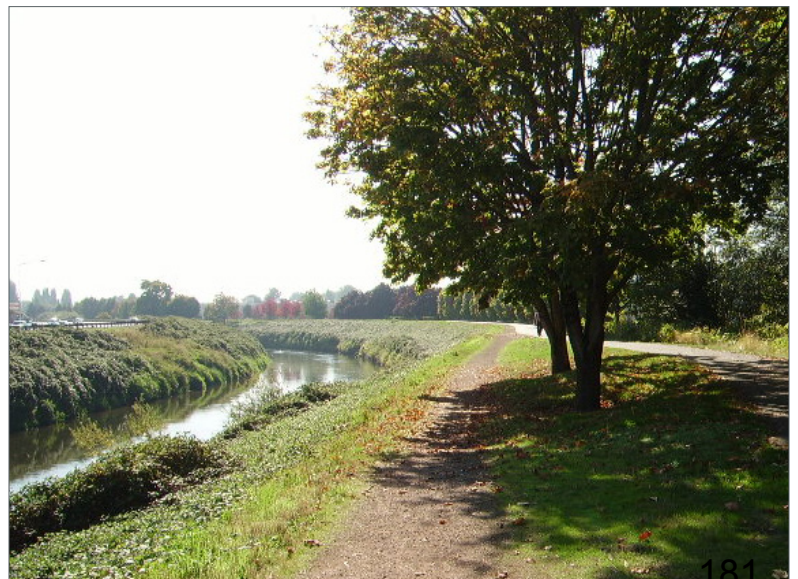


CHAPTER FIVE SHORELINE ELEMENT

TUKWILA COMPREHENSIVE PLAN



SHORELINES

WHAT YOU WILL FIND IN THIS CHAPTER:

- A discussion of shoreline areas in the City of Tukwila;
- An overview of the Shoreline Management Act and how it applies in Tukwila;
- Goals and Policies for managing development in shoreline areas; and
- A map of Tukwila's adopted Shoreline Environment Designations.

PURPOSE

This element of the City's Comprehensive Plan presents goals and policies related to development and restoration along the Green/Duwamish River, a shoreline of statewide significance subject to the Washington State Shoreline Management Act (SMA), which flows northerly through the entire length of Tukwila. A small fragment of the Black River flows into the Duwamish River just north of Fort Dent Park and is also subject to the SMA and the goals and policies of this chapter.

The Shoreline Element of the Comprehensive Plan represents the Shoreline Master Program's role in the community-wide planning process. It reflects the relationship between shoreline development and other Comprehensive Plan goals and policies, and the importance of a shoreline vision to a community vision. The Shoreline Element identifies existing local and regional policies, land use and shoreline conditions, and sets forth shoreline goals and the policies for achieving them. These goals and policies reflect Tukwila's priorities in these areas:

- Facilitating redevelopment and prioritizing water-dependent industrial uses in the Manufacturing/Industrial Center (MIC) and encouraging redevelopment in the Tukwila Urban Center (TUC) that recognizes the river as a valuable resource .

What is the Shoreline Management Act?

The Shoreline Management Act (SMA) was approved by Washington voters in 1972 and is designed to prevent degradation of the state's shorelines from uncoordinated development.

Where does the Shoreline Management Act apply?

Each city and county defines their own shoreline jurisdiction based on the provisions of the SMA and regulations from the Department of Ecology.

The SMA applies to the following areas:

- Marine waters,
- Streams and rivers that have an average annual flow of at least 20 cubic feet per second,
- Upland areas within 200 feet of regulated waterbodies, and
- Wetlands and flood-prone areas associated with regulated waterbodies.

Additional information on the Shoreline Management Act is available on the Department of Ecology's website at: http://www.ecy.wa.gov/programs/sea/sma/st_guide/intro.html.

- Ensuring the safety of new development from flooding and from destabilized riverbanks by establishing setbacks for new construction. Setbacks will allow for eventual replacement of existing flood control levees and regrading of over-steepened banks.
- Increasing public access to the river.
- Supporting restoration of habitat along the river through a restoration plan in the Shoreline Master Program. Restoration is accomplished in part, through removing invasive vegetation and replacing it with native species, constructing off-channel habitat and setting back levees to incorporate a mid-slope bench that can be planted to improve habitat.

Shoreline policies encourage high-quality development and redevelopment along the river. At the same time they recognize the value of the Green/Duwamish River as an aesthetic resource by encouraging new development in the urban center to "face" the river, provide views and public or private access to the shoreline. The policies also recognize the shoreline as an important natural resource that requires protection and restoration of shoreline ecological functions (such as habitat, surface water and flood attenuation, water quality improvement and others). Policies in the Master Program support restoration of shoreline ecological functions, particularly improved habitat for endangered fish species (Chinook salmon and Pacific Bull Trout).

As a whole, the Tukwila Shoreline Master Program acts as the implementation mechanism for achieving these goals and policies.



The Shoreline Management Act promotes increased recreational opportunities and public access to the shoreline environment.



ISSUES

Department of Ecology guidelines, and the City's obligations as a participant in the implementation of the Green/Duwamish Salmon Habitat Restoration plan, dictate that Shoreline Master Program policies and regulations be established to ensure no net loss and restoration of shoreline ecological functions. The major issue facing the City is balancing the existing and planned future urban development along the river with these requirements.

SHORELINE MANAGEMENT ACT PRIORITIES

The SMA designates the Green/Duwamish River as a shoreline of statewide significance. "Because these shorelines are major resources from which all people in the state derive benefit, the [development] guidelines and master programs must give preference to uses which favor public and long-range goals." [WAC 173-16-040(5)] The SMA states that master programs for shorelines of statewide significance shall give preference to uses that (in order of preference):

1. Recognize and protect the statewide interest over local interest
2. Preserve the natural character of the shoreline
3. Result in long-term over short-term benefit
4. Protect the resources and ecology of the shoreline
5. Increase public access to publicly owned areas of the shoreline
6. Increase recreational opportunities for the public in the shoreline
7. Provide for any other element as defined in RCW

90.58.100 deemed appropriate or necessary (that is, which further the state's shoreline policies).

The Washington State Shoreline Management Act requires that, where alterations in the natural condition of a shoreline are authorized, priority shall be given to the following uses:

- Single-family residences
- Ports
- Shoreline recreational uses
- Industrial and commercial developments dependent upon a shoreline location
- Other developments that will provide an opportunity for a substantial number of people to enjoy the shoreline.

The policies established in the Tukwila Shoreline Master Program attempt to balance the river's value as a long-term natural resource for the region with the demands of intense urban development. The City's Shoreline Master Program also recognizes that except for the area north of the Turning Basin, most of the Green River is not navigable, and therefore opportunities to establish water dependent uses are limited.

GOALS AND POLICIES

Tukwila's 2011 approved Shoreline Master Program, which is incorporated by reference as part of this Plan, revised some of the 1995 Comprehensive Plan goals and policies and added new ones to address new issues, changed conditions along the river, or new requirements established by the Washington State Department of Ecology .

Tukwila shoreline policies give priority to the economic vitality of the MIC, and focus intense multi-purpose urban uses, such as water-enjoyment commercial activity and public access, in the Tukwila Urban Center. The policies also emphasize the importance of a variety of shoreline public access methods, both physical and visual, linked to other areas of the region. They recognize the value of the river as a natural resource by encouraging restoration of wildlife habitat and native riverbank vegetation, including tree planting.

SHORELINE ENVIRONMENT DESIGNATIONS

The two hundred foot shoreline jurisdiction that comprises each shoreline environment is divided lengthwise into a buffer and outside-buffer area and allowed uses are specified for each. The shoreline environments are 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 U.S. Army Corps of Engineers.

The Shoreline Master Program provides more information on buffer size and function. The adopted buffers for each shoreline environment balance shoreline ecological function, human life and property protection (including future levee repair/reconstruction), existing land use patterns, and state and federal agency policies.

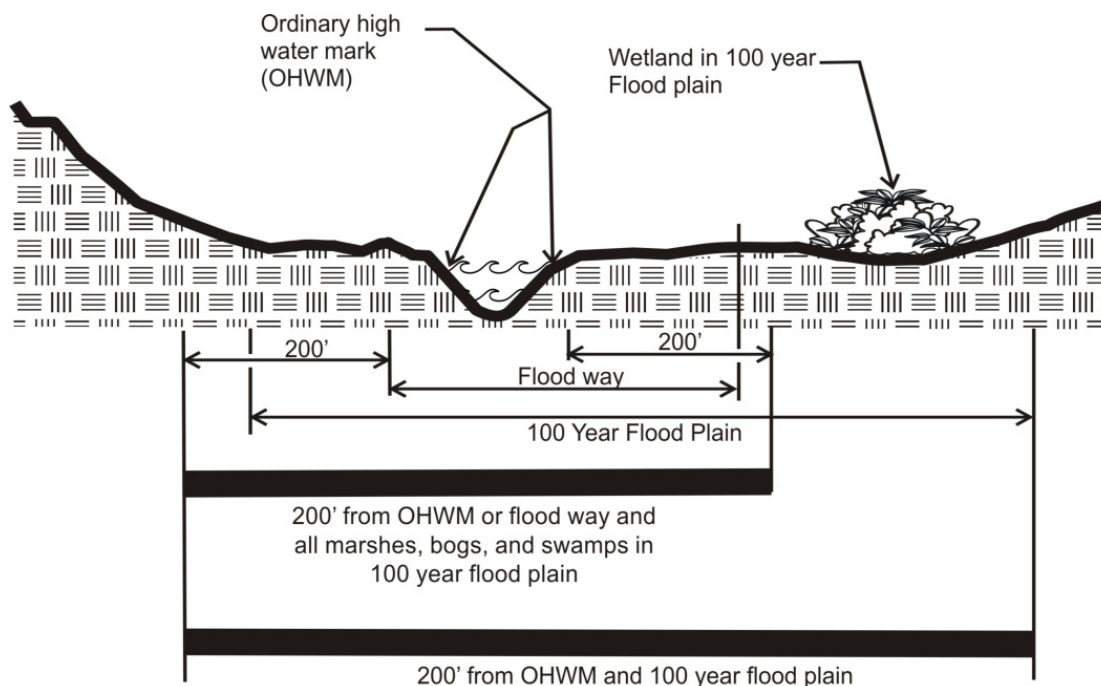


Figure 5-1: Shoreline Management Act Jurisdiction

Goal 5.1 Shoreline Environment Designations

Shoreline Environment designations that meet Washington State Shoreline Management Act requirements, and reflect local conditions and Tukwila's long-term vision for its shoreline. The shoreline zone generally extends for 200 feet on either side of the Ordinary High Water mark, consistent with the Washington State Shoreline Management Act (as illustrated in Figure 5-1).

Policies

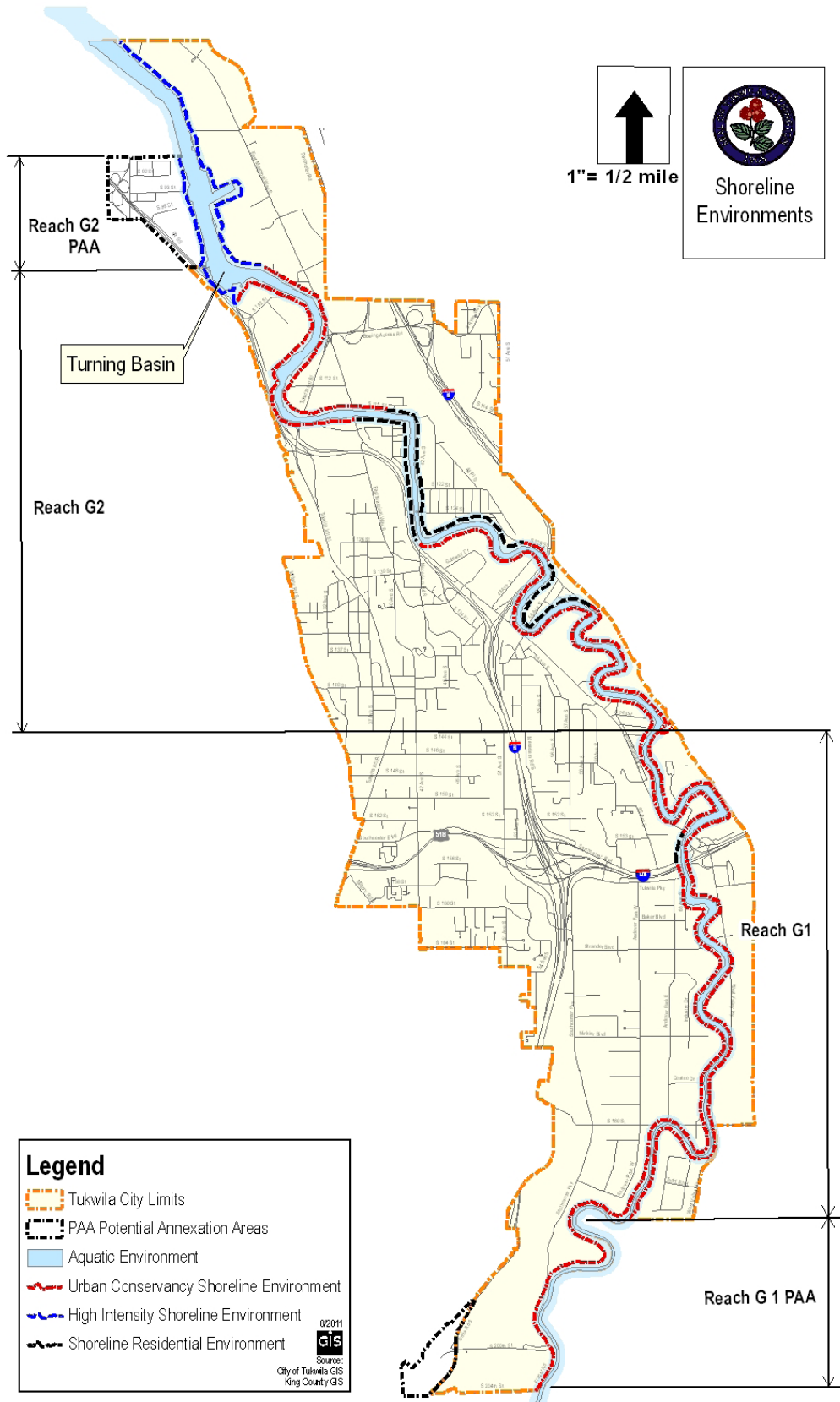
- 5.1.1 Shoreline Residential Environment. In the Shoreline Residential Environment, priority shall be given to the following:
- Uses that preserve or restore the natural character of the shoreline or promote preservation of vegetation, open space, flood plain or sensitive area lands; and
 - Development that is compatible with the natural and biological limitations of the land and water and that will not require extensive alteration of the shoreline or new "hard" structural shoreline stabilization. Where possible the removal of bulkheads, revetments, levees or other "hard" structural shoreline stabilization is required. Hard structural shoreline stabilization may be replaced with alternative bioengineered bank stabilization; and
 - On publicly owned property, water-dependent or water-related recreational activities that are compatible with the character of the shoreline residential areas.
 - Maintenance of existing single-family residential development patterns and public open space and recreation uses;
 - Residential and recreational development that promotes vegetation conservation and enhancement, sensitive areas protection, and maintenance of water quality to assure no net loss of shoreline ecological functions;
 - Residential and recreational development that contributes to the restoration of ecological functions over time in areas where ecological degradation has occurred.

5.1.2 Urban Conservancy Environment: In the Urban Conservancy Environment priority shall be given to the following:

- Development that promotes vegetation conservation and enhancement, sensitive areas protection, and preservation of water quality to assure no net loss of shoreline ecological functions.
- Water enjoyment uses
- Uses that remove shoreline armoring, unless required for a shoreline dependent use, and uses that prevent and/or minimize flood damage;
- Uses that preserve or restore shoreline ecological functions provided by vegetation, open space, flood plain or sensitive area lands;
- Uses that minimize interference with navigation and flood control, consider impacts to public views, and allow for the safe, unobstructed passage of fish and wildlife, particularly those species dependent on migration;
- Uses that provide public access and public recreation whenever feasible and when ecological impacts can be mitigated;
- Development that is compatible with the natural and biological limitations of the land and water that do not require extensive alteration of the shoreline or new shoreline stabilization, except for restoration projects.
- Uses that provide public access and public recreation whenever feasible and ecological impacts can be mitigated;
- Enhancement and restoration of ecological functions; and
- Redevelopment of underutilized areas and development of commercial and industrial activities where shoreline impacts are minimized and where there is no net loss of shoreline functions.

5.1.3 High Intensity Shoreline Environment: In the High Intensity Environment, priority shall be given to the following:

- Water dependent commercial and industrial uses;
- Development that promotes vegetation conservation and enhancement, sensitive areas protection, and preservation of water quality to assure no net loss of shoreline ecological functions.
- Uses that remove shoreline armoring, unless required for a shoreline dependent use, and uses that prevent and/or minimize flood damage;
- Uses that preserve or restore shoreline ecological functions provided by vegetation, open space, flood plain or sensitive area lands;
- Uses that minimize interference with navigation and flood control, consider impacts to public views, and allow for the safe, unobstructed passage of fish and wildlife, particularly those species dependent on migration;
- Uses that provide public access and public recreation whenever feasible and when ecological impacts can be mitigated;
- Development that is compatible with the natural and biological limitations of the land and water that do not require extensive alteration of the shoreline or new shoreline stabilization, except for restoration projects.
- Uses that provide public access and public recreation whenever feasible and ecological impacts can be mitigated;
- Enhancement and restoration of ecological functions; and
- Redevelopment of underutilized areas and development of intensive commercial and industrial activities where shoreline impacts are minimized and where there is no net loss of shoreline functions.



Map 5-1: Shoreline Environment Designations



The Aquatic Environment applies to areas below the Ordinary High Water Mark of a lake, stream, or marine water body.

- 5.1.4 Shoreline Aquatic Environment. In the Shoreline Aquatic Environment, priority shall be given to the following:
- Uses that preserve or restore the natural character of the shoreline or promote preservation of vegetation, open space, flood plain or sensitive area lands;
 - Water dependent uses;
 - Uses that remove shoreline armoring, unless required for a shoreline dependent use, and uses that prevent and/or minimize flood damage;
 - Uses that minimize interference with navigation and flood control, consider impacts to public views , and allow for the safe, unobstructed passage of fish and wildlife, particularly those species dependent on migration;
 - Uses that provide public access and public recreation whenever feasible and ecological impacts can be mitigated;
 - Development that is compatible with the natural and biological limitations of the land and water that do not require extensive alteration of the shoreline or new shoreline stabilization, except for restoration projects;

- Uses that provide public access and public recreation whenever feasible and ecological impacts can be mitigated;
- Enhancement and restoration of ecological functions; and
- Uses compatible with the adjoining shoreline environments.

Tukwila is located in the lower reach of the Green/Duwamish River watershed, which covers 482 square miles and includes over 93 river miles from the Cascade Mountains to Elliott Bay. The City's portion of the river covers approximately 13 river miles – as a result, the City's Shoreline Master Program recognizes that to be successful, protection and enhancement of shoreline resources is not only a City responsibility, but also a regional one. The City is a member of the Water Resource Inventory Area (WRIA) 9, which covers the Green/Duwamish River watershed, and has adopted the WRIA 9 Salmon Habitat Plan which identifies specific actions and restoration projects to improve salmon habitat.

Goal 5.2 Shoreline Planning and Management

Expanded value of the river as a community and regional resource through regional coordination of shoreline management programs and through programs that foster river appreciation and awareness, involving partnerships among businesses, schools, residents and government and community organizations.

Policies

- 5.2.1 Coordinate shoreline planning and management activities with other local jurisdictions and their plans such as the WRIA 9 Salmon Habitat Plan and the King County Flood Hazard Management Plan to establish region-wide consistency in addressing river issues with regional implications, such as economic development, public access, wildlife habitat, water quality control, and flood control.
- 5.2.2 Promote river stewardship and increase river awareness through actions which further shoreline goals, such as educational programs, community activities, and partnerships with Tukwila residents, businesses, schools, government, and community organizations.

- 5.2.3 Promote and participate in the implementation of the Watershed Resource Inventory Area (WRIA) 9 Plan, including supporting the recommended projects located in Tukwila to improve the habitat functions of the Green/Duwamish River, as well as the Plan policies and goals.

IMPLEMENTATION STRATEGIES

- WRIA 9 Salmon Habitat Plan
- Tukwila SMP Restoration Plan
- King County Flood Hazard Management Plan

An objective of the City's Shoreline Master Program, identified in the Issue section of this Chapter, is to allow continued and increased urban development in recognition of the City's role as a regionally significant industrial and commercial center, while also ensuring no net loss of shoreline ecological functions. The following policies address these objectives.

Goal 5.3 Land Development Use and Economic Vitality

Development along the shoreline that fosters the economic vitality of Tukwila while preserving the long-term benefits of the river.

General Policies

- 5.3.1 Implement shoreline design guidelines to:
- Encourage design that views the river as an amenity;
 - Guide the design of shoreline multiple uses;
 - Establish techniques for increasing shoreline multiple use;
 - Prioritize locations for uses; and
 - Encourage removal of invasive species with nonchemical methods and maintenance of native planted vegetation to minimize the presence of invasive species.

- 5.3.2 Design and locate all shoreline development to minimize impacts on areas identified as important for other river uses, such as wildlife and aquatic habitat, river vegetation, public access and recreation, historical resources, and flood control.
- 5.3.3 Allow structures to be placed in the water, or structural reinforcement of the riverbank, only when this provides a significant, long-term public benefit, does not interfere with navigation or flood management, does not cause a loss of shoreline function or is essential to a water-dependent use.
- 5.3.4 Prohibit the construction of new flood control facilities unless constructed to incorporate habitat restoration features and work to remove existing shoreline armoring – where possible – to restore habitat functions.
- 5.3.5 Recognize and promote the river’s contribution to the economic vitality of Tukwila, as a valuable amenity for existing and future businesses which depend on or benefit from a shoreline location.
- 5.3.6 Ensure that shoreline development does not diminish the commercial navigability of the river.

Tukwila Urban Center Development Policy

- 5.3.7 Design and locate shoreline development in the Tukwila Urban Center to encourage water enjoyment uses that:
- Provide for shoreline multiple uses that are consistent with the underlying zoning; and
 - Provide additional benefits, such as riverbank restoration, fishing piers, non-motorized boat launches, river views, or interpretive signs; and
 - Support public access to and along the shoreline; and
 - Provide water-enjoyment uses as a transition between the river and non-water uses; and

- Encourage efficient use of land through such techniques as clustering, mixed-use projects, cooperative parking or parking located under principal structures, and shared utility and access corridors.
- Ensure that new development and re-development in the Urban Center acknowledges the goal of a continuous street façade along Christensen Road and the riverfront and locates parking facilities to the interior of the lot.

IMPLEMENTATION STRATEGIES

- Shoreline Design Guidelines
- Development standards
- Tukwila Urban Center Plan

Policy for Development Outside the Tukwila Urban Center or MIC

- 5.3.8 Design and locate shoreline development outside of the Tukwila Urban Center and the MIC to:
- Provide for shoreline multiple uses; and
 - Provide water-enjoyment uses as transitions between the river and non-water-dependent uses; and
 - Encourage efficient use of land through such techniques as clustering, mixed-use projects, cooperative parking or parking located under principal structures, and shared utility and access corridors.
 - Treat the river as an amenity in the design and location of the project

Policy for Development Outside the Tukwila Urban Center or MIC

- 5.3.9 Ensure that non-water dependent shoreline development in the MIC provides for shoreline multiple uses to the extent that site security and the success of industrial operations are not jeopardized, ensures no net loss of shoreline function and provides adequate mitigation for loss of shoreline multiple use opportunities.

- 5.3.10 Allow opportunities for commercial and recreational marinas to locate in Tukwila downstream of the turning basin, where compatible with existing and future navigability and existing and future ecological restoration projects.

Goal 5.4 Private Property Rights

Protect rights of property owners to reasonable use and enjoyment of private property through appropriate location, access to, and design of shoreline uses.

Policies

- 5.4.1 Design, locate and manage shoreline uses in a manner which maintains reasonable use and enjoyment of private property.
- 5.4.2 Design and locate public access in a way that is appropriate for the site, depending on site conditions and private property concerns.

IMPLEMENTATION STRATEGIES

- River design guidelines
- River access guidelines
- Shoreline development standards

- 5.4.3 Special sensitivity is required for residential property; therefore, all single-family residential development of four or fewer single-family residential lots is excluded from requirements to provide private or public access. Single family property owners are not exempt from the responsibility to improve the habitat value of the shoreline environment.
- 5.4.4 Maintain flexibility in methods of obtaining access, to allow for different site conditions and private property concerns that might conflict with access, such as privacy, safety, and security.

- 5.4.5 Obtain additional easement area to permit the improvement of river habitat by setting back levees or removing revetments and other hard shoreline armoring and replacing with more habitat-friendly shoreline treatment.

IMPLEMENTATION STRATEGY

- Shoreline design guidelines

Goal 5.5 Shoreline Design Quality

Enhanced identity of the river as a unique community asset through high-quality development and public activities that reflect Tukwila's history and sense of community pride.

Policies

- 5.5.1 Require that shoreline development outside of the MIC:
- Ensures no net loss of shoreline function; and
 - Is designed to be consistent with Tukwila river design guidelines; and
 - Reflects principles of high-quality design in such areas as site planning, architecture, and landscaping; and
 - Includes setbacks, bulk, height, density, landscape buffers, and provisions for open space that enhance the shoreline environment.

IMPLEMENTATION STRATEGIES

- River design guidelines
- Shoreline development standards
- Tukwila Urban Center Plan



Tukwila's Manufacturing/Industrial Center is an important regional industrial center located along the Duwamish River.

- 5.5.2 Require that shoreline development in the MIC:
- Is designed to be consistent with Tukwila shoreline design guidelines; and
 - Maintains or enhances the existing visual quality along the river; and
 - Provides trees and other landscaping to buffer industrial uses that are incompatible with other river uses; and
 - Provides amenities that enhance enjoyment of the river by employees.

IMPLEMENTATION STRATEGY

- Shoreline design guidelines
- Shoreline development standards

Public access to 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 recreation.

In addition to the Green River Trail, which runs along much of the length of the river through the City, Tukwila is fortunate to have a number of other public access sites along the river. The following goals and policies support preserving existing public access sites and providing additional public access to the river. To support implementation of these goals and policies, the City's development regulations include incentives for private development projects to provide public access to the shoreline.



Shoreline trails provide important public access opportunities for Tukwila residents.

Goal 5.6 Access and Recreational Use

Increase the amount and diversity of opportunities for public recreation and access to and along the river, including visual and cultural access, access to the water's edge, opportunities for small boat navigation and access, and connections to other neighborhoods consistent with the shoreline character.

General Policies

- 5.6.1 Retain and improve areas identified as important in the network of public access to the river, including cross-town connections, former railroad rights-of-way and unimproved street-end rights-of-way, historic sites, unique natural features, or other areas valuable for their interpretive potential.

- 5.6.2 Maintain existing parks along the shoreline and acquire additional park land to increase access and recreation opportunities.
- 5.6.3 Incorporate river access requirements to guide the design, location, and management of shoreline public access in short plats over 4 lots and all subdivisions as well as multi-family, commercial and industrial development; to identify types of access appropriate and feasible for various site conditions and locations; and to establish strategies, funding sources, and priorities for acquisition and enhancement of shoreline public access.

IMPLEMENTATION STRATEGIES

- Shoreline design guidelines
- Shoreline public access guidelines
- Shoreline development standards
- Walk and Roll Plan
- Parks and Open Space Plan

- 5.6.4 Design, locate and manage public access for diverse types and variable levels of intensity, in order to minimize impacts on vulnerable features of the natural environment and to minimize conflicts with private property uses.
- 5.6.5 Where shoreline development provides public access areas, reserve such areas through the means most appropriate for the type, scale, and impacts of the development, such as donation or sale of an easement or right-of-way to the City.
- 5.6.6 Support the implementation of the King County Green River Trail, per the existing King County Green River Trail Master Plan as well as pedestrian/bicycle connections with the Trail from properties on the opposite bank and the expansion of this Trail where appropriate.

Policies for Development Outside MIC

- 5.6.7 Require subdivisions, multi-family residential uses and commercial and industrial uses along the shoreline to provide a trail for public access along the river in areas identified for trail connections, consistent with the King County Green River Trail Master Plan, Shoreline Master Program or any other approved access plan. Require any property not included in the King County Green River Trail Plan to provide public access or a private natural area in lieu of physical public access.

IMPLEMENTATION STRATEGIES

- King County Green River Trail Master Plan amendment
- Shoreline public access standards
- Walk and Roll Plan
- Parks and Open Space Plan

- 5.6.8 Where shoreline public access is provided, ensure that it is designed to be safe and convenient and includes access amenities such as benches, drinking fountains, public parking areas, handicapped access, and appropriate lighting, consistent with the shoreline access guidelines.

IMPLEMENTATION STRATEGIES

- Shoreline access guidelines
- King County Green River Trail Master Plan
- Walk and Roll Plan
- Parks and Open Space Plan

- 5.6.9 Except for single-family residential development of four or fewer single-family residential lots, shoreline developments shall maintain views of the water from the shoreline and from upland areas, through appropriate design of building height, bulk and modulation, windows, breezeways, and outdoor spaces.

IMPLEMENTATION STRATEGY

- Shoreline design guidelines

- 5.6.10 Public access improvements should be designed and constructed to:
- Look and “feel” welcoming to the public;
 - Connect to public areas, street ends, and other pedestrian or public through fares;
 - Enhance the character of Tukwila;
 - Avoid conflicts with water-dependent uses;
 - Provide for public safety and minimize impacts to private property and individual privacy and security;
 - Require a low level of operation and maintenance;
 - Ensure that construction (i.e. structures and access pathways) incorporates environmentally sensitive design and materials (e.g., non-toxic, natural materials)
- 5.6.11 Improve pedestrian connections between the river, Green River Trail and the Urban Center’s commercial, office and residential uses.

Policies for Development in MIC

- 5.6.12 For MIC properties included in the King County Green River Trail Master Plan, require shoreline development to provide a trail for public access along the river.

- 5.6.13 Where shoreline public access is provided, ensure that it is designed to be safe and convenient and includes access amenities such as benches, drinking fountains, public parking areas, handicapped access and appropriate lighting, consistent with the river access guidelines.
- 5.6.14 For MIC properties not included in the King County Green River Trail Plan, require shoreline development to provide public access or a private natural area in lieu of public access, or otherwise mitigate the loss of public access.

IMPLEMENTATION STRATEGIES

- Shoreline design guidelines
- Shoreline access guidelines
- Walk and Roll Plan
- Parks and Open Space Plan

Goal 5.7 Transportation Within the Shoreline Zone

Safe corridors and amenities for pedestrians, cyclists, and users of public transportation, allowing more citizens to access and enjoy the river.

Policies

- 5.7.1 Design and locate transportation uses within the shoreline jurisdiction to be compatible with shoreline vegetation or other habitat features, turn-outs or parking areas for public access, boat ramps, biofiltration swales to protect water quality, public art, or interpretive signs.
- 5.7.2 Ensure that transportation uses within the shoreline jurisdiction and within those corridors identified as river cross connections provide safe, convenient, and attractive pedestrian, bicycle and boater access and facilities for public transportation.

- 5.7.3 Minimize transportation impacts on the natural environment (such as noises, odors, and air or water pollution) and enhance the natural environment wherever possible through planting trees and other habitat features.
- 5.7.4 Encourage maintenance of the river's navigability up to the turning basin, where this achieves a greater public interest and a balance between costs and benefits to the broader community and impacts to the habitat functions of the river, in recognition of the historical significance of navigation and its importance to the economic vitality of water-dependent uses and the MIC.

Goal 5.8 Historical Resource Use

Recognition of the river's contribution to Tukwila history and community identity through identification, enhancement, restoration, and protection of sites with historic and cultural value and through development of interpretive and educational programs.

Policies

- 5.8.1 Ensure that shoreline development reflects the river's important role in Tukwila history and that long-term public use of the river as a historical resource is protected by providing for the identification, protection, and interpretation of unique historic and archaeological features.
- 5.8.2 Ensure that public shoreline development reflects the river's natural features and community traditions.
- 5.8.3 Ensure that archaeological artifacts and sites are protected when development takes place in the shoreline jurisdiction.

The Green/Duwamish River has undergone extensive modifications in the past to reduce channel migration and limit the extent and duration of valley flooding by constructing levees and revetments. These modifications to the river system have negatively impacted ecological

functions, including hydrology, water quality, riparian habitat and in-stream habitat. River flows have been modified by dam construction, stream diversion, and urban development. River management and levees have reduced the connection between the rivers and their floodplains, changing the spatial extent of habitat, 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 has a negative impact on riparian and aquatic habitats. The following goals and policies seek to improve the ecological function of the river system.

Goal 5.9 Natural Environment and Habitat Use

Restored, enhanced, and protected natural environmental resources along the river, including trees, wildlife habitat, and features with value for long-term public, scientific, and educational uses.



Aerial view of North Winds Weir Off-Channel Habitat (photo courtesy of WRIA 9)

Policies

- 5.9.1 Ensure that shoreline development results in no net loss of shoreline ecological function, minimizes impacts on wildlife and that significant vegetation, sandbars, wetlands, watercourses, and other critical areas identified as important for habitat are maintained through the proper location, design, construction, and management of all shoreline uses and activities.
- 5.9.2 Ensure that shoreline development and activities protect riverbank vegetation and, where feasible, restore degraded riverbanks in accordance with the vegetation management provisions of the Shoreline Master Program, in order to minimize and compensate for impacts on fish and wildlife habitat.
- 5.9.3 Mitigate unavoidable disturbances of significant vegetation or habitat through replacement of habitat and provision of interpretive features consistent with the shoreline access guidelines.
- 5.9.4 Support relief from certain Shoreline Master Program requirements for properties affected by habitat restoration projects that result in the movement of the ordinary high water mark.
- 5.9.5 Support establishing the Transition Zone as the priority area for habitat restoration projects given its importance for subtidal and intertidal habitats to allow salmonids to gradually adjust to the change between fresh and saltwater conditions.

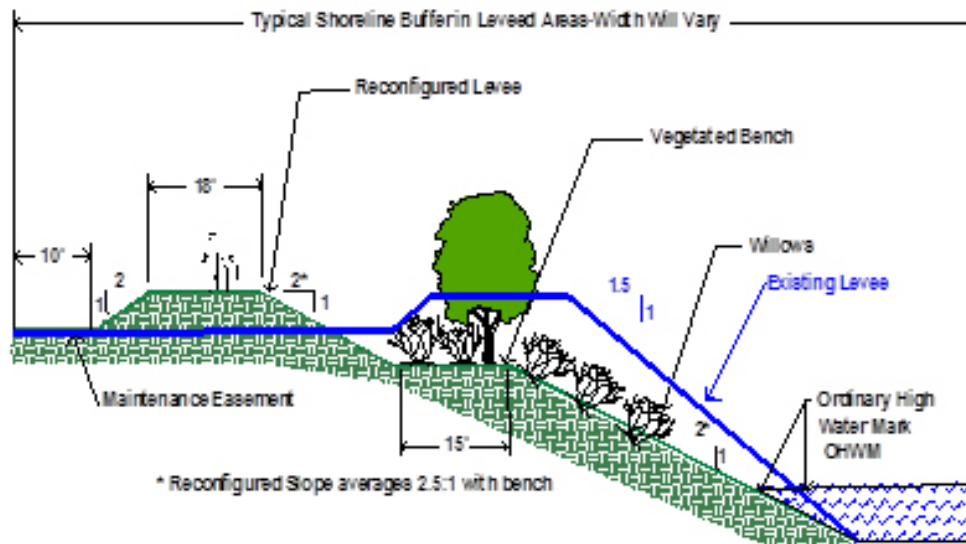
A system of levees and revetments have been constructed along a major portion of the river in Tukwila. The City has adopted a minimum levee profile to promote river bank stability, protect structures, and enhance shoreline ecological functions. The minimum levee profile incorporates a mid-slope bench that provides a wider river channel to accommodate higher flows during storm events and allows planting of native vegetation to improve habitat functions. The vegetation on the mid-slope bench will also reduce the speed of water flows during storm events.

Goal 5.10 Water Quality, Surface Water, and Flood Control Use

Improved water quality and quantity control programs affecting the Green/Duwamish River that improve the river's water quality, provide habitat for fish and wildlife, protect public health and safety, and enhance public enjoyment of the river.

Policies

- 5.10.1 Design, locate, and manage shoreline development including streets, flood control projects, surface water drainage and sewer systems, clearing and grading activities, and landscaping in a manner that minimizes opportunities for pollutants to enter the river, provides erosion control, and otherwise protects water quality.
- 5.10.2 Design, manage, and mitigate flood control uses to minimize impacts on other shoreline uses such as trees and riverbank vegetation, public access and recreation, and fish habitat; and set them back from the river, where feasible for the project, with land areas between the water and the levee set aside as open space for public recreation or wildlife habitat.
- 5.10.3 Consistent with project feasibility, mitigate unavoidable negative impacts on other shoreline uses owing to flood control uses through such measures as restoration of trees and native riverbank vegetation, provision of public access to the water's edge, interpretive features, or other mitigation of loss of opportunities for shoreline multiple uses.
- 5.10.4 Obtain additional easements, where needed, from property owners to set back levees to improve flood control and shoreline habitat functions. Where possible, as redevelopment occurs, replace bulkheads, revetments or other hard bank stabilization with more natural levees, riverbanks or other shoreline treatments, to improve flood control, ecological functions and habitat.



Minimum Levee Profile

Not To Scale

Proposed profile for reconfigured levees.

IMPLEMENTATION STRATEGIES

- Where possible, increase levee setback
- Shoreline access guidelines
- Surface Water Management Plan
- WRIA 9 Plan water quality policies

Goal 5.11 Public Health, Safety, and Welfare

Shoreline uses that do not endanger public health, safety, and welfare or the capacity of the river to provide long-term benefits and resources to the community.

- 5.11.1 Design, locate, and manage shoreline uses, such as capital improvement projects and private development, in a manner that does not endanger public health, safety and welfare, and enhances the capacity of the river to provide long-term benefits and resources to the community.