City of Edmonds

Shoreline Master Program Update

Cumulative Impacts Analysis

1. Introduction

The Washington State Shoreline Master Program Guidelines state that local Shoreline Master Programs (SMPs) are required to "evaluate and consider" the cumulative impacts of reasonably foreseeable future development on shoreline ecological functions and other shoreline functions promoted by the Shoreline Management Act (SMA). The guidelines further state that "to ensure no net loss of ecological functions and protection of other shoreline functions and/or uses, master programs shall contain policies, programs, and regulations that address adverse cumulative impacts and fairly allocate the burden of addressing cumulative impacts among development opportunities."

Specifically, the guidelines state that the evaluation of cumulative impacts should consider:

i. current circumstances affecting the shorelines and relevant natural processes;
ii. reasonably foreseeable future development and use of the shoreline; and
iii. beneficial effects of any established regulatory programs under other local, state, and federal laws.

Additionally, the guidelines indicate that an appropriate cumulative impact analysis (CIA) will also consider the effects of unregulated activities and development exempt from permitting on shoreline ecological functions and other shoreline functions and uses. Also, the guidelines indicate that particular attention should be paid to policies and regulations concerned with the platting or subdividing of property, laying of utilities, and mapping of streets that establish a pattern for future development.

Finally, the guidelines note that methods for determining reasonably foreseeable future development may vary depending on local circumstances, including demographic and economic characteristics as well as the nature and extent of shorelines.

2. Current Circumstances Affecting the Shorelines and Relevant Natural Processes

The City of Edmonds (the City) Shoreline Inventory and Characterization describes in-depth the current circumstances affecting the City's shorelines and relevant natural processes. For planning purposes, that document divided up the City's shorelines into four distinct reaches (Figure 2 – Shoreline Planning Segments & Planning reaches form the Shoreline Inventory and Characterization is included with this document for ease of use). The first three reaches are continuous and together cover the City's shoreline situated along Puget Sound. The fourth reach consists of the City's shoreline along Lake Ballinger. This section begins with a brief description of each of those four reaches and reproduces the list of biological functions and features that have been impaired in each

reach as found in the Shoreline Inventory and Characterization (section 8). Then, a summary discussion regarding the ecological functions at risk is provided.

Reach Descriptions and Impaired Biological Functions and Features

Reach 1
Reach 1 encompasses the section of the City's shoreline along Puget Sound that begins at the City's northern limits (in the Lund's Gulch area) and extends south to Caspers Street. This reach is approximately 19,351 feet in length, and therefore makes up approximately 64% of the City's shoreline jurisdiction. A defining feature of this reach is the pair of Burlington Northern Santa Fe (BNSF) railroad tracks that run parallel to the shoreline in the upper portion of the beach. Because of the tracks, the entire shoreline in this reach is armored with rock walls. Waterward of the tracks, the beach is generally narrow, steep, and made up of coarse substrate. Landward of the tracks, the land generally slopes upward before flattening out. Several creeks flow down these slopes before flowing into Puget Sound via culverts. This reach has little riparian vegetation.

As mentioned, a primary use of the shoreline in Reach 1 is rail transportation. The other principal land use in this reach is single-family housing, which is situated on the uplands above the beach.

In the Shoreline Inventory and Characterization (section 8.1), the following biological functions or features of this shoreline reach are listed as being impaired:

- Fish and wildlife accessibility between the marine nearshore and the terrestrial backshore: blocked by the BNSF railroad bed and restricted to a few small culverts
- Nutrient transport and cycling: reduced by clearing vegetation from the backshore and bulkheading/filling of the upper intertidal zone and backshore, and further reduced by restricting the estuarine transitional area to small-diameter culverts that impound creek flows and block detritus and woody debris from moving between the ravine and the beach
- Estuarine and creek-mouth habitat area: significantly reduced, and habitat function, significantly impaired
- Marine riparian vegetation: eliminated by railroad fill or cleared for right-of-way maintenance and upland residential views
- Beach substrate composition and slope: coarsened and steepened by erosion and lack of replenishment from upland or aquatic sources
- Longshore drift: altered by in-water structures (seawalls, bulkheads, culverts, and a pier) that prevent sediment from naturally recruiting to the beach

For more detailed information on the current circumstances of Reach 1, see the Shoreline Inventory and Characterization (sections 7.1-7.5).

Reach 2
Reach 2 consists of the section of the City's shoreline along Puget Sound to the south of Caspers Street and to the north of Main Street. The length of this section of shoreline is approximately 2,253 feet, and therefore comprises roughly 7% of the City's shoreline jurisdiction. The BNSF tracks continue to be a defining feature in this reach. Because of their presence, most of this reach is armored with rock walls. The slope landward of the tracks is generally more moderate than in Reach 1. No streams are found in this reach. Riparian vegetation is scant throughout the reach.

As in Reach 1, the major uses of this reach are rail transportation and single-family housing. Another significant use of the shoreline in this reach is public recreation, due to the presence of Brackett's Landing North (Edmonds Underwater Park).

In the Shoreline Inventory and Characterization (section 8.2), the following biological functions or features of this shoreline reach are listed as being impaired:

- Fish and wildlife accessibility between the marine nearshore and the terrestrial backshore: blocked by the BNSF railroad bed and urban development
- Upper intertidal and adjacent terrestrial habitat: degraded or lost due to urban development
- Nutrient transport and cycling: reduced by clearing vegetation from the backshore and bulkheading/filling of the upper intertidal zone and backshore
- Marine riparian vegetation: eliminated by railroad fill or cleared for right-of-way maintenance and upland residential views
- Longshore drift: altered by in-water structures (Washington State Ferries pier and seawall, groin at Brackett's Landing North) that prevent sediment from naturally recruiting to the beach

For more in-depth information on the current circumstances of Reach 2, see the Shoreline Inventory and Characterization (sections 7.5-7.6).

Reach 3
Reach 3 extends south of Main Street to the City's southern limits (at Point Edwards). It is approximately 4,716 feet in length, and therefore includes approximately 16% of the City's shoreline jurisdiction. Major features in this reach include the Washington State Ferries pier, the Port of Edmonds Marina, and the Unocal pier. The shoreline in this reach is mostly armored. The transition from the shore to uplands is marked by little or no bank. Some creeks and a major wetland (Edmonds Marsh) occur in this reach. Little riparian vegetation is present.

Land uses in this reach are more varied than in Reaches 1 and 2. Land uses include parks, transportation, commercial, and natural resource production.

In the Shoreline Inventory and Characterization (section 8.3), the following biological functions or features of this shoreline reach are listed as being impaired:

- Fish and wildlife accessibility between the marine nearshore, Edmonds Marsh, and the terrestrial backshore: blocked by the BNSF railroad bed, Edmonds Marina, and commercial waterfront development, restricted to a paved corridor and culvert between Edmonds Marsh and South Marina Park
- Nutrient transport and cycling: significantly reduced by clearing vegetation from the backshore and bulkheading/filling of the upper intertidal zone and backshore, and further reduced by restricting the estuarine transitional area to a small-diameter culvert and tide gate on Willow Creek that impounds creek flows and blocks detritus and woody debris between the marsh and the beach
- Estuarine and creek-mouth habitat area: significantly altered and reduced, and habitat function, significantly impaired
- Marine riparian vegetation: eliminated by port development, commercial development, and railroad fill, and cleared for right-of-way maintenance and upland residential/commercial views
- Beach substrate composition and slope: coarsened and steepened by erosion and lack of replenishment from upland or aquatic sources
- Longshore drift: altered by in-water structures (seawalls, bulkheads, culverts, and the former Unocal pier) that prevent sediment from naturally recruiting to the beach

For more in-depth information on the current circumstances of Reach 3, see the Shoreline Inventory and Characterization (sections 7.6-7.8).

Reach 4

Reach 4 consists of the City's shoreline along Lake Ballinger, which is located on the western and southern sides of the lake. The length of this reach is around 3,947 feet, and therefore constitutes approximately 13% of the City's shoreline jurisdiction.

Land use in Reach 4 consists of single-family housing. Nearly all the houses in this reach have an accompanying dock or pier. Riparian vegetation consists almost entirely of lawns and ornamental plantings.

In the Shoreline Inventory and Characterization (section 8.4), the following biological functions or features of this shoreline reach are listed as being impaired:

- Hydrologic function of the lake outlet, which is currently managed as a stormwater catchbasin control

- Hyporheic function, which has reached its capacity as a nutrient sink for nitrogen and phosphorus

- Nutrient transport and cycling, significantly reduced by increasing sediment and nutrient loading from watershed development, stormwater runoff, and former septic/sewage inputs; replacing native wetland and riparian vegetation with ornamental vegetation (e.g., grass) and adding bulkheads, docks, and piers to the shoreline

- Lake inlet and outlet deltas, significantly altered or eliminated by control structures

- Fish and wildlife accessibility between the lake and McAleer Creek, blocked by the outlet control structure

- Fish and wildlife biological communities, significantly altered by habitat alteration (i.e., conversion of a wetland into a lake) and introduction of non-native species (e.g., catfish, yellow perch, and largemouth bass)

- Lake sediment, significantly altered by substantial sediment inputs from urban development within the Hall Creek and Lake Ballinger drainage sub-basins

For more in-depth information on the current circumstances of Reach 4, see the Shoreline Inventory and Characterization (section 7.9).

Summary Discussion – Ecological Functions at Risk

As discussed above, several functions and features of the City's shorelines are impaired. This section briefly summarizes the at risk ecological functions of the City's shorelines.

Puget Sound shorelines (in reaches 1, 2, & 3)

- Sedimentation – The sedimentation processes of these shorelines are significantly degraded. The presence of the railroad bed prevents upland sediment from reaching the beach and resulting in its coarse substrate and steep slope. Also, in-water structures prevent longshore drift sediment from recruiting to the beach.

- Habitat provision – This function of the shoreline is diminished due to a loss of habitat related to construction of the railroad bed, vegetation clearing, and uplands development. Moreover, access between the marine nearshore and the terrestrial backshore is impaired due to the presence of the railroad bed, and for aquatic organisms, the presence of small artificial connectors.

- Nutrient transport and cycling – This function is degraded due to the clearing of backshore vegetation, bulkheading/filling of the upper intertidal zone and backshore, and restricted estuarine transitional areas.

- Woody debris production and distribution – Production is degraded due to vegetation clearing and uplands development. Distribution is degraded due to the bulkheading/filling of the upper intertidal zone and backshore, and the limited estuarine transitional areas.

Edmonds Marsh (in reach 3)

- Habitat provision – This function of the Edmonds Marsh is diminished due to prior wetland filling and creek re-channelization. The value of the remaining habitat is diminished because of the reduced access resulting from the presence of the railroad bed, Edmonds Marina, and commercial waterfront development in between the marsh and the shoreline, as well as from the restriction of aquatic access to a single artificial culvert.

- Water quality function – Altered due to the presence of tide gate, which causes the marsh to be brackish in the winter and saline in the summer (when the tide gate is opened).

- Nutrient transport and cycling – Reduced due to the restricted estuarine transitional area between the marsh and Puget Sound.

- Woody debris production and distribution – Reduced due to the restricted estuarine transitional area between the marsh and Puget Sound.

Lake Ballinger (reach 4)

- Nutrient transport and cycling – Significantly reduced by sediment and nutrient loading, stormwater runoff, former wastewater inputs, vegetation alteration, and the presence of artificial shoreline structures.

- Hydrological function – Significantly altered by the stormwater control system.

- Habitat provision – Significantly altered by the stormwater control system, which has converted the former wetland into a lake, altered or eliminated inlet and outlet deltas, and blocked fish passage between the lake and McAleer Creek. Habitat has also been altered by the introduction of non-native species.

- Water quality function – Reduced by sediment, contaminant, and nutrient inputs.

3. Reasonably Forseeable Future Development and Use of the Shoreline

In this section, the reasonably foreseeable future development and use in each of the four reaches is described. Next, some additional remarks regarding the reasonably foreseeable future development and use in the City are given. Then, the cumulative impacts that might potentially result from actions related to the reasonably foreseeable development and other shoreline alterations are presented in a tabular format. The table lists the

alterations with potential cumulative impacts, lists the ecological functions and processes at risk, gives the shoreline reaches at risk, provides mitigating draft SMP policies and regulations, and finally provides some possible non-regulatory mitigation measures. In the final part of this section is a discussion of the modifications made to regulations as a result of this CIA.

Reasonably Foreseeable Future Development and Use

Reach 1
As mentioned in the previous section, land use in Reach 1 consists primarily of the BNSF railway and the single-family housing landward of the tracks. Due to the failing condition of the railroad armoring in many locations, it is likely that portions of it may be repaired in the future.

Regarding the single-family housing in the uplands, the 2006 City of Edmonds Comprehensive Plan designates the land in this area as Single Family—Resource. The corresponding zoning is either Single Family, 12,000 square foot lots or Single Family, 20,000 square foot lots. While it is possible that a minimal number of the 190 or so existing residential parcels in the shoreline jurisdiction might be further subdivided, the comprehensive plan designation and zoning regulations would prevent any dramatic increase in development intensity. It is also worth mentioning that BNSF ownership and use of the railroad right-of way precludes the construction of residential docks in this area and negates the need for these residences to construct their own bulkheads. Activities related to vegetation (such as clearing) would be expected to continue on these residential parcels.

Development in the far north of the City, in the Lund's Creek area, is prevented by the Meadowdale Beach County Park. Although this park is currently zoned as Single Family, 20,000 square foot lots, this land is designated as Park in the City's comprehensive plan.

Waterward of the railroad tracks, a small section of land where the dilapidated Laebugten's Wharf now stands is designated in the comprehensive plan as Mixed Use Commercial and correspondingly zoned Commercial Waterfront. In the future, it is likely that Laebugten's Wharf will be removed. However, it is unlikely that any new structures would be permitted at this site. Additionally, waterward of the railroad tracks several parcels have been platted. However, these parcels are non-buildable.

Reach 2
As in Reach 1, the BNSF railway is a major feature of this reach. To accommodate the future expansion of commuter trains operated by Sound Transit, BNSF plans to construct a second railroad track in the parts of this reach that feature just one track. Also, due to the failing condition of the railroad armoring in a few locations, it is possible that portions of it may be repaired.

The bulk of the developable parcels in Reach 2 are designated as Single Family—Urban 1 in the comprehensive plan. These parcels are correspondingly zoned Single Family,

6,000 square foot lots. These lots are virtually built out. Development activity would therefore consist primarily of structure remodel or replacement. As was the case with the single-family residences in reach 1, BNSF ownership and use of the railroad right-of way precludes the construction of residential docks in this area and negates the need for these residences to construct their own bulkheads. Activities related to vegetation (such as clearing) would be expected to continue on these residential parcels.

A small number of parcels in Reach 2 are designated by the comprehensive plan as Downtown Mixed Commercial and Downtown Residence—Office and zoned Downtown Mixed Commercial and Office—Residential, respectively. There parcels are already are for the most part already intensely developed and future development will largely be restricted to structure remodel or replacement.

Waterward of the railroad, the area around Brackett's Landing North is designated by the comprehensive plan as Park/Open Space and zoned Public Use. Thus, development in this area is precluded. And while a small portion of the shoreline waterward of the tracks is platted and zoned Waterfront Single Family, 12,000 square foot lots, this is not a development concern because the land is non-buildable.

Reach 3
Reach 3 comprehensive plan designations include Park/Open Space, Shoreline Commercial, Master Plan Development, and Multi Family—High Density. These areas are correspondingly zoned Public Use, Open Space, Commercial Waterfront, Master Plan Hillside Mixed Use, and Multi Family, 2,400 square feet of lot area per unit.

This reach will likely see intense development and redevelopment activity in the near future. One of the major sources of this development activity will be the Edmonds Crossing project. This project is an effort to provide a long-term solution to current operation and safety conflicts in the downtown area for ferry, rail, automobile, bus, and pedestrian transportation modes. Part of this effort is the proposed move of the existing ferry terminal to a location further south and its conversion into a multimodal transportation complex. State Route 104 would be rerouted to serve the new complex.

Several other development actions may occur in this reach as well. As was the case in Reach 2, BNSF is planning to install a second railroad track in areas where only one track currently exists. Also, the Port of Edmonds is considering several projects involving the construction, renovation, and removal of buildings and facilities. Such development projects are likely to in turn spur other new development projects in the vicinity.

Reach 4
As already mentioned, land use in Reach 4 consists of single-family housing and associated infrastructure. The City's comprehensive plan designates the 49 or so parcels in this reach as Single Family—Resource. All these parcels are correspondingly zoned Waterfront Single Family, 12,000 square foot lots. These parcels are virtually built out. Development activity in this reach would be limited to the remodel or replacement of

existing houses and ancillary structures (such as docks). Activities related to vegetation (such as clearing) would be expected to continue on these residential parcels.

Additional Remarks on Reasonably Foreseeable Future Development and Use

On activities exempt from shoreline permits
Some of the reasonably foreseeable development activity in the City would be exempt from shoreline permits. This is because the SMA exempts from shoreline permitting several development actions including: single-family residences, normal protective bulkheads of single-family residences, normal maintenance and repair of existing structures, salt water docks worth less than $2,500, fresh water docks worth less than $10,000, and emergency construction.

However, because of a variety of constraints, not much development of entirely new structures exempt from shoreline permits is expected. The most significant constraint is the BNSF railway, which precludes many of the parcels along the Puget Sound shoreline from developing docks or bulkheads.

Therefore, it is likely that most of the exempt development activity would be limited to work related to the repair or replacement of existing structures. However, development activity related to existing structures is not expected to produce adverse cumulative impacts due to the beneficial effects of other regulatory programs (see section 4), such as the critical areas code.

As an additional note on exempt shoreline development activities, of growing concern in the Puget Sound area is the increased intensity of use of residential lots (through the remodel and replacement of existing residences). However, in the City of Edmonds, such increased intensity of use is not currently foreseeable. This is because development standards in the shoreline area have not recently been amended. For example, maximum lot coverage (an important determinant of impervious surface area) remains unchanged at 35%. Moreover, at least several of the houses in the shoreline jurisdiction are located in portions of parcels outside of the shoreline jurisdiction.

In sum, exempt shoreline development is expected to be minimal, and whatever activity might occur will be subject to other regulations. Therefore, development activities exempt from shoreline permits are not expected to result in a net loss of shoreline ecological function.

On the establishment of future development patterns
As noted in the beginning of this document, the Washington State SMP Guidelines indicate that particular attention should be paid to policies and regulations concerned with the platting or subdividing of property, laying of utilities, and mapping of streets that establish a pattern for future development. Of these factors, as discussed above, the subdivision of property will likely be the only factor contributing to the future development pattern in the shoreline area. However, any subdivision activity is expected

to be minimal, and therefore should not result any development pattern markedly different from the existing pattern.

CUMULATIVE IMPACTS ANALYSIS TABLE				
Shoreline Alterations with Potential Cumulative Impacts	**Ecological Processes and Associated Functions at Risk**	**Shoreline Resources at Risk**	**Mitigating Draft SMP Policies and Regulations (selected regulation excerpts included)**	**Possible Non-Regulatory Mitigation Measures**
Alteration: Placement/Replacement of shoreline armoring Potential Cumulative Impacts: Loss of beach areas, impoundment of sediment, modification of groundwater regimes, lowering of beach elevations, concentration and redirection of wave energy to adjacent areas, alteration of substrate, loss of riparian vegetation	Process: Wave action Functions: Sediment erosion, deposition, and transport; turn over of thermal stratification Process: Large woody debris production and distribution Functions: Shoreline stabilization, habitat provision, water flow pattern complexity, food production Process: Sedimentation Functions: Land formation, provision of nutrients and	Puget Sound shorelines (reaches 1, 2, & 3) Lake Ballinger (reach 4)	Policies: *Shoreline use element:* 24.20.050.C.15 The rehabilitation of "natural systems" (e.g. the improvement in water quality, removal of beach obstructions, etc.) should be encouraged when opportune. *Conservation element:* 24.20.060.C.2 Development in shoreline areas should be managed so that any adverse impacts on aquatic and land plants and animals are avoided or mitigated to result in no net loss of ecological function. *Restoration element:* 24.20.110.C.1 Protect and/or restore freshwater, nearshore, and estuarine habitat and habitat-forming processes. *General Modification Policies* 24.50.010.A.1 Locate and design all new development in a manner that prevents or minimizes the need for shoreline modifications. 24.50.010.A.2 Ensure that shoreline modification, where permitted, are as	Encourage the use of low impact development techniques.

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	minerals Process: Nutrient Transport and Cycling Functions: Provision of nutrients, provision of water quality		compatible as possible with natural shoreline processes and character. 24.50.010.A.3 Regulate shoreline modifications to assure that modifications individually and cumulatively do not result in a net loss of ecological functions. Mitigation may be required to meet the no net loss standard. 24.50.010.A.4 Give preference to those types of shoreline modifications that have a less impact on ecological functions and require mitigation of identified impacts resulting from shoreline modifications. 24.50.010.A.5 Incorporate all feasible measures to protect ecological shoreline functions and ecosystem-wide processes in the placement and design of shoreline modifications. To avoid and reduce ecological impacts, the mitigation sequence in ECDC 24.40.020.E.3 shall be utilized. *Shoreline Stabilization Policies*: 24.50.020.B.5 Consider the effect that proposed shore defense works have on ecosystem-wide processes (e.g. sand movement) and functions (e.g. habitat).	

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			Make provisions to avoid and minimize impacts where feasible. Mitigation must be provided to achieve no net loss. Regulations: *Flood Hazard Reduction:* 24.40.030.B.4 New structural flood control works shall be placed landward of associated wetlands and designated habitat conservation areas, except for works that improve ecological functions, such as wetland restoration. *General Shoreline Modification Regulations:* 24.50.010.B.2 Structural shoreline modification measures shall be permitted only if nonstructural measures are unable to achieve the same purpose. *Shoreline Stabilization Regulations*: 24.50.020.C.2 Structural stabilization methods shall be permitted when necessary for reconfiguration of the shoreline for mitigation or enhancement purposes. 24.50.020.C.3 New development that would require shoreline stabilization which causes	

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			significant negative impacts to adjacent or down-current properties and shoreline areas should not be allowed. 24.50.020.C.4 New development on steep slopes or bluffs shall be set back sufficiently to ensure that shoreline stabilization is unlikely to be necessary during the normal, useful life of the structure, as demonstrated by a geotechnical analysis. 24.50.020.C.5.a – 5.d New structural stabilization measures shall not be allowed except when necessity is demonstrated in the following manner. 5.a.ii The erosion control structure will not result in a net loss of shoreline ecological functions. 5.b.ii The erosion control structure will not result in a net loss of shoreline ecological functions. 5.d To protect projects for the restoration of ecological functions or hazardous substance remediation projects pursuant to chapter 70.105D RCW…	

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			Shoreline Stabilization Siting and Design Regulations: ECDC 24.50.020.D.1.a Limit the size of stabilization measures to the minimum necessary. Use measures designed to assure no net loss of shoreline ecological functions. Soft approaches shall be used unless demonstrated not to be sufficient to protect primary structures, dwellings, and businesses.	
Alteration: Placement/Replacement of overwater structures Potential Cumulative Impacts: Changed levels of light, shoreline energy regimes, substrate type and stability, and water quality can result in alterations in the presence, abundance, and diversity of plant and animal species in the nearshore area	Process: Light transmittal Functions: Water temperature moderation, energy source for photosynthesis, visibility Process: Wave action Functions: Sediment erosion, deposition, and transport; turn over	Puget Sound shorelines (reaches 1 & 3) Lake Ballinger Nearshore and freshwater aquatic habitat	Policies: *Shoreline use element:* 24.20.050.*C.4* Overwater structures other than ferry terminal passenger shelters, docks, piers, walkways, breakwaters and other similar structures should be prohibited with the exception of minor appurtenant buildings, buoys, divers resting floats, and art sculpture. *Conservation element:* 24.20.060.C.2 Development in shoreline areas should be managed so that any adverse impacts on aquatic and land plants and animals are avoided or mitigated to result in no net loss	Encourage the use of low impact development techniques.

CUMULATIVE IMPACTS ANALYSIS TABLE				
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	of thermal stratification		of ecological function. *Restoration element:* 24.20.110.C.1 Protect and/or restore freshwater, nearshore, and estuarine habitat and habitat-forming processes. *Moorage Piers, Docks and Floats Polices*: 24.50.030.B.4…shall be designed and constructed to avoid or to minimize and mitigate the impacts to ecological functions, critical areas resources such as eelgrass beds and fish habitats and processes such as currents and littoral drift. *Boating Facilities Policies:* 24.60.020.B.4 Boating facilities shall be located, designed, constructed and operated in a manner that will minimize damage to shoreline processes and functions. When impacts cannot be avoided, impacts must be mitigated to assure no net loss of ecological function necessary to sustain shoreline resources.	

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			Regulations: *Moorage Piers, Docks, and Floats Regulations:* 24.50.030.C.1.b Covered moorage is prohibited. 24.50.030.C.3.a – 3.d Regulations to minimize impacts or nearshore areas and avoid reduction in ambient light level. 24.50.030.C.5 Prohibited substances. *Boating Facilities Regulations:* 24.60.020.C.1.b Covered moorage is prohibited 24.60.020.C.2 Marinas or launch ramps shall not be permitted within the following marine shoreline habitats because of their scarcity, biological productivity and sensitivity unless no alternative location is feasible, the project would not result in a net loss of shoreline ecological functions… 24.60.020.C.9 Prohibited substances.	
Alteration:	Process:	Puget Sound	Policies:	Public outreach

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Vegetation clearing <u>Potential Cumulative Impacts</u>: Losses in production and delivery of woody debris to shoreline, decreased amount and quality of shoreline habitat, decreased water quality, altered water temperatures, erosion, losses of favorable microclimates	Large woody debris production and distribution <u>Functions</u>: Shoreline stabilization, habitat provision, water flow pattern complexity, food production <u>Process</u>: Light transmittal <u>Functions</u>: Water temperature moderation, energy source for photosynthesis, visibility <u>Process</u>: Sedimentation <u>Functions</u>: Land formation, provision of nutrients and minerals	shorelines (reaches 1, 2, & 3) Lake Ballinger	*Shoreline use element:* 24.20.050.C.15 The rehabilitation of "natural systems" (e.g. the improvement in water quality, removal of beach obstructions, etc.) should be encouraged when opportune. *Views and Aesthetics element:* 24.20.090.C.3 Public views from the shoreline upland areas should be enhanced and preserved. Enhancement of views should not be construed to mean excessive removal of vegetation which partially impairs views. *Conservation element*: 24.20.060.C.2 Development in shoreline areas should be managed so that any adverse impacts on aquatic and land plants and animals are avoided or mitigated to result in no net loss of ecological function. *Restoration element:* 24.20.110.C.1 Protect and/or restore freshwater, nearshore, and estuarine habitat and habitat-forming processes. *Shoreline Vegetation Conservation:* 24.40.050.A.3 Where new developments	and education on shorelines. Restore degraded shoreline areas with native riparian vegetation where possible.

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	Process: Nutrient Transport and Cycling Functions: Provision of nutrients, provision of water quality		and/or uses are proposed, native shoreline vegetation should be conserved to maintain shoreline ecological functions and/or processes and mitigate the direct, indirect and/or cumulative impacts of shoreline development… Regulations: *Shoreline Vegetation Conservation Regulations:* 24.40.050.B.1.d Alteration of native shoreline vegetation only allowed when Restoration activities conducted in accordance with an approved plan designed to improve ecological functions and values. 24.40.050.B.2 The removal or disturbance of existing vegetation and the alteration of topography shall be limited to the minimum necessary to accommodate approved shoreline development.	
Alteration: Increased impervious surface area	Process: Hydrologic cycle	Puget Sound shorelines (reaches 1, 2, & 3)	Policies: *Circulation element:* 24.20.040.C.2 Where new streets are needed to	Encourage the use of low impact development techniques.

CUMULATIVE IMPACTS ANALYSIS TABLE				
Shoreline Alterations with Potential Cumulative Impacts	**Ecological Processes and Associated Functions at Risk**	**Shoreline Resources at Risk**	**Mitigating Draft SMP Policies and Regulations (selected regulation excerpts included)**	**Possible Non-Regulatory Mitigation Measures**
Potential Cumulative Impacts: Low dissolved oxygen in water bodies; increased contaminants, nutrients, and toxics in water; scouring of land from increased runoff volume, increased erosion	Functions: Water, nutrient, pathogen, sediment transport, and water quality Process: Tidal action Functions: Salinity, water flow patterns, water volume	Lake Ballinger (reach 4) Edmonds Marsh	serve uses in the shoreline area, these streets should be the minimum size necessary to provide safe and efficient vehicular, pedestrian, and bicycle access, including access for emergency vehicles, to the properties to be served. *Conservation element*: 24.20.060.C.2 Development in shoreline areas should be managed so that any adverse impacts on aquatic and land plants and animals are avoided or mitigated to result in no net loss of ecological function. *Restoration element:* 24.20.110.C.1 Protect and/or restore freshwater, nearshore, and estuarine habitat and habitat-forming processes. *Restoration element:* 24.20.110.C.8 Manage and treat stormwater to improve water quality, decrease peak flow events, and increase implementation of low impact development (LID) practices. *Transportation and Parking Policies:* 24.60.080.B.4. Avoid unnecessary duplication	

CUMULATIVE IMPACTS ANALYSIS TABLE				
Shoreline Alterations with Potential Cumulative Impacts	**Ecological Processes and Associated Functions at Risk**	**Shoreline Resources at Risk**	**Mitigating Draft SMP Policies and Regulations (selected regulation excerpts included)**	**Possible Non-Regulatory Mitigation Measures**
			or roads by making use of existing roads where practicable. *Utilities:* 24.60.090.B 2. New public or private utilities should be located inland from the land/water interface, preferably out of the shoreline jurisdiction, unless this location is reasonably necessary for the efficient operation of the utility facility or service. 24.60.090.B.6. Utilities should be located in existing rights-of-way and corridors whenever feasible. 24.60.090.B.7. Utilities serving new development should be located underground, wherever feasible. <u>Regulations</u>: *Water Quality, Stormwater, and Nonpoint pollution regulations:* 24.40.060.B.4 New development is encouraged to employ Low Impact Development principles and practices such as setbacks, retaining land cover, and reducing impervious areas, and use special caution to avoid infiltration of stormwater in shoreline	

CUMULATIVE IMPACTS ANALYSIS TABLE				
Shoreline Alterations with Potential Cumulative Impacts	**Ecological Processes and Associated Functions at Risk**	**Shoreline Resources at Risk**	**Mitigating Draft SMP Policies and Regulations (selected regulation excerpts included)**	**Possible Non-Regulatory Mitigation Measures**
			areas along marine bluffs *Transportation and Parking Regulations:* 24.60.080.C.1 Transportation and parking facilities shall be planned, located, and designed so that routes will have the least possible adverse effect on unique or fragile shoreline features, will not result in a net loss of shoreline ecological functions or adversely impact existing or planned water-dependent uses. 24.60.080.C.8 Parking layouts must be designed efficiently to use the minimum amount of space necessary to provide the required parking and safe and reasonable access… 24.60.080.C.9. Transportation facilities shall be constructed of materials that will preclude or minimize adverse affects on water quality or aquatic plants and animals over the long term… Elements within or over water shall be constructed of materials approved by applicable state agencies for use in water for both submerged portions and other components to avoid discharge of pollutants from splash, rain or runoff. No part of a	

CUMULATIVE IMPACTS ANALYSIS TABLE				
Shoreline Alterations with Potential Cumulative Impacts	**Ecological Processes and Associated Functions at Risk**	**Shoreline Resources at Risk**	**Mitigating Draft SMP Policies and Regulations (selected regulation excerpts included)**	**Possible Non-Regulatory Mitigation Measures**
			transportation facility that may come in contact with the water may be treated with or consist, in whole or in part, of creosote, oil based paints, toxic chemicals or other substances that would be harmful to the aquatic environment, unless specifically permitted and authorized by appropriate state and federal regulatory agencies. *Recreational Development – Shoreline Area Regulations:* 24.60.060.D.10.a Structures will not result in more than ten percent (10%) building coverage or 4,000 square feet, whichever is greater and total impervious surface will not exceed twenty percent (20%), or 10,000 square feet, whichever is greater. *Utilities Regulations:* 24.60.090.C.2 Except where infeasible, all utility lines, pipes, conduits, meters, vaults and similar infrastructures and appurtenances must be placed underground consistent with the standards of the serving utility. 24.60.090.C.4 Utilities shall be located	

CUMULATIVE IMPACTS ANALYSIS TABLE				
Shoreline Alterations with Potential Cumulative Impacts	**Ecological Processes and Associated Functions at Risk**	**Shoreline Resources at Risk**	**Mitigating Draft SMP Policies and Regulations (selected regulation excerpts included)**	**Possible Non-Regulatory Mitigation Measures**
			adjacent to or within existing utility or circulation easements or rights-of-way whenever feasible. Joint use of rights-of-way and corridors is encouraged.	
Alteration: Increased vehicular traffic Potential Cumulative Impacts: Decreased water quality, decreased air quality	Process: Water quality maintenance Functions: Provision of water quality Process: Air quality maintenance Functions: Provision of air quality	Puget Sound shorelines (reaches 2 & 3) Edmonds Marsh	Policies: *Circulation element:* 24.20.040.C.2 Whenever practicable, safe pedestrian and bicycle movement on and off roadways in the shoreline area should be encouraged as a means of personal transportation and recreation 24.20.040.C.4 Public waterborne transportation linked to public and private forms of ground transportation should be encouraged to minimize auto usage, and to eliminate barriers between public waterborne transportation and ground transportation in conformance with the Americans with Disabilities Act. 24.20.040.C.7 Public transit systems should be linked to the urban waterfront. *Transportation and Parking Policies:* 24.60.080.B.2 Transportation system plans and	Public outreach and education on shorelines. Encourage vehicles waiting at the ferry terminal to turn off engines.

CUMULATIVE IMPACTS ANALYSIS TABLE				
Shoreline Alterations with Potential Cumulative Impacts	**Ecological Processes and Associated Functions at Risk**	**Shoreline Resources at Risk**	**Mitigating Draft SMP Policies and Regulations (selected regulation excerpts included)**	**Possible Non-Regulatory Mitigation Measures**
			transportation projects within shorelines should provide safe travel ways for non-motorized traffic such as pedestrians and bicyclists. Space for such uses should be required along roads on shorelines, where appropriate, and should be considered when rights-of-way are being vacated. <u>Regulations</u>: *Transportation and Parking Regulations:* 24.60.080.C.1 Transportation and parking facilities shall be planned, located, and designed so that routes will have the least possible adverse effect on unique or fragile shoreline features, will not result in a net loss of shoreline ecological functions or adversely impact existing or planned water-dependent uses. 24.60.080.C.5 Road routes shall make provisions for pedestrian, bicycle, and other non-motorized modes of travel whenever feasible.	

CUMULATIVE IMPACTS ANALYSIS TABLE				
Shoreline Alterations with Potential Cumulative Impacts	**Ecological Processes and Associated Functions at Risk**	**Shoreline Resources at Risk**	**Mitigating Draft SMP Policies and Regulations (selected regulation excerpts included)**	**Possible Non-Regulatory Mitigation Measures**
Alteration: Dredging Potential Cumulative Impacts: Habitat disruption, increased water turbidity, altered hydrology	Process: Sedimentation Functions: Land formation, provision of nutrients and minerals Process: Marine and freshwater habitat Functions: Water quality	Puget Sound shorelines (reaches 1, 2, & 3) Lake Ballinger (reach 4)	Policies: *Restoration element:* 24.20.110.C.1 Protect and/or restore freshwater, nearshore, and estuarine habitat and habitat-forming processes. *Aquatic Environment:* 24.30.030.D.11 Dredging and dredge material disposal should be limited to the minimum amount necessary. Dredging operations should minimize impacts to other shoreline uses and functions. *Dredging and dredge material policies:* 24.50.060.B.1 Site and design new development to avoid or, if that is not possible, to minimize the need for new and maintenance dredging. 24.50.060.B.2 Dredging waterward of the ordinary high water mark for the primary purpose of obtaining fill material shall not be allowed, except when the material is necessary for the restoration of ecological functions. 24.50.060.B.4 Plan and conduct dredge and	

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Shoreline Alterations with Potential Cumulative Impacts	**Ecological Processes and Associated Functions at Risk**	**Shoreline Resources at Risk**	**Mitigating Draft SMP Policies and Regulations (selected regulation excerpts included)**	**Possible Non-Regulatory Mitigation Measures**
			dredge disposal operations in a manner that avoids or minimizes interference with navigation and significant ecological impacts. Impacts which cannot be avoided should be mitigated in a manner that assures no net loss of shoreline ecological functions. 24.50.060.B.5 Minor dredging for fill materials as part of ecological restoration or enhancement, beach nourishment, public access or public recreation should be permitted if consistent with this Program. <u>Regulations</u>: *Dredging and dredge material regulations:* 24.50.060.C.1.a – 1.g Regulations for when dredging may be permitted, including; 1.f. Restoration or enhancement of shoreline ecological functions and processes benefiting water quality and/or fish and wildlife habitat. 1.g Dredging waterward of the ordinary high water mark for the primary purpose of obtaining fill material shall not be allowed, except when the material is necessary for the	

CUMULATIVE IMPACTS ANALYSIS TABLE				
Shoreline Alterations with Potential Cumulative Impacts	**Ecological Processes and Associated Functions at Risk**	**Shoreline Resources at Risk**	**Mitigating Draft SMP Policies and Regulations (selected regulation excerpts included)**	**Possible Non-Regulatory Mitigation Measures**
			restoration of ecological functions. When allowed, the site where the fill is to be placed must be located waterward of the ordinary high water mark. The project must be either associated with a MRCA or CERCLA habitat restoration project or, if approved through a shoreline conditional use permit, any other significant habitat enhancement project. 23.50.060.C.2 The existing physical alignment and ecological function and processes shall be maintained, except to improve hydraulic function, water quality, fish or wildlife habitat, or fish passage. 23.50.060.C.3 New development shall be sited and designed avoid or, if that is not possible, to minimize the need for new and/or maintenance dredging. 23.50.060.5.a – 5.h …when permitted dredging shall 5.b Include all feasible mitigating measures to protect habitats and to minimize adverse impacts such as turbidity, release of nutrients, heavy metals, sulfides, organic materials, or toxic substances, depletion of oxygen, disruption of food chains, loss of	

CUMULATIVE IMPACTS ANALYSIS TABLE				
Shoreline Alterations with Potential Cumulative Impacts	**Ecological Processes and Associated Functions at Risk**	**Shoreline Resources at Risk**	**Mitigating Draft SMP Policies and Regulations (selected regulation excerpts included)**	**Possible Non-Regulatory Mitigation Measures**
			benthic productivity, and disturbance of fish runs and important localized biological communities. 5.c Be scheduled so as to not materially interfere with the migratory movements of anadromous fish. 5.e. Not interfere with geohydraulic processes. 5.f. Be found, through analysis by qualified professional, to be nonpolluting or shall have no significant negative pollution impact. 5.h Not result in erosion of the shoreline or undermine the stability of neighboring properties. 24.50.060.E.12 – Natural Environment: Dredging is prohibited except that dredging is permits as an essential element of an approved shore restoration or enhancement project subject to the policies and regulations of the Program.	
<u>Alteration</u>: Filling <u>Potential Cumulative Impacts</u>:	<u>Process</u>: Sedimentation <u>Functions</u>: Land formation,	Puget Sound shorelines (reaches 1, 2, & 3)	<u>Policies</u>: *Restoration element:* 24.20.110.C.1 Protect and/or restore	

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Shoreline Alterations with Potential Cumulative Impacts	**Ecological Processes and Associated Functions at Risk**	**Shoreline Resources at Risk**	**Mitigating Draft SMP Policies and Regulations (selected regulation excerpts included)**	**Possible Non-Regulatory Mitigation Measures**
Reduced sediment storage, decreased water quality, habitat disruption, altered hydrology	provision of nutrients and minerals Process: Marine nearshore and freshwater habitat Functions: Water quality	Lake Ballinger (reach 4) Edmonds Marsh Shell Creek Wetland	freshwater, nearshore, and estuarine habitat and habitat-forming processes. 24.20.110.C.3 Remove intertidal fill; restore beach deposits and processes and ecological functions. *Aquatic Environment:* 24.30.030.D.12 Filling should be avoided if practicable and limited to the minimum amount necessary. Filling operations should minimize impacts to other shoreline uses and functions. *Shoreline stabilization:* 24.50.020.B.3.c Structural stabilization will not be permitted for the indirect purpose of creating land by filling. *Landfill:* 24.50.040.B.1 Landfill should only be permitted to the minimum extent necessary to accommodate an approved shoreline use or development and with assurance of no net loss of shoreline ecological functions and processes. Enhancement and voluntary	

CUMULATIVE IMPACTS ANALYSIS TABLE				
Shoreline Alterations with Potential Cumulative Impacts	**Ecological Processes and Associated Functions at Risk**	**Shoreline Resources at Risk**	**Mitigating Draft SMP Policies and Regulations (selected regulation excerpts included)**	**Possible Non-Regulatory Mitigation Measures**
			restoration of landforms and habitat are encouraged. 24.50.040.B.2 Allow landfills waterward of the ordinary high water mark, in those limited circumstances where permitted, only when necessary to facilitate water-dependent uses or ecological restoration projects that are consistent with this program and the City of Edmonds Comprehensive Plans. Where feasible, public access to the shoreline and the water should be incorporated into the design. Regulations: *Landfill Regulations:* 24.50.040.C.1.a – 1.f Landfill water ward of the ordinary high water mark may be permitted as a conditional use in limited instances for the following purposes only, with due consideration given to specific site conditions, and only in conjunction with approved shoreline use and development activities that are consistent with this program: 1.c Cleanup and disposal of contaminated sediments as part of an interagency	

CUMULATIVE IMPACTS ANALYSIS TABLE				
Shoreline Alterations with Potential Cumulative Impacts	**Ecological Processes and Associated Functions at Risk**	**Shoreline Resources at Risk**	**Mitigating Draft SMP Policies and Regulations (selected regulation excerpts included)**	**Possible Non-Regulatory Mitigation Measures**
			environmental clean-up plan. 1.f Mitigation action, environmental restoration, beach nourishment or enhancement projects. 24.50.040.C.2.a – 2.f Landfills shall be permitted only where it is demonstrated that: 2.a The project has been located, designed, and constructed in a manner that minimizes impacts to ecological processes and functions and where impacts cannot be avoided, mitigation is provided to achieve no net loss. 2.b The fill will not result in erosion of the shoreline or undermine stability of neighboring properties. 2.f Placement of landfill will be timed so as to minimize damage to water quality and aquatic life. 24.50.040.C.3 The applicant must stabilize exposed fill areas with vegetation. 24.50.040.E.12 Natural Environment: Landfill may be allowed as a conditional use when necessary to protect or restore	

CUMULATIVE IMPACTS ANALYSIS TABLE				
Shoreline Alterations with Potential Cumulative Impacts	**Ecological Processes and Associated Functions at Risk**	**Shoreline Resources at Risk**	**Mitigating Draft SMP Policies and Regulations (selected regulation excerpts included)**	**Possible Non-Regulatory Mitigation Measures**
			shoreline ecological functions subject to the policies and regulations of this program.	
Alteration: Land surface modification Potential Cumulative Impacts: Reduced sediment storage, decreased water quality, altered hydrology	Process: Hydrologic cycle Functions: Water, nutrient, pathogen, and sediment transport Process: Sedimentation Functions: Land formation, provision of nutrients and minerals Process: Upland shore habitat Functions: water quality	Puget Sound shorelines (reaches 1, 2, & 3) Lake Ballinger (reach 4) Edmonds Marsh Shell Creek wetlands	Policies: *Restoration Element:* 24.20.110.C.1 Protect and/or restore freshwater, nearshore, and estuarine habitat and habitat-forming processes. *Natural Environment :* 24.30.040.D.4 New development or significant vegetation removal that would reduce the capability of vegetation to perform normal ecological functions should not be allowed. Subdivision of property in a configuration that would, to achieve its intended purpose, require significant vegetation removal or shoreline modification that adversely impacts ecological functions should not be allowed. *Urban Conservancy Environment:* 24.30.050.D.5 New development should be designed and located to preclude the need for shoreline armoring, vegetation removal, flood control, and other shoreline modifications.	

CUMULATIVE IMPACTS ANALYSIS TABLE				
Shoreline Alterations with Potential Cumulative Impacts	**Ecological Processes and Associated Functions at Risk**	**Shoreline Resources at Risk**	**Mitigating Draft SMP Policies and Regulations (selected regulation excerpts included)**	**Possible Non-Regulatory Mitigation Measures**
			Shoreline Residential : 24.30.060.D.3. Structurally engineered shoreline modifications and stabilization should be prohibited except in cases of emergency as defined. *General Modification Policies:* 24.50.010.A.1 Locate and design all new development in a manner that prevents or minimizes the need for shoreline modifications. 24.50.010.A.2 Ensure that shoreline modification, where permitted, are as compatible as possible with natural shoreline processes and character. 24.50.010.A.3 Regulate shoreline modifications to assure that modifications individually and cumulatively do not result in a net loss of ecological functions. Mitigation may be required to meet the no net loss standard. 24.50.010.A.4 Give preference to those types of shoreline modifications that have a less impact on ecological functions and require mitigation of identified impacts resulting from	

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Shoreline Alterations with Potential Cumulative Impacts	**Ecological Processes and Associated Functions at Risk**	**Shoreline Resources at Risk**	**Mitigating Draft SMP Policies and Regulations (selected regulation excerpts included)**	**Possible Non-Regulatory Mitigation Measures**
			shoreline modifications. 24.50.010.A.5 Incorporate all feasible measures to protect ecological shoreline functions and ecosystem-wide processes in the placement and design of shoreline modifications. To avoid and reduce ecological impacts, the mitigation sequence in ECDC 24.40.020.E.3 shall be utilized. <u>Regulations</u>: *Critical Areas:* 24.40.020.J Additional authority. In addition to any other authority the city may have, the city is hereby authorized to condition or deny a proposed use, modification or activity or to require site redesign because of hazards associated with the use, modification or activity on or near an environmentally sensitive and/or critical area, and/or the effect of the proposal on the environmentally sensitive area and/or critical area. *Shoreline Vegetation Conservation:* 24.40.050.B.1.a – 1.d Alteration of native shoreline vegetation shall only be allowed as set forth below:	

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Shoreline Alterations with Potential Cumulative Impacts	**Ecological Processes and Associated Functions at Risk**	**Shoreline Resources at Risk**	**Mitigating Draft SMP Policies and Regulations (selected regulation excerpts included)**	**Possible Non-Regulatory Mitigation Measures**
			1.b Removal of noxious weeds as listed by the state in WAC 16-750, provided such activity shall be conducted in a manner consistent with best management practices and native vegetation is promptly reestablish in the disturbed area. 1.c Modification of vegetation in association with a legal, nonconforming use provided that said modification is conducted in a manner consistent with this Master Program and results in no net loss to ecological functions or critical fish and wildlife conservation areas. 1.d Restoration activities conducted in accordance with an approved plan designed to improve ecological functions and values. 24.40.050.B.2 The removal or disturbance of existing vegetation and the alteration of topography shall be limited to the minimum necessary to accommodate approved shoreline development. *General Shoreline Modification Regulations:* 24.50.010.B.1 Shoreline modification activities that do not support a permitted shoreline use are considered "speculative" and are prohibited by this Master Program,	

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			unless it can be demonstrated to the satisfaction of the Shoreline Administrator that such activities are in the public interest and necessary and for the maintenance of shoreline environmental resource values. 24.50.010.B.3 Shoreline modification activities, with the exception of restoration or enhancement efforts, are prohibited in wetlands, and undeveloped spits, hooks, bars, barrier beaches, or similar accretion terminals or accretion shore forms. 24.60.090.C.10 Utility developments shall be located and designed so as to avoid, to the extent practicable, the need for any structural or artificial shoreline modification works for the life of the project.	

Modifications to Regulations as a Result of the Cumulative Impacts Analysis

The policies and regulations evaluated in this draft of the cumulative impact analysis were developed to ensure no net loss of ecological functions and protection of other shoreline functions and/or uses and these regulations and policies have been iteratively reviewed by the Department of Ecology for consistency with this requirement. As a result of this review process, no modifications to the regulations were necessitated as a result of this cumulative impacts analysis.

4. Beneficial Effects of Any Established Regulatory Programs Under Other Local, State, and Federal Laws

Several other established regulatory programs (besides the SMP) yield beneficial effects on the City's shorelines. Some regulatory programs with beneficial effects are briefly described below. For more information on the shoreline regulatory framework, refer to the Shoreline Inventory and Characterization (section 2).

Local

City of Edmonds Comprehensive Plan
The City of Edmonds Comprehensive Plan provides the overall strategy for the physical layout of the City. One of its purposes is "to anticipate and influence the orderly and coordinated development of land and building use of the City and its environs and conserve and restore natural beauty and other natural resources."

City of Edmonds Community Development Code
The City of Edmonds Community Development Code (ECDC) Titles 16 and 17 contain the zoning ordinance for the City. The zoning designations are consistent with the comprehensive plan.

The ECDC also contains the environmentally critical areas code (Title 23) for the City. The purpose of this code is to "designate and classify ecologically sensitive and hazardous areas and to protect these areas and their functions and values, while also allowing for reasonable use of private property." The code covers wetlands, critical aquifer recharge areas, frequently flooded areas, geologically hazardous areas, and fish and wildlife habitat conservation areas. The code yields beneficial effects on the City's shorelines because its provisions extend to the critical areas which exist in or are in the vicinity of the City's shoreline jurisdiction. The code attempts to achieve its purpose by requiring that "any action taken pursuant to this title shall result in equivalent or greater functions and values of the critical areas associated with the proposed action, as determined by the best available science." Mitigation is only allowed when applicants first demonstrate an inability to avoid or reduce impacts.

State

Shoreline Management Act
The goal of the SMA (RCW 90.58) is to "prevent the inherent harm in an uncoordinated and piecemeal development of the state's shorelines." The SMA gives preference to uses that protect water quality and the natural environment, water-dependent uses, and preserve or enhance public access or recreational opportunities. Cities, including the City of Edmonds, and counties prepare SMPs based on state guidelines, yet geared to fit the specific circumstances of the individual jurisdictions. SMPs include both plans and regulations for shoreline areas.

Growth Management Act
Many of Washington's cities and counties, including the City, plan according to the Growth Management Act (GMA). While the goals and policies of the SMA are themselves a goal of the GMA, other goals of the GMA are particularly relevant in shoreline jurisdictions as well. Those goals include "Encourage economic development consistent with resources and facilities throughout the state," "Maintain and enhance natural resource-based industries," and "Protect the environment and enhance quality of life." To meet the goals of the GMA, jurisdictions planning under the GMA are required to designate and protect critical areas, as well as to use the best available science in developing policies and regulations to protect their functions and values. Also, the land use element of comprehensive plans is required to consider stormwater management and discharges into waters of the state.

State Environmental Policy Act
The State Environmental Policy Act (SEPA) aims to maintain and improve environmental quality. SEPA does so by requiring procedures designed to insure that governmental agencies give proper consideration of environmental matters when making decisions on development actions. If initial governmental review of a proposed action indicates that the action will have probable and significant adverse environmental impacts, preparation of a detailed environmental impact statement is required. The review of projects in the shoreline area triggering SEPA will afford the City's shorelines additional environmental protection.

Water pollution control laws
The state also has water pollution control laws (RCW 90.48) with beneficial effects on the City's shoreline. In enacting these laws, the legislature declared that it is "public policy of the state of Washington to maintain the highest possible standards to insure the purity of all waters of the state consistent with public health and public enjoyment thereof, the propagation and protection of wild life, birds, game, fish and other aquatic life, and the industrial development of the state, and to that end require the use of all known available and reasonable methods by industries and others to prevent and control the pollution of the waters of the state of Washington. Consistent with this policy, the state of Washington will exercise its powers, as fully and as effectively as possible, to retain and secure high quality for all waters of the state."

Federal

Federal Water Pollution Control Act
The Federal Water Pollution Control Act regulates discharges of pollutants into federally designated waters, which include Lake Ballinger, Edmonds Marsh, and the marine waters along the City's shoreline abutting Puget Sound.

Endangered Species Act
The Endangered Species Act protects shoreline flora and fauna by requiring all projects permitted, funded, or authorized by the federal government to protect threatened and endangered species.

Magnuson-Stevens Fisheries Conservation and Management Act
The Magnuson-Stevens Fisheries Conservation and Management Act requires federally funded, authorized, or permitted projects that may adversely affect Essential Fish Habitat to be consulted upon by NOAA Fisheries.

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Miles

Puget Sound

A
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E
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G
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Point Edwards

Point Wells

Lund's Creek
Meadowdale Creek
Perrinville Creek
Fruitdale Creek
Northstream Creek
Hindley Creek
Shell Creek
Shellabarger Creek
Willow Creek
Deer Creek
Hall Creek
Lake Ballinger
McAleer Creek

75Th Pl W
Olympic Ave
Olympic View Dr
88Th Ave W
64Th Ave W
60Th Ave W
Puget Dr
196Th St SW
Caspers St
3Rd Ave N
9Th Ave N
200Th St SW
68Th Ave W
204Th St SW
Main St
76Th Ave W
208Th St SW
3Rd Ave S
5Th Ave S
9Th Ave S
Walnut St
66Th Ave W
99
220Th St SW
100Th Ave W
95Th Pl W
Edmonds Way
228Th St SW
73Rd Pl W
84Th Ave W
5
104
226Th St SW
244Th St SW
236Th
58Th Ave W

Legend

- Planning Segment Break
- Planning Segment
- Edmonds City Limits
- DRAFT SMP Jurisdiction
- Major Road
- Street
- Railroad
- Stream

Shoreline Planning Reaches
- Reach 1
- Reach 2
- Reach 3
- Reach 4

CITY OF EDMONDS Inc. 1890

City of Edmonds
Shoreline Master Program Update

Shoreline Planning Segments & Planning reaches

Figure 2

Date of Last Revision: 12-05-06