shoreline Residential	Distance required to set back slope from toe at 2.5:1 plus 20' setback, Min. 50' width	Removal of invasive species and replanting with native species of high habitat value voluntary unless triggered by requirement for a Shoreline Substantial Development permit

LDR Zoned property with levees from EMWS to I-405	Moderate flooding risk, Less than 25' difference from OHWM to top of bank, tidal influence on northern section	Shoreline Residential	125'	Upon reconstruction of levee in accordance with City levee standards, the Director may reduce the buffer to actual width required. Comment: this applies to City-owned property at Fort Dent.
Commercially zoned property from 42 <sup>nd</sup> Ave S. Bridge to I-405	Moderate flooding risk, Less than 25' difference from OHWM to top of bank	Urban Conservancy	100'	The Director may reduce the standard buffer on a case-by-case basis by up to 50% upon-construction of the following cross section: <ul style="list-style-type: none"> <li>• reslope bank from toe to be no steeper than 3:1 using bioengineering techniques</li> <li>• Minimum 20' buffer landward from top of bank</li> <li>• Bank and remaining buffer to be planted with native species with high habitat value</li> </ul> Any buffer reduction proposal must demonstrate to the satisfaction of the Director that it will not result in direct, indirect or long-term adverse impacts to shoreline ecological functions. In all cases a buffer enhancement plan must also be approved and implemented as a condition of the reduction. The plan must include using a variety of native vegetation that improves the functional attributes of the buffer and provides additional protection for the shoreline ecological functions.
West River bank from I-405 to South City Limit, Tukwila 205 Levee and South Annexation Area	High flooding risk, Federally certified and County levee, large water level fluctuations	Urban Conservancy	125'	Upon construction or reconstruction of levee in accordance with City levee standards the Director may reduce the buffer to the actual width required. In no case shall the buffer be less than 50 feet.

**Commented [NG8]:** The proposal is to change this to 3:1 to provide greater slope stability and ease of planting. This can be accommodated within the existing 100' buffer width.

East River bank <b>without levee</b> from I-405 south to City Limits	Moderate flooding risk, 20 to 25' difference from OHWM to top of bank, Moderate slumping risk, large water level fluctuations	Urban Conservancy	100'	<p>The Director may reduce the standard buffer on a case-by-case basis by up to 50% upon construction of the following cross section:</p> <ul style="list-style-type: none"> <li>- 1. reslope bank from toe to be no steeper than 3:1, using bioengineering techniques</li> <li>- 2. Minimum 20' buffer landward from top of bank</li> <li>- 3. Bank and remaining buffer to be planted with native species with high habitat value</li> </ul> <p>Any buffer reduction proposal must demonstrate to the satisfaction of the Director that it will not result in direct, indirect or long-term adverse impacts to shoreline ecological functions. In all cases a buffer enhancement plan must also be approved and implemented as a condition of the reduction. The plan must include using a variety of native vegetation that improves the functional attributes of the buffer and provides additional protection for the shoreline ecological functions.</p>
East River bank <b>with levee</b> from I-405 to South City Limit	Moderate flooding risk, 20 to 25' difference from OHWM to top of bank, Moderate slumping risk, large water level fluctuations	Urban Conservancy	125'	<p>Upon reconstruction of levee in accordance with City levee standards the Director may reduce the buffer to the actual width required for the levee. In no case shall the buffer be less than 50 feet.</p>
Any shoreline environment where street or road runs parallel to the river through the buffer				<p>End buffer on river side of existing improved street or roadway.</p>

**Commented [NG9]:** The proposal is to change this to 3:1 to provide greater slope stability and ease of planting. This can be accommodated within the existing 100' buffer width.





## 7.5 Determination of Shoreline Buffers

The determination of the buffer distances for each shoreline environment was based on several factors including the analysis of buffer functions needed for protecting and restoring shoreline ecological function (as presented in the Shoreline Inventory and Characterization Report) and the need to allow space for bank stability and for protecting human life and structures from damage from high flows, erosion and bank failures. Safety of residents and people who work in buildings along the shoreline has become even more important in recent years due to the increase in stormwater entering the river from increasing impervious surfaces throughout the watershed and increasing frequency and intensity of flows during high rain events. These higher and more frequent flows will put more stress on over-steepened banks all along the river, increasing the possibility of bank erosion, levee failures, and bank failures. Thus, ensuring that new structures are not built too close to the river's edge is crucial to avoid loss of human life.

Staff also reviewed the rationale for the buffer widths established for watercourses under TMC 18.45, the Sensitive Areas Ordinance, as well as buffer widths recommended by resource agencies, such as the State Department of Fish and Wildlife, Department of Natural Resources and the recent Biological Opinion issued by National Marine Fisheries Service in relation to FEMA's National Flood Insurance Program.

The final buffer widths proposed by staff for each shoreline environment attempted to balance shoreline ecological function needs, human life and property protection needs (including future levee repair/reconstruction), existing land use patterns, and state and federal agency policies.

The following information summarizes the analysis carried out and the rationale used for determining buffer widths.

### **A. Buffer Functions Supporting Shoreline Ecological Resources, Especially Salmonids**

Buffers play an important role in the health of any watercourse and an even more important role when considering the health of salmonids in the Green/Duwamish River system. The key buffer functions for the river are summarized below.

The Shoreline Management Act and the Department of Ecology regulations require evaluation of ecological functions and that local SMPs ensure that the policies and regulations do not cause any net loss of shoreline ecological function. In addition, the SMP must identify mechanisms for restoration of lost ecological functions.

The crucial issue for the Green/Duwamish River is the presence of salmonids that are on the Endangered Species list. To protect and restore ecological functions related to these

species it is important to provide for the installation of native vegetation along the shoreline. Such vegetation provides shade for improving temperature conditions in the river and habitat for insects on which fish prey. Trees along the shoreline also provide a source of large woody debris (tree trunks, root wads, limbs, etc. that fall into the water), which in turn provides pooling and areas of shelter for fish and other animals. In order to allow for planting of native vegetation, banks need to be set back to allow for less steep and more stable (requiring less armoring) slopes, so that they can be planted, which is crucial for improving shoreline ecological functions that are needed in the river.

**Commented [NG10]:** While the current profile requires a mid-slope bench for plantings they can also occur outside of the levee prism when designed using flood walls or shallower slopes.

The buffer widths needed to achieve a particular buffer function vary widely by function type from as little as 16 feet for large woody debris recruitment (assuming the buffer has large trees) to over 400 feet for sediment removal. The Washington State Department of Fish and Wildlife (WDFW) recommends a riparian buffer width of 250 feet for shorelines of statewide significance (this applies to the Green/Duwamish River). The Washington Department of Natural Resources (WDNR) recommends a riparian buffer of 200 feet for Class 1 Waters (the Green/Duwamish River is a Class 1 Water under the WDNR classification scheme). The National Marine Fisheries Service (responsible at the federal level for overseeing protection of endangered salmonids under the Endangered Species Act) has recommended a buffer of 250 feet in mapped floodplain areas to allow for protection of shoreline functions that support salmonids.<sup>1</sup> Tukwila's Sensitive Areas Ordinance (TMC 18.45) has established a 100 foot buffer for Type 2 watercourses in the city (those that bear salmonid species).

The key buffer functions for the river are summarized below.

1. Maintenance of Water Quality

Salmonid fish require water that is both colder and has lower nutrient levels than many other types of fish. Vegetated shoreline buffers contribute to improving water quality as described below.

- a. Water Temperature: The general range of temperatures required to support healthy salmonid populations is generally between 39 degrees and 63 degrees. Riparian vegetation, particularly forested areas can affect water temperature by providing shade to reduce exposure to the sun and regulate high ambient air temperatures.
- b. Dissolved Oxygen: dissolved oxygen is one of the most influential water quality parameters for aquatic life, including salmonid fish. The most significant factor affecting dissolved oxygen levels is water

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<sup>1</sup> Endangered Species Act – Section 7 Consultation, Final Biological Opinion and Magnuson –Stevens Fishery Conservation and Management Act Essential Fish Habitat Consultation, Implementation of the Flood Insurance Program in the State of Washington, Phase One Document, Puget Sound Region, September, 2008.

temperature – cooler streams maintain higher levels of oxygen than warmer waters.

- c. **Metals and pollutants:** Common pollutants found in streams, particularly in urban areas, are excessive nutrients (such as phosphorous and nitrogen), pesticides, bacteria and miscellaneous contaminants such as PCBs and heavy metals. Impervious surfaces collect and concentrate pollutants from different sources and deliver these materials to streams during storm events. The concentration of pollutants increases in direct proportion to the total amount of impervious area. Undisturbed or well vegetated riparian buffer areas can retain sediment, nutrients, pesticides, pathogens and other pollutants, protecting water quality in streams. Elevated nitrogen and phosphorus levels in runoff are a typical problem in urban watersheds and can lead to increased in-stream plant growth, which results in excess decaying plant material that consumes oxygen in streams and reduces aquatic habitat quality.

## 2. Contributing to in-stream structural diversity

- a. Large woody debris (LWD) refers to limbs and tree trunks that naturally fall into the stream bed from a vegetated buffer. LWD serves many functions in watercourses. LWD adds roughness to stream channels, which in turn slows water velocities and traps sediments. Sources of LWD in urban settings are limited where stream corridors have been cleared of vegetation and developed and channel movement limited due to revetments and levees. Under natural conditions, the normal movement of the stream channel, undercutting of banks, wind throw, and flood events are all methods of LWD recruitment to a stream channel.
- b. LWD also contributes to the formation of pools in river channels that provide important habitat for salmonids. Adult salmonids require pools with sufficient depth and cover to protect them from predators during spawning migration. Adult salmon often hold to pools during daylight, moving upstream from pool to pool at night.

## 3. Providing Biotic Input of Insects and Organic Matter

- a. Vegetated buffers provide foods for salmonids and other fish, because insects fall into the water from overhanging vegetation.
- b. Leaves and other organic matter falling into stream provide food and nutrients for many species of aquatic insects which in turn provide forage for fish.

## B. Bank Stability and Protection of Human Lives and Structures

The main period of runoff and major flood events on the Green River is from November through February. The lower Green and Duwamish levees and revetments form a nearly continuous bank protection and flood containment system. Farmers originally constructed many of these levees and revetments as the protection to the agricultural lands of the area and this original material is still in place as the structural core. In particular, these protection facilities typically have over-steepened banks, areas with inadequate rock buttressing at the toe, and lack habitat-enhancing features such as overhanging vegetation or in-water large woody debris. Because of these design and construction shortcomings, the protection to river banks has not always performed as intended. Instead, there have been bank failures that have threatened structures and infrastructure; erosion of banks – making them even steeper; and damage to levees that has required a series of repair projects.

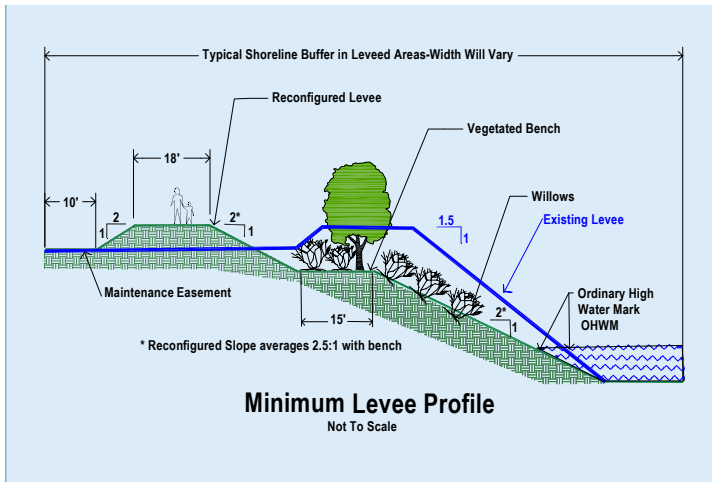
The damage to the levee system in storm events lead to discussions among the City, US Army Corps of Engineers and the King County Flood Control District to determine the best levee design to prevent the recurring problem of continued levee repairs. The criteria used to design a levee profile are:

- Public Safety;
- Maintaining levee certification;
- Solutions that eliminate or correct factors that have caused or contributed to the need for the levee repair;
- Levee maintenance needs; and
- Environmental considerations.

To overcome the existing problems and to reduce future maintenance and repair costs, the Corps chose to lessen the overall slope to a stable grade. This selected method is consistent with recommendations set forth in the Corps of Engineers' Manual for Design and Construction of Levees (EM 1110-2-1913) for slope stability. It also is consistent with the levee rehabilitation project constructed on the nearby Briscoe School levee that has proven to be a very effective solution to scour problems – the design slows the river down, provides additional flood storage and allows a vegetated mid-slope bench for habitat improvements. This profile was used to repair two areas of the federally-certified levee in Tukwila – the Lily Point project and the Segale project, which were about 2,000 linear feet of repairs. Costs of these repairs were around \$7 million dollars, not including any costs of land acquisition for laying back the levees. It is expected that the use of this levee design or an environmentally superior solution will reduce the need to continually repair the levee in those areas, thus avoiding such high expenditures in the future and saving money in the long run.

**Commented [NG11]:** However, the Briscoe profile was not used in the more recent levee reconstruction in Kent.

The profile discussed above is illustrated in Figure 2 below:



Commented [AMS12]: Figure should be renamed Briscoe Levee Profile

**Figure 2. Briscoe Levee Profile**

Because of the similarities in the soil conditions and taking into consideration the tidal influence, the Green/Duwamish River can be divided into three areas – South of I-405; North of I-405; and areas around residential neighborhoods. Looking at the slope geometry and the difference in height between the ordinary high water mark and the 100-year flood elevation for these three areas, it was found that 125-feet of setback distance (buffer) is needed to accommodate the “lay back” of the levee in the area south of I-405 and around Fort Dent Park.<sup>2</sup> During high flow events, the water surface can be as much as 16 feet above the OHWM in these areas. At locations further downriver, the water surface elevation difference is much less pronounced due to the wider channel and proximity to Puget Sound. For areas without levees, north of I-405 and those areas south of I-405 on the east side of the river (right bank), a 100-foot setback distance is required to accommodate the slopes needed for bank stability. Within residential neighborhoods, a minimum 50-foot setback is justified because of the less intense land use associated with single-family home construction and the estimated amount of space needed to achieve the natural angle of repose for a more stable slope.

Even though the above explanation for determining appropriate buffer distance used levee design as the example, the same problems exist where there are no levees. The river makes no distinction between an over-steepened slope associated with a levee or a riverbank. Scouring within the river will cause sloughing and slope stability will be weakened, potentially resulting in the loss of structures. In fact, the non-leveed riverbank

<sup>2</sup> The 125 foot distance includes a slope no steeper than 2.5:1 with a mid-slope bench incorporated, 18 feet at the top of the levee and 10 feet on the back side of the levee for access and inspection.

can be more prone to these problems since they tend to be steeper and consist mainly of sand and silt. This makes them susceptible to erosion. Because the non-leveed riverbanks are for the most part privately owned, they are not actively monitored for damage by the City or County.

### C. Conclusions

The determination of buffer widths was based on two important criteria: the need to achieve bank stability and protect structures along the shoreline from damage due to erosion and bank failures and to protect and enhance shoreline ecological function.

Applying the 200 to 250 foot buffer widths recommended by WDFW and WDNR would not be practical given the developed nature of the shoreline. It was also felt that a buffer less than that already established for Type 2 Watercourses under the City's SAO would not be sufficiently protective of shoreline functions, unless those functions were enhanced through various restoration options. Therefore, 100 feet was established as the starting point for considering buffer widths from the standpoint of shoreline ecological function in each of the Shoreline Environments. Between 100 and 125 feet was the starting point for buffer widths from the standpoint of bank stability and property protection.

Thus buffers were established taking into account (as explained in the following sections) the characteristics of each Shoreline Environment, needs for protection/restoration of shoreline ecological functions, and needs for stable banks and human life and property protection.

### 7.6 Shoreline Residential Environment

**A. Designation Criteria:** All properties zoned for single-family use from the ordinary high water mark landward two-hundred (200) feet. In addition, those areas zoned for single family use but developed for public recreation or open space within 200 feet of the shoreline shall also be designated Shoreline Residential, except Fort Dent Park.

**B. Purpose of Environment and Establishment of River Buffer:** The purpose of the Shoreline Residential Environment is to accommodate urban density residential development, appurtenant structures, public access and recreational activities. However, within the 200 foot shoreline jurisdiction in the Shoreline Residential Environment there will be a protective buffer along the river, where development will be limited to protect shoreline function.

The purpose of the river buffer in the shoreline residential environment is to:

- Ensure no net loss to shoreline ecological functions;

- Help protect water quality and habitat function by limiting allowed uses;
- Protect existing and new development from high river flows by ensuring sufficient setback of structures;
- Promote restoration of the natural character of the shoreline environment; and
- Allow room for reconstructing over-steepened river banks to achieve a more stable slope and more natural shoreline bank conditions and avoid the need for shoreline armoring.

**C. Analysis of Development Character of Residential Shoreline:** An analysis was prepared that looked at the residential properties along the shoreline and identified the number of parcels with structures within 50 feet and 100 feet of the OHWM. This analysis showed the following:

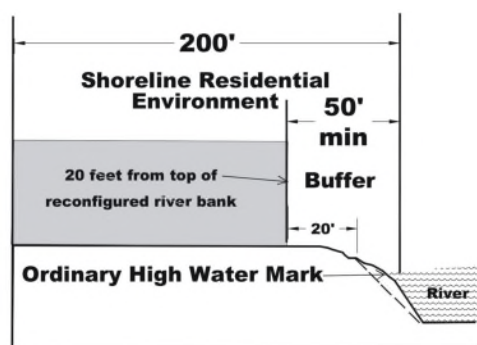
ZONE	Number of parcels within 50 feet of OHWM	Number of vacant parcels within 50 feet	Number of parcels with structures within 50 feet/%	Number of parcels within 100 feet of OHWM	Number of vacant parcels within 100 feet	Number of parcels with structures within 100 feet/%
LDR	135	12	67/49%	201	25	165/82%

As can be seen from the chart above, almost half of the parcels in the residential neighborhoods have a structure within 50 feet of the OHWM – a direct result of the current King County regulations. To apply a buffer width that is consistent with the City’s Sensitive Areas Ordinance (SAO) of 100 feet would create a situation where 82% of the properties along the river would have nonconforming structures as they relate to the proposed shoreline buffer.

Expansion of single family nonconforming structures in the proposed SMP buffer would be governed by Section 14.5 of the SMP, which permits an expansion of only 50% of the square footage of the current area that intrudes into the buffer and only along the ground floor of the structure. For example, if 250 square feet of a building extended into the proposed buffer, the ground floor could be expanded a maximum of 125 feet in total area along the existing building line.

A buffer of 100 feet was considered for the shoreline residential properties, with the potential of a property owner applying for a buffer reduction of 50%, however, under the Shoreline Management Act, this would have required an application for a shoreline variance for each requested buffer reduction, a process that requires review and approval both at the local and state level (Ecology must review and approve the variance in addition to the City of Tukwila). This did not seem a reasonable process to require of so many property owners.

The river bank in the Shoreline Residential Environment is typically in a modified and degraded state but generally not stabilized with revetments, dikes or levees. Based on an analysis of the river elevations and existing banks, a 50 foot minimum buffer in the Shoreline Residential Environment would allow room to achieve a 2.5:1 bank slope with an additional 20 foot setback from the top of the slope – a distance that will allow for bank stability and in-turn, protection of new structures from high flows, and bank failures. A schematic of the shoreline jurisdiction showing the buffer is provided in Figure 3.



**Figure 3. Schematic of Shoreline Residential Environment and Buffer**

The proposed buffer area for the Shoreline Residential Environment will allow for removal of invasive plants, planting of native vegetation in the riparian zone and inclusion of other features to improve shoreline habitat. It also will prevent the placement of any structures in an area that could potentially prove unstable. In the event of bank erosion or slope failures, the buffer will provide sufficient space for re-sloping the bank to a more stable 2.5:1 slope, either through bank stabilization projects or through natural bank failures that result in the natural angle of repose (2.5:1 or greater).

### **7.7 Urban Conservancy Environment**

**A. Designation Criteria:** This environment will be designated in the area between the Ordinary High Water Mark and 200 feet landward as regulated under the Shoreline Management Act and applied to all shorelines of the river except the Shoreline Residential Environment and the High Intensity Environment. The Urban Conservancy Environment areas are currently developed with dense urban multifamily, commercial, industrial and/or transportation uses or are designated for such uses in the proposed south annexation area. This environment begins at the southern end of the Turning Basin and includes portions of the river where levees and revetments generally have been constructed and where the river is not navigable to large water craft. Uses will be restricted immediately adjacent to the river by establishment of a minimum protective buffer.



**B. Purpose of Environment:** The purpose of the Urban Conservancy Environment is to protect ecological functions where they exist in urban and developed settings, and restore ecological functions where they have been previously degraded, while allowing a variety of compatible uses.

**C. Establishment of River Buffers:** The Urban Conservancy environment will have two different buffers, depending on the location along the river and whether or not the shoreline has a flood control levee. The purpose of Urban Conservancy River Buffers is to:

- Protect existing and restore degraded ecological functions of the open space, floodplain and other sensitive lands in the developed urban settings;
- Ensure no net loss of shoreline function when new development or re-development is proposed;
- Provide opportunities for restoration and public access;
- Allow for adequate flood and channel management to ensure protection of property, while accommodating shoreline habitat enhancement and promoting restoration of the natural character of the shoreline environment, wherever possible;
- Avoid the need for new shoreline armoring; and
- Protect existing and new development from high river flows.

Buffer in Non-Levee Areas:

A buffer width of 100 feet is established for the Urban Conservancy Environment for all non-residential areas without levees. This buffer width is consistent with that established by the City’s Sensitive Areas Ordinance for Type 2 streams that support salmonid use, which is based on Best Available Science. In addition, as noted above, looking at the slope geometry and the difference in height between the ordinary high water mark and the 100-year flood elevation for these areas, it was found that a 100-foot setback distance is required to accommodate the slopes needed for bank stability.

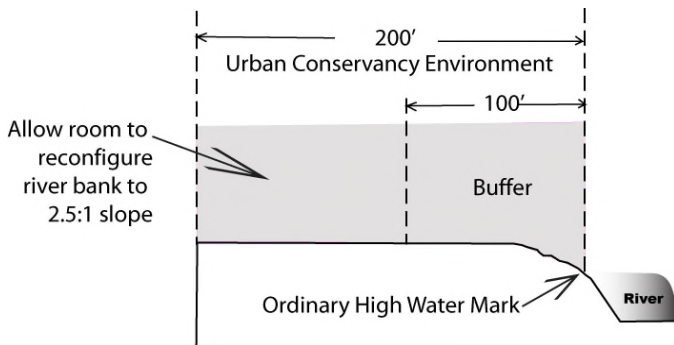
The buffer width of 100 feet allows enough room to reconfigure the river bank to achieve a slope of 2.5:1, the “angle of repose” or the maximum angle of a stable slope and allow for some restoration and improvement of shoreline function through the installation of native plants and other habitat features. The actual amount of area needed to achieve a 2.5:1 slope may be less than 100 feet, depending on the character of the river bank and can only be determined on a site-by-site basis.

As an alternative to the 100 foot buffer, a property owner may re-slope the river bank to be no steeper than 3:1, provide a 20 foot setback from the top of the new slope and vegetate both the river bank and the 20 foot setback area in accordance with the standards in the Vegetation Protection and Landscaping Section. Any buffer reduction proposal

**Commented [NG13]:** The proposal is to change the standard for buffer reductions from 2.5:1 to 3:1 to provide greater slope stability and ease of planting. This can be accommodated within the existing 100’ buffer width.

must demonstrate to the satisfaction of the Director that it will not result in direct, indirect or long-term adverse impacts to shoreline ecosystem functions. In all cases a buffer enhancement plan must also be approved and implemented as a condition of the reduction. The plan must include removal of invasive plants, and plantings using a variety of native vegetation that improves the functional attributes of the buffer and provides additional protection for the watercourse functions. In no case shall the buffer be less than 50 feet.

In areas of the river where this condition currently exists or where the property owner has constructed these improvements, the buffer width will be the actual distance as measured from the ordinary high water mark to the top of the bank plus 20 feet. The shoreline jurisdiction and buffers for the Urban Conservancy Environment are depicted in the schematic in Figures 4 and 5 below.

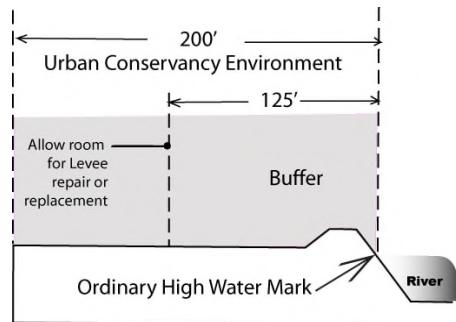


**Figure 4. Schematic of Shoreline Jurisdiction and Buffers for the Urban Conservancy Environment in Areas without Levees**

Buffer in Levee Areas:

For properties located behind the Army Corps of Engineers (ACOE) Certified 205 levee and County constructed levees, the buffer will extend 125 feet landward from the ordinary high water mark, determined at the time of development or redevelopment of the site or when levee replacement or repair is programmed. This buffer width is the maximum needed to reconfigure the river bank to the minimum levee profile and to achieve an overall slope of 2.5:1, the “angle of repose” or the maximum angle of a stable slope. The establishment of the 2.5:1 slope along the Corps certified 205 levee in the Tukwila Urban Center will allow for incorporating a mid-slope bench that can be planted with vegetation to improve river habitat. The mid-slope bench also will allow access for maintenance equipment, when needed. A fifteen foot easement necessary to allow access for levee inspection is required on the landward side of the levee at the toe.

**Commented [NG14]:** The Briscoe profile was not used in the more recent levee reconstruction in Kent as other engineering solutions can also provide environmental enhancement and flood protection.



**Figure 5. Schematic of Shoreline Jurisdiction and Buffers for the Urban Conservancy Environment in Areas with Levees**

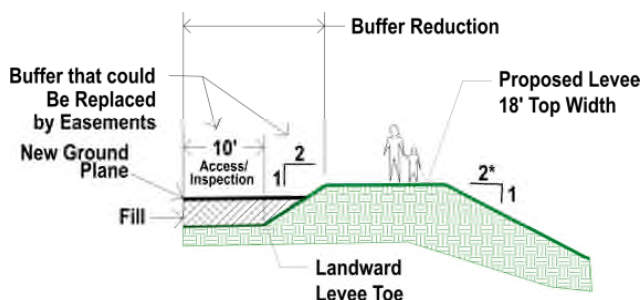
As an alternative to the 125 foot buffer for leveed areas, a property owner may construct levee or riverbank improvements that meet the Army Corps of Engineers, King County Flood Control District, and City of Tukwila minimum levee standards. These standards at a minimum shall include an overall slope no steeper than 2.5:1 from the toe of the levee to the riverward edge of the crown, 16' access across the top of the levee, a 2:1 back slope, and an additional 15 foot no-build area measured from the landward toe for inspection and repairs. In instances where an existing building that has not lost its nonconforming status prevents achieving an overall slope of 2.5:1 the slope should be as close to 2.5:1 as possible.

A floodwall is not the preferred back slope profile for a levee but may be substituted for all or a portion of the back slope where necessary to avoid encroachment or damage to a structure legally constructed prior to the date of adoption of this Master Program which has not lost its nonconforming status and to preserve access needed for building functionality. The floodwall shall be designed to provide 15' (fifteen foot) clearance between the levee and the building or to preserve access needed for building functionality while meeting all engineering safety standards. A floodwall may also be used where necessary to avoid encroachment on a railroad easement or to provide area for waterward habitat restoration.

In areas of the river where the property owner or a government agency has constructed a levee with an overall waterward slope of 2.5:1 or flatter, the buffer will be reduced to the actual distance as measured from the ordinary high water mark to the landward toe of the levee or face of a floodwall, plus 15 feet. In the event that the owner provides the City and/or applicable agency with a 15-foot levee maintenance easement measured landward from the landward toe of the levee or levee wall (which easement prohibits the construction of any structures and allows the City and/or applicable agency to access the area to inspect the levee), then the buffer shall be reduced to the landward toe of the levee, or landward edge of the levee floodwall, as the case may be.

In cases where fill is placed along the back slope of the levee, the shoreline buffer may be

further reduced to the point where the ground plane intersects the back slope. The area between the landward edge of the buffer and a point fifteen (15) feet landward of the underground levee toe shall be covered by an easement prohibiting the construction of any structures and allowing the City and/or applicable agency to access the area to inspect the levee and/or floodwall and make any necessary repairs. See Figure 5 below.



### Buffer Reduction with Backfill Option

Not To Scale

Figure 6. Schematic of Buffer Reduction Through Placement of Fill on Levee Back Slope

## 7.8 High Intensity Environment

**A. Designation Criteria:** The High Intensity Shoreline Environment area is currently developed with high intensity urban commercial, industrial and/or transportation uses or is designated for such uses in the proposed north annexation area. This environment begins at the Ordinary High Water Mark and extends landward 200 feet and is located from the southern edge of the Turning Basin north to the City limits and includes the North PAA. This Environment is generally located along portions of the Duwamish River that are navigable to large watercraft. Uses will be restricted immediately adjacent to the river by establishment of a minimum protective buffer.

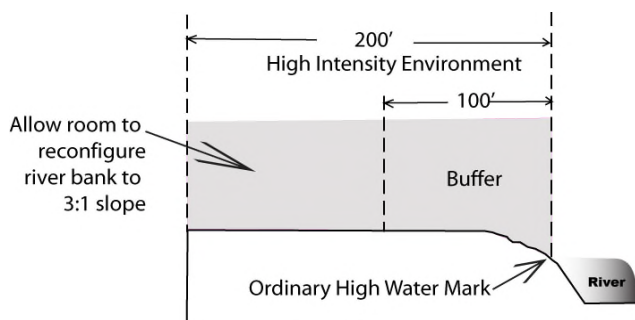
The transition zone is located partly in the High Intensity Environment. The transition zone is the location where freshwater from a river and saltwater from the marine salt wedge mix creating brackish conditions. Often it is also where the river widens, stream velocities decrease and estuarine mudflats begin to appear. Habitat associated with the transition zone is critically important for juvenile Chinook and chum smolts making the transition to salt water. The transition zone moves upstream and downstream in response to the combination of stream flow and tidal elevations and as a result varies over a twenty-four hour period and seasonally. The transition zone is a crucial habitat for salmonids.

**B. Purpose of Environment and Establishment of River Buffer:** The purpose of the Urban High Intensity Environment is to provide for high intensity, commercial, transportation and industrial uses and to promote water dependent and water oriented uses while protecting existing shoreline ecological functions and restoring ecological functions in areas that have been previously degraded.

The purposes of the High Intensity River Buffer are to:

- Protect existing and restore degraded ecological functions of the open space, floodplain and other sensitive lands in the developed urban settings;
- Ensure no net loss of shoreline function when new development or re-development occurs;
- Provide opportunities for shoreline restoration and public access;
- Allow for adequate flood and channel management to ensure protection of property, while accommodating shoreline habitat enhancement and promoting restoration of the natural character of the shoreline environment, wherever possible;
- Avoid the need for new shoreline armoring; and
- Protect existing and new development from high river flows.

A buffer of 100 feet is established, which allows enough room to reconfigure the river bank to achieve a slope of 3:1, (starting at the OHWM rather than the toe) the “angle of repose” or the maximum angle of a stable slope and allow for some restoration and improvement of shoreline function through the installation of native plants and other habitat features. The actual amount of area needed to achieve a 3:1 slope may be less than 100 feet, depending on the character of the river bank and can only be determined on a site-by-site basis.



**Figure 7. Schematic Showing the Proposed Shoreline Jurisdiction and Buffer for the High Intensity Environment**

As an alternative to the 100 foot buffer, a property owner may re-slope the river bank to a maximum-3:1, provide a 20 foot setback from the top of the new slope and vegetate both the river bank and the 20 foot setback area in accordance with the standards in the Vegetation Protection and Landscaping Section. The property owner must also demonstrate that this approach will not result in a loss of ecological functions of the shoreline. In areas of the river where this condition currently exists or where the property owner has constructed these improvements, the buffer width will be the actual distance as measured from the Ordinary High Water Mark to the top of the bank plus 20 feet. In no case shall the buffer be less than 50 feet.

In any shoreline environment where an existing improved street or road runs parallel to the river through the buffer, the buffer would end on the river side of the street or road.

#### **Section 7.9 Aquatic Environment**

**A. Designation Criteria:** All water bodies within the City limits and its potential annexation area under the jurisdiction of the Shoreline Management Act waterward of the ordinary high water mark. The aquatic environment includes the water surface together with the underlying lands and the water column.

**B. Purpose:** The purpose of this designation is to protect the unique characteristics and resources of the aquatic environment by managing use activities to prioritize preservation and restoration of natural resources, navigation, recreation and commerce and by assuring compatibility between shoreland and aquatic uses.

### **8. SHORELINE USE REGULATIONS AND DEVELOPMENT STANDARDS**

Uses that are permitted outright, permitted as a Conditional Use, or prohibited altogether for each Shoreline Environment are provided in TMC 18.44.030 along with special conditions and general requirements controlling specific uses. These regulations are intended to implement the purpose of each Shoreline Environment designation adopted with this SMP. Development standards such as setbacks, height limitations, water quality regulations, flood hazard reduction, shoreline stabilization, protection of archaeological resources, environmental impact mitigation, parking and over water structures requirements are codified in TMC Chapter 18.44.

The Administrative procedures codified in TMC Chapter 18.44 are designed to:

- Assign responsibilities for implementation of the Master Program and Shoreline Permits.
- Establish an orderly process by which to review proposals and permit

applications.

- Ensure that all persons affected by this Master Program are treated in a fair and equitable manner.

These procedures include permit application requirements, conditional use approval criteria, variance approval criteria, and regulations for non-conforming development.

## 9. ENVIRONMENTALLY CRITICAL AREAS WITHIN THE SHORELINE JURISDICTION.

### 9.1 **Applicable Critical Areas Regulations**

A. The following critical areas shall be regulated in accordance with the provisions of the Critical Areas Ordinance TMC Chapter 18.45, adopted [Date to be added], which is herein incorporated by reference into this SMP, except for the provisions excluded in subsection B of this Section:

1. Wetlands
2. Watercourses (Type F, Type Np, Type Ns)
3. Areas of potential geologic instability
4. Abandoned mine areas
5. Fish and wildlife habitat conservation areas

Such critical area provisions shall apply to any use, alteration, or development within shoreline jurisdiction whether or not a shoreline permit or written statement of exemption is required. Unless otherwise stated, no development shall be constructed, located, extended, modified, converted, or altered, or land divided without full compliance with the provision adopted by reference and the Shoreline Master Program. Within shoreline jurisdiction, the regulations of TMC Chapter 18.45 shall be liberally construed together with the Shoreline Master Program to give full effect to the objectives and purposes of the provisions of the Shoreline Master Program and the Shoreline Management Act. If there is a conflict or inconsistency between any of the adopted provisions below and the Shoreline Master Program, the most restrictive provisions shall prevail.

B. The following provisions of TMC Chapter 18.45 do not apply within the Shoreline jurisdiction:

1. Sensitive Area Master Plan Overlay (TMC Section 18.45.160)
2. Reasonable Use Exception (TMC Section 18.45.180).

C. Critical areas comprised of frequently flooded areas and areas of seismic instability are regulated by the Flood Zone Management Code (TMC Chapter 16.52) and

**Commented [NG15]:** The proposal is to adopt the revised critical areas regulations by reference rather than duplicating them in the SMP and Zoning Code.

the Washington State Building Code, rather than by TMC Section 18.44.090.

## 9.2 **Purpose**

A. The Growth Management Act (RCW 36.70A) requires protection of critical areas (sensitive areas), defined as wetlands, watercourses, frequently flooded areas, geologically hazardous areas, critical aquifer recharge areas, fish and wildlife conservation areas, and abandoned mine areas.

B. The purpose of protecting environmentally critical areas within the shoreline jurisdiction is to:

1. Minimize developmental impacts on the natural functions and values of these areas.
2. Protect quantity and quality of water resources.
3. Minimize turbidity and pollution of wetlands and fish-bearing waters and maintain wildlife habitat.
4. Prevent erosion and the loss of slope and soil stability caused by the removal of trees, shrubs, and root systems of vegetative cover.
5. Protect the public against avoidable losses, public emergency rescue and relief operations cost, and subsidy cost of public mitigation from landslide, subsidence, erosion and flooding.
6. Protect the community's aesthetic resources and distinctive features of natural lands and wooded hillsides.
7. Balance the private rights of individual property owners with the preservation of environmentally sensitive areas.
8. Prevent the loss of wetland and watercourse function and acreage, and strive for a gain over present conditions.
9. Give special consideration to conservation or protection measures necessary to protect or enhance anadromous fisheries.
10. Incorporate the use of best available science in the regulation and protection of critical areas as required by the state Growth Management Act, according to WAC 365-195-900 through 365-195-925 and WAC 365-190-080.

C. The goal of these critical area regulations is to achieve no net loss of wetland, watercourse, or fish and wildlife conservation area or their functions. Critical areas currently identified in the shoreline jurisdiction are discussed in the Shoreline Inventory and Characterization Report, which forms part of this Shoreline Master Program. The locations are mapped on the Sensitive Areas in the Shoreline Jurisdiction Map – Map 5. This map is based on assessment of current conditions and review of the best available information. However, additional sensitive areas may exist within the shoreline jurisdiction and the boundaries of the sensitive areas shown are not exact. It is the responsibility of the property owner to determine the presence of sensitive areas on the property and to verify the boundaries in the field. Sensitive area provisions for abandoned mine areas do not apply as none of these areas is located in the shoreline jurisdiction.







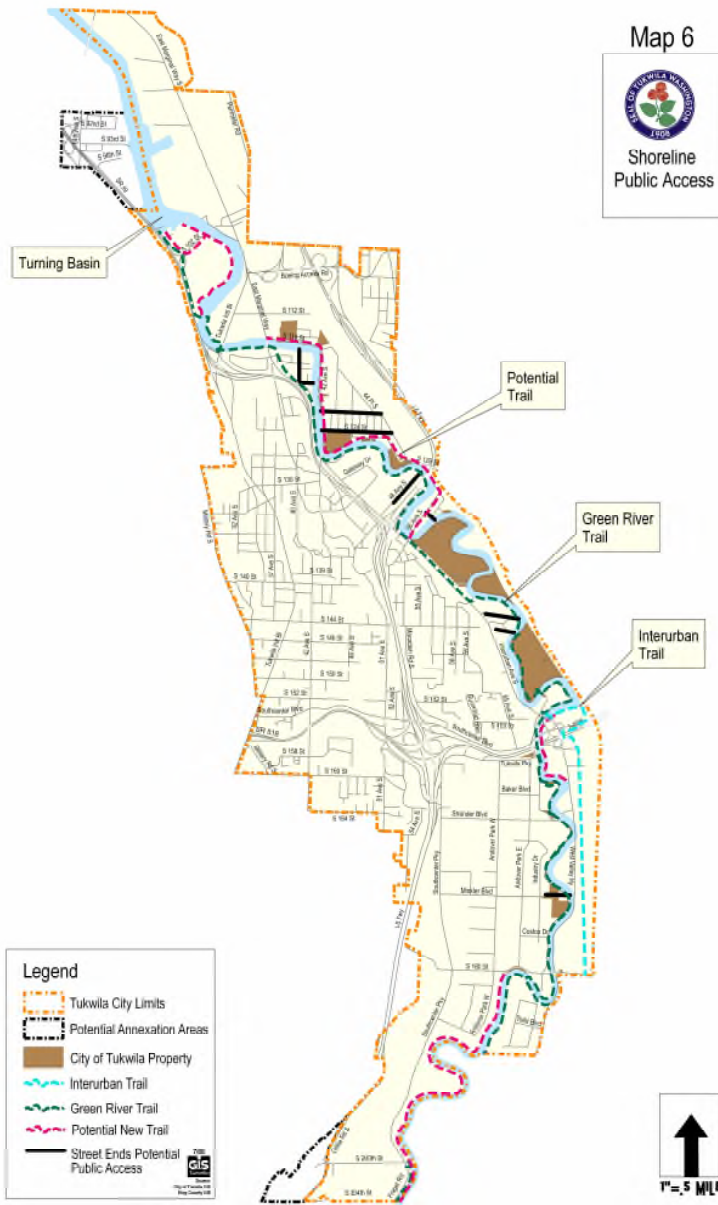
## 10. PUBLIC ACCESS TO THE SHORELINE

Public access to the shorelines of the state is one of the key goals of the Shoreline Management Act – of the seven uses identified in RCW 90.58.020 as having preference in the shoreline, two relate to public access and recreational opportunities along the shoreline.

The City of Tukwila is fortunate to have a number of public access sites already along the Green/Duwamish River in addition to the Green River Trail, which runs along almost the entire length of the river through the City. Other public access points are available at the North Winds Wier, the Tukwila Community Center, Codiga Park, Bicentennial Park at Strander Boulevard and parking available on Christianson Road and at S. 180<sup>th</sup> Street. A habitat restoration project is underway at Duwamish Riverbend Hill, on South 115<sup>th</sup> Street, which also includes public access to the river. The Public Access Map (**Map 6**) identifies several street ends that could be improved or to which amenities could be added that would offer opportunities for neighborhood access to the river and/or the Green River Trail.

The Shoreline Public Access Map identifies several potential trail sites on the river to supplement the existing Green River trail system. The largest stretch of potential trail runs from S. 180<sup>th</sup> on the left bank to the end of south annexation area. A pedestrian bridge to link the area south of S. 180<sup>th</sup> Street to the existing trail on the right bank is being discussed as well. A second area where improvement is needed in public access relates to boat launches for small hand launched boats. Several potential sites have been identified in the Tukwila Parks Department Capital Improvement Program to address this need at City-owned sites.

Requirements for public access to shorelines have been codified in TMC Chapter 18.44.



## 11. SHORELINE DESIGN GUIDELINES

The Green/Duwamish River is an amenity that should be valued and celebrated when designing projects that will be located along its length. The river and its tributaries support salmon runs and resident trout, including the ESA-listed Chinook salmon, Bull Trout and Steelhead. If any portion of a project falls within the shoreline jurisdiction, then the entire project will be reviewed under the shoreline specific guidelines codified in TMC Chapter 18.44 as well as the relevant sections of the Design Review Chapter of the Zoning Code (TMC Chapter 18.60). The standards of TMC Chapter 18.60 shall guide the type of review, whether administrative or by the Board of Architectural Review.

The standards apply to development, uses and activities in the Urban Conservancy and High Intensity Environments and non-residential development in the Shoreline Residential Environment.



## 12. SHORELINE RESTORATION

The Shoreline Restoration Plan, found in Appendix B, identifies the sites that have been identified to-date as possible locations for habitat restoration along the Green/Duwamish River. The City will continue to add sites to the Restoration Plan as they are identified and will include them in the City's Capital Improvement Program for acquisition and improvement. Project sites in the Transition Zone have the highest priority for acquisition. Amendments or revisions to the Restoration Plan do not require an amendment to the Shoreline Master Program.

## 13. ADMINISTRATION

**Commented [NG16]:** Administrative procedures have been codified in TMC 18.44.

The Administrative procedures below are designed to:

- Assign responsibilities for implementation of the Master Program and Shoreline Permit
- Establish an orderly process by which to review proposals and permit applications
- Ensure that all persons affected by this Master Program are treated in a fair and equitable manner.

### 13.1 Applicability of Shoreline Master Program and Substantial Development Permit

#### A. Development in the Shoreline Jurisdiction

Based on guidelines in the Shoreline Management Act for a minimum shoreline jurisdiction, Tukwila's Shoreline Jurisdiction is defined as follows:

*The Tukwila Shoreline Jurisdiction includes the channel of the Green/Duwamish River, its banks, the upland area which extends from the ordinary high water mark landward for 200 feet on each side of the river, floodways and all associated wetlands within its floodplain. The floodway shall not include those lands that have historically been protected by flood control devices and therefore have not been subject to flooding with reasonable regularity.*

#### B. Applicability

The Tukwila Shoreline Master Program applies to uses, change of uses, activities or development that occurs within the above-defined Shoreline jurisdiction. All proposed uses and development occurring within the shoreline jurisdiction must conform to chapter 90.58 RCW, the Shoreline Management Act and this Master Program whether or not a permit is required. Except that requirements to obtain a substantial development permit, conditional use permit, variance, letter of exemption, or other review to implement the Shoreline Management Act do not apply to the following described in WAC 173-27-044 and WAC 173-27-045:

1. Remedial actions. Pursuant to RCW 90.58.355, any person conducting a remedial action at a facility pursuant to a consent decree, order, or agreed order issued pursuant to chapter 70.105D RCW, or to the department of ecology when it conducts a remedial action under chapter 70.105D RCW.

2. Boatyard improvements to meet NPDES permit requirements. Pursuant to RCW 90.58.355, any person installing site improvements for storm water treatment in an existing boatyard facility to meet requirements of a national pollutant discharge elimination system storm water general permit.
3. WSDOT facility maintenance and safety improvements. Washington State Department of Transportation projects and activities meeting the conditions of RCW 90.58.356 are not required to obtain a substantial development permit, conditional use permit, variance, letter of exemption, or other local review.
4. Projects consistent with an environmental excellence program agreement pursuant to RCW 90.58.045. (v) Projects authorized through the Energy Facility Site Evaluation Council process, pursuant to chapter 80.50 RCW.

### **13.2 Relationship to Other Codes and Regulations**

1. Compliance with this Master Program does not constitute compliance with other federal, state, and local regulations and permit requirements that may apply. The applicant is responsible for complying with all other applicable requirements.
2. Where this Master Program makes reference to any RCW, WAC, or other state or federal law or regulation, the most recent amendment or current edition shall apply.
3. When any provision of this Master Program or any other federal, state, or local provision conflicts with this Master Program, the provision that is most protective of shoreline resources shall prevail, except when constrained by federal or state law, or where specifically provided otherwise in this Master Program.
4. Relationship to Sensitive Areas Regulations.
  - A. For protection of critical areas where they occur in shoreline jurisdiction, this Master Program adopts by reference the City's Critical Areas Ordinance, which is incorporated into this Master Program with specific exclusions and modifications in Section 10 of this SMP.
  - B. All references to the Critical Areas Ordinance are for the version adopted [SAO adoption date]. Pursuant to WAC 173-26-191(2)(b), amending the referenced regulations in the Master Program for those critical areas under shoreline jurisdiction will require an amendment to the Master Program and approval by the Department of Ecology.
  - C. Within shoreline jurisdiction, the Critical Areas Ordinance shall be liberally construed together with this Master Program to give full effect to the objectives and purposes of the provisions of this Master Program and Chapter 90.58 RCW.

## 14. APPEALS

Any appeal of a decision by the City on a Shoreline Substantial Development Permit, Shoreline Conditional Use, Unclassified Use or Shoreline Variance must be appealed to the Shoreline Hearing Board.

**Commented [NG17]:** Permit requirements and non-conforming standards have been codified at TMC 18.44.

**Commented [NG18]:** Enforcement provisions have been codified in TMC 18.44.

## 15. MASTER PROGRAM REVIEW AND AMENDMENTS

- 15.1. This Master Program shall be periodically reviewed and adjustments shall be made as are necessary to reflect changing local circumstances, new information or improved data, and changes in State statutes and regulations. This review process shall be consistent with WAC 173-26 and shall include a local citizen involvement effort and public hearing to obtain the views and comments of the public.
- 15.2. Any provision of this Master Program may be amended as provided for in RCW 90.58.080 and WAC 173-26-090. Amendments or revisions to the Master Program, as provided by law, do not become effective until 14 days following written approval by the Washington State Department of Ecology.
- 15.3. Proposals for shoreline environment re-designations (i.e. amendments to the shoreline maps and descriptions) must demonstrate consistency with the criteria set forth in WAC 173- 26-040 and this program.

## 16. LIABILITY

- 16.1. Liability for any adverse impacts or damages resulting from work performed in accordance with a Permit issued on behalf of the City within the City limits, shall be the sole responsibility of the owner of the site for which the Permit was issued.
- 16.2. No provision of or term used in the Master Program is intended to impose any duty upon the City or any of its officers or employees that would subject them to damages in a civil action.





# City of Tukwila Shoreline Master Program

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## Gap Analysis Report

Prepared on behalf of:



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## Table of Contents

<b>1. Introduction .....</b>	<b>1</b>
<b>2. Consistency with Legislative Amendments.....</b>	<b>3</b>
<b>3. Consistency with Sensitive Areas Ordinance .....</b>	<b>7</b>
<b>4. Consistency with Other Development Regulations and Comprehensive Plan .....</b>	<b>8</b>
<b>5. Usability Recommendations .....</b>	<b>10</b>

## List of Tables

Table 1. Summary of gaps in consistency with legislative amendments, and associated mandatory and recommended SMP revisions. ....	3
Table 2. Summary of recommended SMP, TMC, and Comprehensive Plan revisions to improve consistency. ....	8
Table 3. Summary of recommended SMP revisions to enhance usability. ....	10



## 1. Introduction

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In accordance with the Washington State Shoreline Management Act (SMA), local jurisdictions with shorelines of the state are required to conduct a periodic review of their Shoreline Master Programs (SMPs) (WAC 173-26-090). This review is intended to keep SMPs current with amendments to state laws or rules, changes to local plans and regulations, changes in local circumstances, and new or improved data and information.

The City of Tukwila (City) adopted its current SMP in 2011 (Ordinance No. 2344). Shorelines of the State in Tukwila include the Green/Duwamish River and a small portion of the Black River. The Tukwila SMP includes goals and policies, shoreline environment designations, and development regulations that guide the development and protection of these shorelines.

As a first step in the periodic review process, The Watershed Company (Watershed) reviewed the current SMP for consistency with legislative amendments made since its adoption. Watershed staff also reviewed the current SMP for consistency with the policies in the City's Comprehensive Plan, adopted in 2015, and with the implementing development regulations in the Tukwila Municipal Code (TMC). Finally, as the periodic review process represents an opportunity to revise and improve the SMP, both City and Watershed staff reviewed the current SMP for overall usability.

The purpose of this gap analysis report is to provide a summary of the review and inform updates to the SMP. The report is organized into the following sections according to the content of the review:

- **Section 2** identifies gaps in consistency with legislative amendments. This analysis is based on a list of amendments between 2007 and 2017, as summarized by the Washington State Department of Ecology (Ecology) and provided to the City as a Periodic Review Checklist.
- **Section 3** identifies gaps in consistency with the City's Sensitive Areas Ordinance (SAO) (Chapter 18.45 TMC). The SAO was most recently updated in 2010, and applies to critical areas outside of shoreline jurisdiction, while the SMP contains in Chapter 10 its own separate set of regulations that apply to critical areas within shoreline jurisdiction.
- **Section 4** identifies gaps in consistency with the City's Comprehensive Plan, and with implementing sections of the City's development regulations other than the SAO. Specifically, the review includes Title 18 (excluding Chapters 18.44 and 18.45) of the TMC.
- **Section 5** identifies issues of usability by both City staff and residents.

For each section, the report presents the topic, relevant section(s) in the SMP, a summary of the analysis (consistency or usability), and a recommendation for revisions to the SMP.



## 2. Consistency with Legislative Amendments

Table 1 summarizes mandatory and recommended revisions to the Tukwila SMP regulations based on the review of consistency with legislative amendments made since SMP adoption. Topics are organized broadly by SMP subject area. In general, mandatory changes to the SMP are minor in nature. The majority of them address revised rules with regard to SMP applicability, including updated exemption thresholds and definitions. Ecology has also developed new guidance on regulating nonconforming uses, structures, and development that could be of use to the City in clarifying the nonconformance regulations in its SMP, as well as recent modifications to wetland buffer guidance that could be applied to both shoreline and non-shoreline wetland regulations.

Table 1. Summary of gaps in consistency with legislative amendments, and associated mandatory and recommended SMP revisions.

No.	Topic (Amendment Year)	Relevant Section(s) in 2011 SMP	Consistency Review	Recommendation
<b>Applicability</b>				
1	Cost threshold for non-exempt substantial development updated (2017)	Chapter 3, Definitions	The SMP includes a definition with reference to an outdated dollar threshold.	<b>Mandatory:</b> Revise definition of “substantial development” to refer to the updated dollar threshold and/or WAC definition, as adjusted by OFM every 5 years.
2	Definition of “development” updated to exclude dismantling or removing structures (2017)	Chapter 3, Definitions	The SMP does not clarify that removing structures does not constitute development.	<b>Recommended:</b> Revise definition of “development” to clarify this exclusion. Example language from Ecology is available.
3	New rules clarify exceptions to local review under the SMA (2017)	Chapter 14, Administration, section 14.2(B) and Chapter 3, Definitions	The SMP addresses exemptions in WAC 173-27-040. Individual exemptions under that section are addressed elsewhere throughout the SMP. The SMP does not refer to WAC 173-27-044 or -045.	<b>Mandatory:</b> Add reference to statutory exceptions. <b>Recommended:</b> Revise Chapter 14 to more comprehensively address exemptions and exceptions from all three relevant sections of the WAC, as amended.

No.	Topic (Amendment Year)	Relevant Section(s) in 2011 SMP	Consistency Review	Recommendation
4	Retrofitting existing structures for ADA compliance is now exempt from shoreline permit requirements (2016)	Chapter 14, Administration	Section 14.2(B) addresses exemptions in WAC 173-27-040. Section 14.5(B) contains provisions for non-conforming structures.	<b>Recommended:</b> Consider revising 14.5(B) to clarify that restrictions on modifications to existing non-conforming structures do not apply to ADA retrofits.
5	Cost threshold for exempt replacement of docks on lakes and rivers increased to \$20,000 from \$10,000 (2014)	Chapter 3, Definitions	Chapter 3 includes a definition of “substantial development” with reference to the outdated dollar threshold.	<b>Mandatory:</b> Revise text to refer to updated dollar threshold, and/or refer directly to WAC 173-27-040 and RCW.90.58.030(3)(e) for the list of exemptions.
<b>Use and Development Provisions</b>				
6	Updated wetlands critical areas guidance refers to the 2014 wetlands rating system (2016)	Chapter 10, Environmentally Sensitive Areas within the Shoreline Jurisdiction	Section 10.6(D) refers to the 2004 rating system.  Ecology provided revised wetland buffer guidance in July of 2018. The revised guidance indicates that wetlands scoring 5 habitat points may use the same standard buffer width as wetlands scoring 3-4 habitat points, and standard buffers for wetlands scoring 6-7 habitat points may be set at 110 feet rather than 165 feet.	<b>Recommended approach to mandatory change:</b> Revise SMP to reference updated SAO, which will incorporate 2014 wetlands rating system.  <b>Recommended:</b> Revise SAO to include July 2018 habitat score and buffer recommendations from Ecology.
7	New definition and policy for floating on-water residences legally established before July 1, 2014 (2014)	Chapter 9, Shoreline Development Standards	Section 9.12(E) contains provisions for live-aboards, which are permitted in the Aquatic environment. No definition of live-aboard is provided in Chapter 3, Definitions.	<b>Mandatory:</b> Revise Chapter 3 and Chapter 9 consistent with the new statutory definition and regulations for floating on-water residences.



No.	Topic (Amendment Year)	Relevant Section(s) in 2011 SMP	Consistency Review	Recommendation
8	Wetlands must be delineated in accordance with the approved federal wetland delineation manual (2011)	Chapter 10, Environmentally Sensitive Areas within the Shoreline Jurisdiction	Section 10.6(A) refers to the Washington State Wetland Identification and Delineation Manual (WDOE Publication #96-94).	<b>Recommended approach to mandatory change:</b> Revise SMP to reference updated SAO, which will refer to the approved federal wetland delineation manual and applicable regional supplements, per WAC 173-22-035.
9	Ecology adopted a rule for certifying wetland mitigation banks (2009)	N/A	The SMP does not address wetland mitigation banks.	<b>Recommended:</b> The City may wish to consider Ecology’s recommendation that SMP provisions (or referenced SAO provisions) authorize the use of mitigation banks.
10	New options for defining “floodway” as either the area that has been established in FEMA maps, or the floodway criteria set in the SMA (2007)	Chapter 3, Definitions	The definition of “floodway” in Chapter 3 is not consistent with either option provided by the statute.	<b>Mandatory:</b> Revise the definition of floodway to either refer to FEMA maps or use SMA criteria consistent with RCW 90.58.030(2)(b)(ii).
<b>Nonconformance</b>				
11	Ecology clarified default provisions for nonconforming uses and development (2017)	Chapter 14, Administration, section 14.5	The SMP includes provisions for nonconforming uses and development in section 14.5.	<b>Recommended:</b> The revised WAC could provide ideas for clarifications or improvements to the existing provisions in SMP.
12	SMPs may classify legally established residential structures and appurtenant structures as conforming even if they do not meet dimensional or bulk standards. Redevelopment, expansion, and replacement consistent with the SMP would be allowed (2011)	Chapter 14, Administration	Sections 14.5(B)(5) and (6) provide allowances for nonconforming residential structures.	<b>Recommended:</b> The City may wish to review these provisions and consider revising to more clearly classify existing structures as conforming.

No.	Topic (Amendment Year)	Relevant Section(s) in 2011 SMP	Consistency Review	Recommendation
<b>Administration</b>				
13	New rule describing the process local governments must follow when conducting periodic reviews (2017)	Chapter 17, Master Program Review and Amendments	Chapter 17 addresses SMP review and amendments, referring to RCW 90.58 and WAC 173-26.	<b>Recommended:</b> The City may wish to consider more specific statutory references (e.g. RCW 90.58.080 and WAC 173-26-090) for the sake of usability.
14	New rule created an optional SMP amendment process that allows for a shared local/state public comment period (2017)	Chapter 17, Master Program Review and Amendments	Chapter 17 addresses SMP review and amendments, referring to RCW 90.58 and WAC 173-26. More specific amendment procedures may be laid out in other chapters of the TMC.	<b>Recommended:</b> The City may wish to consider the use of the new optional SMP amendment process, and if so should review local amendment procedures to ensure there are no impediments to using it.
15	New Growth Management Act – Shoreline Management Act clarifications (2009)	Chapter 10, Environmentally Sensitive Areas within the Shoreline Jurisdiction, and Chapter 17, Master Program Review and Amendments	Chapter 10 includes provisions for critical areas in shoreline jurisdiction. Section 17.2 refers to the effective date of SMP amendments.	<b>Mandatory:</b> Revise 17.2 to clarify that SMPs are effective 14 days from Ecology’s written notice of final action.  <b>Recommended:</b> Replace Chapter 10 with an adoption by reference of the updated SAO, with exceptions/modifications as necessary.
16	The Legislature added moratoria authority and procedures to the SMA (2009)	N/A	The SMP does not address this.	<b>Recommended:</b> Consider adding provisions to address moratoria authority. Ecology has provided example language.

### 3. Consistency with Sensitive Areas Ordinance

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Based on a review of consistency with the City's Sensitive Areas Ordinance (SAO), codified in Chapter 18.45 TMC and adopted in 2010, there are numerous minor inconsistencies exist between the way the SAO and SMP designate and protect critical areas. Many of these appear to be a result of the time difference between adoptions of the two documents. We recommend that the City address these inconsistencies through direct adoption by reference in the SMP of the City's SAO, which is scheduled to be amended and adopted immediately prior to SMP adoption. Specific exceptions to the SAO required by statute may be called out in Chapter 18.45 TMC.

## 4. Consistency with Other Development Regulations and Comprehensive Plan

Table 2 summarizes recommended revisions to the Tukwila SMP based on a review of consistency with the Comprehensive Plan and the Tukwila Municipal Code (TMC). The Comprehensive Plan was updated in 2015 and is generally consistent with the SMP; however, certain policies can be updated to better align with SMP language. Certain code chapters that apply within shoreline jurisdiction, such as the Tree Regulations (Chapter TMC 18.54), refer to outdated SMP provisions and should be updated. In general, cross-references within Title 18 – both from the SMP to other code chapters and vice versa – could be strengthened to clarify applicability of the SMP.

Table 2. Summary of recommended SMP, TMC, and Comprehensive Plan revisions to improve consistency.

No.	Topic	Relevant Section(s) in 2011 SMP, TMC, or Comprehensive Plan	Consistency Review	Recommendation
<b>Comprehensive Plan</b>				
1	Shoreline Goals and Policies	SMP Chapter 6	The SMP references the City’s 1995 Comprehensive Plan, with proposed amendments. Many of these have since been adopted in the 2015 Comprehensive Plan.	Update Chapter 6 of the SMP to refer to the 2015 Comprehensive Plan. Incorporate small language changes to policies throughout.
2	Policies for development outside the Tukwila Urban Center or MIC	SMP Section 6.3 / Comprehensive Plan Goal 5-3	Numbering and language for policies 5.3.8, 5.3.9, and 5.3.10 differ slightly between the SMP and Comprehensive Plan.	Revise the SMP to align with more recent Comprehensive Plan language and numbering for these policies.
3	Levee profile	SMP 7.5(B), Figure 2 / Comprehensive Plan Goal 5-10, Figure 5-2	The SMP and Comprehensive Plan both reference the City’s adopted minimum levee profile with a graphic of the preferred profile.	Amend the Comprehensive Plan and SMP to include a policy stating/describing the City’s preferred levee profile.
<b>Development Regulations</b>				
4	Shoreline Design Guidelines	TMC 18.44.110 (SMP) / Title 18	Projects within shoreline jurisdiction are subject to the Shoreline Design Guidelines as	Where design review and shoreline projects are mentioned throughout Title 18 (e.g. Chapter

No.	Topic	Relevant Section(s) in 2011 SMP, TMC, or Comprehensive Plan	Consistency Review	Recommendation
			part of required design review. The SMP refers to the design review process and non-shoreline criteria. Other chapters of the TMC refer to the need for shoreline design review, but do not mention the Shoreline Design Guidelines.	18.60, Board of Architectural Review), refer to both shoreline and non-shoreline design guidelines.
5	Tree Regulations	Chapter 18.54 TMC	Tree removal within shoreline jurisdiction is subject to the provisions of Chapter 18.54. The chapter refers to outdated shoreline environments (e.g. Low-Impact Environment, TMC 18.54.130). The SMP itself does not reference the Tree Regulations.	Update outdated shoreline code references in Chapter 18.52 and 18.54 TMC, and clarify that these standards do not apply in shoreline jurisdiction, where 18.44.080 applies.
6	Definitions	SMP Chapter 3 / Chapter 18.06 TMC	Several definitions in the SMP are similar, but not the same as, definitions found in the TMC. For example, definition inconsistencies (including missing definitions) were found for the following terms: accessory use, high-impact environment, low-impact environment, river environment, shoreline, substantial development	Amend the definitions in both documents (SMP and TMC). Where definitions differ, focus on statutory requirements.

## 5. Usability Recommendations

Table 3 summarizes recommended revisions to the Tukwila SMP based on a review of general usability of the document by both Watershed and City staff. Topics are organized broadly by SMP subject area. The majority of these recommendations arise from City staff experience in implementing the SMP and a desire to make the regulations clearer and more internally consistent.

Note that all revisions will need to be made consistently to both the SMP and its codified regulations in Chapter 18.44 TMC.

Table 3. Summary of recommended SMP revisions to enhance usability.

No.	Topic	Relevant Section(s) in 2011 SMP	Usability Discussion	Recommendation
<b>Permitted Uses</b>				
1	Internal consistency	Permitted uses by SED (TMC 18.44.040-.065 / Sections 8.4-8.7) vs. Use Matrix (Figure 18-1 / Section 3)	The City has identified several inconsistencies between the permitted use provisions listed by SED and those in the matrix (e.g. utilities and utility towers allowed as “P” or “C”)	Review both sections for consistency and determine which section shall control. Default is for written provisions to control; however, the City may wish to reinterpret some of these provisions.  Alternatively, remove the written provisions and rely exclusively on the use matrix, with footnotes as necessary to provide additional conditions, as well as use-specific provisions in subsections of 18.44.070.
<b>Dimensional Standards</b>				
2	Shoreline buffers	18.44.040-.060	Subsection A of each upland SED “uses” section defines the required width of the shoreline buffer in that SED. These are described in more detail in Section 7.5 of the SMP, which does not have an analogous subsection within the SED use sections in Chapter 8.	Summarize shoreline buffers by SED in a table, and remove from the SED uses sections. This table could also contain other dimensional criteria currently incorporated into written provisions (e.g. height restrictions) to enhance usability.

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3	Truncated shoreline buffers	Section 7.4, Table 3	Table 3, Summary of Buffer Widths for Land Use Zones and Shoreline Ecological Conditions, was used to define the shoreline buffers included in TMC 18.44. The final entry in the table states that where a street or road runs parallel to the river through a shoreline buffer, the buffer should be truncated on the river side of the existing improved street or roadway.	Incorporate this provision into the shoreline buffer standards in the TMC. Should buffers be summarized in a table, as recommended above, a table footnote could include this provision.
4	Recreational structures	18.44.070 / Sections 8.4, 8.6, 8.8	The SMP limits recreational structures to a height of 15 feet and an area of 25 square feet. In the City's experience, this is too restrictive for certain structures, e.g. viewing platforms.	Revisit dimensional criteria for recreational structures.
<b>General Use and Development Provisions</b>				
5	Environmental Impact Mitigation - monitoring	18.44.070.H	Mitigation sequencing requires monitoring. However, specifications are not provided on monitoring duration.	Require a minimum of five years' monitoring where vegetation mitigation is required.
6	Vegetation protection and landscaping – exempt activities	18.44.080.A	The code does not specify what types of vegetation management may be allowed without a permit, focusing instead on provisions applicable to land under development.	Amend this section to include a list of vegetation management activities such as, e.g., removal of invasive vegetation or noxious weeds.
7	Vegetation protection and landscaping – maintenance and monitoring	18.44.080.D	Where vegetation is planted as part of a required mitigation or restoration, monitoring should be required. Based on City experience, the code should provide for situations in which overplanting is necessary to protect against invasive vegetation, and thinning is required following vegetation establishment.	Revise section to clarify this approach. Clarification could be placed in "exempt activities" section described in #6 of this table, above, or in 18.44.080.D.
8	Public access	18.44.100	The existing dimensional standards for trails (14' wide with two-foot shoulders) is not	Revisit trail standards and consider reducing to a minimum of 12' wide with two-foot

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			consistent with the County or City Parks standards which require a 12' wide trail with two-foot shoulders. The City has received submittal of several variance applications due to this inconsistency.	shoulders, or applying the reduced minimum where the applicant demonstrates it to be necessary due to lack of space.
<b>Specific Use and Development Standards</b>				
9	Minimum levee profile	18.44.070.D, Flood Hazard Reduction	In the case that a proposed levee profile improves upon the adopted minimum levee profile, a shoreline variance should not be required.	Revise subsection (10) to provide flexibility where an applicant demonstrates, and the City Engineer confirms, that the proposed levee profile will provide improved shoreline ecological functions and flood protection relative to the adopted minimum profile.
10	Permitting of over-water structures	18.44.070.K, Marinas, Boat Yards, Dry Docks, Boat Launches, Piers, Docks, and other Over-Water Structures	Subsection 1 requires that the applicant present state and federal approvals prior to issuance of an SSDP for construction of piers, docks, wharves, and other over-water structures. This approach is inconsistent with other City land use approval procedures and may be at odds with state or federal permit requirements.	Revise subsection 1 to require proof of submittal, rather than approval, of state and federal permit requirements, as applicable.
11	Classification of bridges	18.44.070.K, Marinas, Boat Yards, Dry Docks, Boat Launches, Piers, Docks, and other Over-Water Structures	City experience permitting a new pedestrian bridge raised the question of whether a bridge would be considered an over-water structure. Requirements for grated decking may pose a safety issue for non-motorized users.	Clarify how bridges are regulated, either in this section or in Chapter 18.06, Definitions.



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<b>Nonconformance</b>				
12	Amortization	18.44.130.E	During original drafting of the nonconformance regulations, the City set a goal to amortize nonconforming uses and structures.	No code revisions are recommended; however, the City should discuss and evaluate progress toward its amortization goal.
13	Parking lots	18.44.130.E(6)	City shoreline jurisdiction includes several nonconforming parking lots. Nonconforming gravel lots within shoreline jurisdiction may not be paved without losing nonconforming status, regardless of approach to stormwater control.	To provide flexibility, consider amending this section to allow for paving together with pollution controls and restoration of or other improvement to shoreline ecological functions.
<b>Administration</b>				
14	Purpose	18.44.010	Chapter 18.44 does not include an introduction or definition of purpose.	To improve usability and provide context, consider adding an introductory subsection that defines the purpose of the Shoreline Overlay District chapter.
15	Shoreline Environment Designation amendments	18.44.130	This section does not address the administrative procedure/requirements for a request of change in shoreline environment designation.	Consider amending this section to include a description of this process.
16	Permit revisions	18.44.130	This section does not address the administrative procedure/requirements for revisions to shoreline permits.	Consider amending this section to include a description of this process, and/or a reference to WAC 173-27-100.
17	Permit timelines	18.44.130	This section does not address time limits on shoreline permits, including period of validity, requirements for project completion, extensions, etc.	Consider amending this section to include a description of this process, and/or a reference to WAC 173-27-090.
18	SSDP approval criteria	18.44.130.B(3)	This subsection requires that a development be consistent with the SMP as a condition for approval.	Revise this subsection to require consistency with the Shoreline Management Act and applicable chapters of the WAC in addition to the SMP.