



MEMORANDUM

To: Planning Commission

From: Stacy Clauson, Senior Planner
Paul Stewart, Deputy Director of Planning

Date: April 3, 2008

Subject: Kirkland's Shoreline Master Program Update

I. RECOMMENDATION

Staff recommends that the Planning Commission complete the following:

1. Consider the revised draft policy language for the **Introduction, Shoreline Land Use, Shoreline Environment** and **Shoreline Parks, Recreation and Open Space** sections of the new Shoreline Chapter. These sections are found in Attachments 1 through 4.

These draft policies are the same as you have previously reviewed at the March 13th meeting, with edits to reflect any requested changes. At this time, staff would like for you to review this revised draft and confirm that these policies adequately reflect your desired framework for the Shoreline Master Program. This would also be an opportunity to bring up any issues that you would like to discuss within these sections of the new Shoreline Chapter. Please note that we are hoping to wrap up detailed discussion on these sections at this meeting, so that at the next meeting we can move forward with new policy sections for the Shoreline Chapter addressing public access, transportation and design issues.

2. Receive a briefing from staff of the April 9th meeting with the Parks Board where they will be reviewing draft policy language contained in the Shoreline Parks, Recreation and Open Space section.
3. Consider the additional information presented under Section III, Items for further discussion. Provide policy direction for vegetation management, vessel size, motorized craft near natural areas, overwater structures, and covered moorage.
4. Review upcoming public meetings. Staff has tentatively established Monday, June 9th as the date for a public open house for the SMP Update. Commission members are encouraged to attend this open house.

I. GOALS AND POLICIES

1. Introduction and Land Use

Draft policies were provided to you at the February 28, 2008 and March 13, 2008 packet. Please review this draft (see Attachments 1 and 2) and address any remaining issues you would like to discuss. Please note that policies addressing shoreline modifications and private shoreline recreational uses have been relocated to this Land Use section.

These policies have also been reviewed with the Houghton Community Council, who has expressed their general agreement with the concepts in the draft policies. The following are several of the key concerns or issues that came up at the March 24, 2008 Houghton Community Council meeting on this topic:

- Request for revision to the first objective for the SMP Update (see Attachment 1) to add in the word “healthy”, as this is an important concept along our shoreline, particularly to address the need for healthy shoreline environment for public use. The idea is that healthy extends before water quality issues, which are covered under the second objective.
- Regarding Goal SMP-1 in Attachment 2, there were some questions about the differences between natural systems and ecological functions as used in this goal statement. Language has been added to the accompanying text to help to better describe this difference.
- There were some general questions about shoreline priority of uses. In particular, there was some concern about the objectives in the Shoreline Management Act (SMA) which place preference to water-dependent uses over water enjoyment uses. There was also some discussion about multi-family and where it fits within the SMA’s preferences. After discussing this issue, the Houghton Community did not request any revisions.
- There was some discussion and questions about the concept of no net loss and the assessment of cumulative impacts.
- There was some concern about Policy SMP-7.2 (see Attachment 2) which addresses land use in the CBD. There was concern about the clause which addressed potential height increases in the CBD, if those are offset by substantial public benefits. After further review for consistency with the existing language in the Downtown Plan, this language has been deleted in the amended draft.
- There was discussion about the need for bulkheads and the design of bulkheads. In addition, there was a desire to see more information on what opportunities or funding support there may be to allow a group of property owners to collectively retrofit existing bulkheads at one time. Staff is continuing to research approaches taken by other jurisdictions and plans to come back with more detailed information when specific regulations are considered. In addition, there was concern that the terminology used to describe the different types of shoreline stabilization be consistent and clear (e.g. “hard” and “soft” shoreline stabilization features). Staff is looking through this section to ensure consistent language use.

- There was concern expressed about shoreline restoration activities that would result in the ordinary high water mark moving landward from its existing location, adversely impacting the private property rights, such as building setbacks. Amy Summe of the Watershed Company did explain that restoration designs can be done which result in the placement of the ordinary high water mark at the same location. Shoreline restoration in some areas where landfill retained by bulkheads was used to create buildable area may not allow for bulkhead replacement, but there may be opportunities for restoration with shoreline plantings or placement of gravel substrate in the water to improve the habitat in the nearshore environment.
- There was discussion about shoreline vegetation. The Houghton Community Council encouraged policy development for vegetation management with new development or substantial reconstruction projects. Staff has added policy language in this section (see Section III for further information). There was some concern about the use of regulatory flexibility, such as setback reductions and provisions for additional lot coverage in exchange for additional shoreline vegetation. In particular, there is concern about increasing lot coverage or shifting residences closer to the street in ways that would adversely impact views. There was also concern expressed that shoreline vegetation or habitat features not reduce physical access of the public to the lake. View access to the lake was a concern and there was a desire to ensure that shoreline vegetation be designed in such a way as to not interrupt views. These are all issues to consider as part of the regulation development for shoreline vegetation.
- There was also a desire for public education and opportunities for people to see best practices. Staff has included policies about the need for public outreach.
- There was a desire to look for examples from other areas, perhaps even other areas of the country, for shoreline vegetation and shoreline stabilization retrofitting concepts that have a proven track record. Staff is continuing to research approaches taken by other jurisdictions and plans to come back with more detailed information when specific regulations are considered.
- There was discussion about pier lengths and what factors are considered in designing the pier length. Additional detailed review of pier regulations will occur in our next phase of the SMP Update process.
- There was concern that the impervious area on properties has been steadily increasing as properties in the shoreline area have been redeveloped. This issue will be reviewed in more detail with development of the shoreline regulations.
- There was a desire to ensure the new development not occur within a 100-year floodplain. The 100-year floodplain areas within the shoreline coincide with protected wetland areas, which also impose significant protections. Additional review of this issue will occur with regulation development.

2. Shoreline Environment

Draft policies were provided to you at the March 13, 2008 packet. Please review this draft (see Attachment 3) and address any remaining issues you would like to discuss.

Please note that the City has received correspondence requesting revisions to specific policies in this section (see Attachment 5). Staff would like to provide the following information to the Planning Commission for consideration. Please advise staff whether you would like to see any amendments to address issues raised in these comments:

3. Shoreline Parks, Recreation and Open Space

Draft policies were provided to you at the March 13, 2008 packet. Please review this draft (see Attachment 4) and address any remaining issues you would like to discuss. Please note that these policies are also being discussed with the Parks Board at their April 9th meeting and staff will convey any issues brought up at this meeting with you on April 10th.

4. Public Comments on Policies

The City has also received correspondence requesting revisions to specific policies in this section (see Attachment 5). Staff would like to provide the following information to the Planning Commission for consideration. Please advise staff whether you would like to see any revisions to address issues raised in this letter:

- A. Shoreline stabilization (see Policies SMP-11.6 through 11.1 in Attachment 2).
 - a. Please note that as shown in Table 7 on page 15 of the Final Shoreline Analysis Report, the majority of the natural/semi-natural shoreline edge condition is located within Juanita Bay and Yarrow Bay Park/Wetlands. With the exception of these areas, the majority of the City's lake edge has been armored. Please advise whether you believe changes are needed to the supporting language in this section to address the comments received.
 - a. The policies for retrofitting shoreline armoring are proposed to apply in cases where there may be substantial new upland construction, or where new or substantial modifications are proposed to the existing bulkhead. The policies do not prohibit new bulkheads, but do require that alternative measures are first evaluated and determined to be infeasible, based on a scientific or geotechnical analysis. Shoreline property owners still may voluntarily want to explore bulkhead retrofitting, and the City would like to facilitate this type of action by providing education and assistance where possible.
 - c. As noted in Item 2.B above, shoreline vegetation provides many different functions along the shoreline, in addition to providing shade. Attached is a sample planting plan that has been put together by King County as an example of the type of plants and plant arrangement that can be used along a natural sloped shoreline without a bulkhead (see Attachment 6). Some of the design principles used in this sample include:
 - i. Planting larger trees and shrubs near the sides of the property to create a natural frame and accentuate views.

- ii. Planting the same plants at different distances from the water. This helps ensure some of the plants will be planted in their favored conditions. This helps avoid significant replanting later.
- iii. Picking plants that will grow to a preferred height. In the interest of time and plant health, avoid planting that will interrupt views.
 - 1. Low growing shoreline plants include small fruited bulrush, slough sedge, and yellow monkey flower.
 - 2. Medium height shrubs may include vine maple, Pacific ninebark, swamp rose, and red twig dogwood.
 - 3. Large trees include Sitka spruce, western red cedar, Oregon ash and various willows.
- iv. Staggering shoreline plantings to create the illusion (from the water) of continuous plants. This technique is used to discourage Canadian geese.

If done properly, shoreline vegetation restoration can be effective on lots without bulkheads and, in many cases, can be used with other bioengineering techniques as an alternative to a bulkhead for providing shoreline stabilization.

- B. Boating facilities (see Goal SMP-10 in Attachment 2). Staff concurs that many of the impacts noted are currently regulated through other mechanisms, as noted in last paragraph of this section, which addresses programs that are in place to minimize these impacts. Please advise whether any changes are needed.
- C. Water Quality and Quantity (see Goal 16 and related policies in Attachment 3). Staff agrees that water quality and non-point source pollution are important issues to consider as part of the SMP Update. Staff believes that Goal SMP-16 and its related policies appropriately acknowledge the relationship between water quality and non-point source pollution and the shoreline. The policies also note the existing programs in place to regulate surface water issues.
- D. Vegetation management (see Goal SMP-17 and related policies in Attachment 3). This issue is further discussed in Section III.1 below. Shoreline vegetation can provide for a number of important functions, including, but not limited to:
 - Providing shade necessary to maintain water temperatures required by salmonids and other aquatic biota;
 - Regulating microclimate in nearshore areas;
 - Providing organic impacts necessary for aquatic life;
 - Stabilizing banks, minimizing erosion and sedimentation;
 - Improving water quality through filtration and vegetation uptake of nutrients and pollutants;
 - Providing a source of large woody debris; and
 - Providing wildlife for habitat.

As a result of these important functions, the policies addressing vegetation conservation have focused on 1) the need to retain existing vegetation and 2) the need to establish new vegetation

along the shoreline with new construction or substantial reconstruction, in order to improve our existing lake edge condition over time.

B. Aquatic vegetation management (see Goal SMP-18 in Attachment 3). Staff notes that this is a complicated issue with many different positions on the best way to approach aquatic vegetation management. Additional research and review into this topic is likely necessary to help to frame this issue; staff is engaging in additional discussion with the Department of Ecology and other cities on this topic. Below is further background that staff and our consultant have been able to identify on this issue:

- a. In general, the role of the City is to review and approve aquatic vegetation removal plans. Aquatic vegetation removal may require review under the State Environmental Policy Act (SEPA) and under the Shoreline Management Act (SMA), unless the activity is otherwise exempt. In cases where the activity is exempt, it still must comply with any specific standards that are established in our SMP, if we choose to incorporate any specific standards. In reviewing the approach taken by other cities on this issue, staff has found the following in draft SMPs:
 - i. The City of Sammamish draft SMP permits aquatic weed control only when native plant communities and associated habitats are threatened or when an existing water-dependent use is restricted by the presence of weeds. Aquatic weed control is also required to occur in compliance with all other applicable laws and standards.
 - ii. The City of Redmond draft SMP prohibits aquatic vegetation removal, except where authorized under an approved habitat enhancement plan, adopted basin plan, or authorized aquatic weed management program and where native plant communities and habitats are threatened or an existing water-dependent use is threatened by the presence of aquatic weeds. Specifically, the use of herbicides to control aquatic vegetation is prohibited, except where no reasonable alternative exists, the use of herbicides has been approved through a comprehensive vegetation management and monitoring plan; and where authorized by the City or other agency through the environmental review process (SEPA). Aquatic vegetation removal activities are also required to comply with the requirements of the other responsible agencies.

There is currently an exemption in the SMA listed for certain types of aquatic weed removal, including use of herbicides as approved by the Department of Ecology (see Section c below).

- b. Property owners also need to work with the Department of Fish and Wildlife to obtain a Hydraulic Project Approval (HPA) for aquatic vegetation removal. In order to expedite certain types of HPA permits for applicants wanting to remove noxious weeds, WDFW has developed a pamphlet that, if followed, can serve as the HPA for some types of aquatic weed or plant control. Depending on the method selected to control aquatic noxious weeds or beneficial plants, an individual HPA may be required (see publication # APF-11-

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97 at <http://wdfw.wa.gov/hab/aquaplnt/aquaplnt.pdf>). This document does not authorize herbicide use; application of aquatic herbicides is regulated primarily by Ecology and the US Department of Agriculture. In this document, WDFW recommends that herbicide application be restricted to those circumstances where other weed removal or control techniques are not sufficient. This document notes that herbicides should only be used as part of an integrated plan for noxious weed control. Further, the document notes that relying solely on aquatic herbicides year after year is generally not appropriate, advisable, or cost effective.

- c. The Department of Ecology has determined that chemical control methods may be acceptable in some instances to maintain beneficial uses of the water body; however, chemical control methods must be conducted under controlled conditions. Therefore, the Department of Ecology has issued an Aquatic Plant and Algae Management General Permit (see http://www.ecy.wa.gov/programs/wq/pesticides/permit_documents/final_permit.pdf) which covers aquatic plant and algae management activities that discharge chemicals and other aquatic plant and algae control products into surface waters of the state of Washington. For in-lake projects applicators and/or the local government sponsoring the project must obtain coverage under Ecology's Aquatic Plant and Algae Management NPDES permit before applying herbicides. The permit contains certain conditions, including conditions for public notice, mitigations to protect rare plants, and monitoring requirements.

Staff has proposed revisions to the this section, but at this time the policy is still written to limit use of herbicides, except in certain circumstances, in keeping with the WDFW guidance on this issue. Staff is also continuing to research this topic and will overview any new information at the April 10th meeting.

II. ITEMS FOR FURTHER DISCUSSION

1. Vegetation Management

At the March 13th meeting, the Planning Commission requested additional information on other jurisdictional approaches to vegetation management in order to better gauge how proactive other jurisdictions are in establishing a regulatory approach that would require installation of shoreline vegetation with new construction or substantial alteration of existing structures, as opposed to an approach where we rely more heavily on voluntary means to accomplish our goals.

The following is a brief description of the approach some other jurisdictions have taken, either through their critical areas ordinance or through their draft SMP update process. Please note that for those jurisdictions that have addressed this issue through their critical areas ordinance, they will need to re-evaluate this issue as part of their SMP update and may revise or include additional provisions as part of this process.

Jurisdiction	Code Section	Vegetation Management Standards
Kirkland		<p>No buffer established from the shoreline. Limitations on tree removal under Chapter 95 of the Zoning Ordinance (removal of no more than two trees per calendar year without a development permit, tree density, and provisions to retain Type I trees).</p> <p>Please also note that there are some parcels along the shoreline where tree removal is subject to regulation by the Department of Fish and Wildlife due to their proximity to a Bald eagle nest (parcels within ½ mile that are within 250' of the shoreline).</p>
Bellevue	20.25H.035.A	Establishes 50 foot buffer from shoreline for undeveloped sites and 25 foot buffer from shoreline for developed sites. See Attachment 15 for more details on vegetation management within this buffer area.
	20.25E.080.B	All development within the Shoreline Overlay District shall be accompanied by a plan indicating methods of preserving shoreline vegetation and for control of erosion during and following construction in accordance with Part 20.25H LUC, City of Bellevue Clearing and Grading regulations, Chapter 23.76 BCC, and the Comprehensive Plan. Special care shall be exercised to preserve vegetation in wetland, shoreline and stream corridor bank areas in order to prevent soil erosion. Removal of vegetation from or disturbance of shoreline critical areas and shoreline critical area buffers, and from other critical area and critical area buffers shall be prohibited, except in conformance with Part 20.25H LUC and the specific performance standards of this section.
	20.25E.080.Q	All residential development shall be accompanied by a plan indicating methods for preserving shoreline vegetation and control of erosion during and following construction as required by City of Bellevue

Jurisdiction	Code Section	Vegetation Management Standards
		clearing and grading regulations, Chapter 23.76 BCC, and the Comprehensive Plan.
	20.25.E.080.G	No clearing, grading, excavating, or fill shall be allowed within the shoreline critical area or shoreline critical area buffer except as permitted by this Part 20.25E , or in association with activities allowed under Part 20.25H LUC.
	20.25E.080.N	In order to mitigate the impacts of new or expanded moorage facilities, the applicant shall plant emergent vegetation (if site-appropriate) and a buffer of vegetation a minimum of 10 feet wide along the entire length of the lot immediately landward of ordinary high water mark.
Sammamish	21A.50.351	Establishes 45 foot buffer from shoreline
	21A.50.351	Allows reduction of buffer in exchange for preservation or restoration of native vegetation under several different scenarios. See Attachment 7 for more details.
	21A.50.160	Vegetation Management Plans are required pursuant to the CAO.
	Draft SMP	All shoreline developments and uses should be planned and designed to retain or replace shoreline vegetation with the overall purpose being to achieve no net loss of the ecological functions and processes performed by the vegetation.
Redmond	Draft SMP	Redmond is proposing to establish a setback, rather than a buffer, from the edge of Lake Sammamish. The setback is 35 feet, but can be reduced to 20 feet if the setback area is revegetated with primarily native vegetation. New development adhering to the 35-foot setback and/or reconstruction that includes greater than 50% the value of existing improvements is required to plant 50% of the area in the minimum 20-foot setback with native vegetation.
	Draft SMP	Requires landscaping within the shoreline jurisdiction to incorporate a minimum of 50 percent native plants. Native plantings are encouraged to be placed close to the waterbody.
	Draft SMP	Promotes preservation of as much non-invasive vegetation as possible, particularly adjacent to buffers of sensitive areas and shorelines. Requires replanting of developed areas with standards of non-dwarf evergreens in natural and random patterns where possible. To lessen impacts and provide transitions to natural areas, promotes use of native plants as much as possible adjacent to the buffers of critical areas and shorelines.

Jurisdiction	Code Section	Vegetation Management Standards
		Setback vegetation should consist of native trees, shrubs or groundcover with an emphasis on encouraging a tree canopy.
	Draft SMP	Requires mature trees, stands of trees, and trees and their understory adjacent to a critical area or shoreline buffer to be protected wherever possible. <ul style="list-style-type: none"> ➤ Minimum 35% of existing significant trees to be preserved. ➤ Within setback, significant trees shall be retained, except if dead, diseased, dying or hazardous. ➤ No removal or topping for purposes of creating views. Non-destructing thinning of lateral branches to enhance views is allowed. ➤ Requires tree replacement for trees removed or damaged.
	Draft SMP	Limits removal of aquatic vegetation, except under specified circumstances.
	Draft SMP	Vegetation removal within setback only allowed for the purposes of maintaining established landscaping, maintaining public safety, maintaining an allowed shoreline use or improvement, or to enhance fish and wildlife habitat.
	Draft SMP	Limitations on application of herbicides, pesticides, and fertilizers.

Note: Staff is also researching the approach being taken in Lake Forest Park, which is also updating its SMP and will provide this information at our meeting.

Staff has drafted some new policies (see Goal SMP-17 and related policies in Attachment 3) on this issue. Please review these policies and provide any suggested revisions.

2. Vessel Size

At the March 13th meeting, the Planning Commission requested additional information on regulations addressing vessel size, either within the City or other jurisdictions.

This issue has been raised to determine whether there is any interest in including specific policies in the SMP that address vessel size. Vessel size was previously raised as an issue of concern in 2002, when the City Council explored options for restricting the size of boats. At that time, the key concerns with vessel size were related to aesthetics and community character.

The following summarizes the regulations contained in Chapter 14 of the KMC that were enacted in 2002 in response to this issue:

- Distinguishes between “water craft” (less than 150 feet in length) and “vessels” (150 feet in length or more).
- “Vessels” (150 feet or more) are prohibited from anchoring within Kirkland’s jurisdictional limits, mooring at general moorage facilities, or anchoring or mooring in street ends.
- Restrictions do not apply to smaller moorage facilities (e.g. 1-2 boards) as this was thought to be self-limiting due to property and pier sizes.

The following summarizes the regulations contained in Chapter 19 of the KMC that were enacted in 2002 in response to this issue:

- Prohibits “vessels” in rights-of-way.
- Establishes street use permit requirements for the use of right-of-way for piers.

In 2002, there was a decision made to hold off on a corresponding amendment to the SMP, in order to evaluate implementation (including any unintended consequences) of these changes. At the time, there were concerns expressed by the Chamber of Commerce and the Kirkland Downtown on the Lake that the regulations be crafted so that the City did not impose restrictions that would be detrimental to the waterfront character or restrictions that would preempt future decisions about waterfront activities, such as historic ships, naval displays, and yacht shows. Kirkland Downtown on the Lake did submit a letter of support for the adopted provisions, but if changes are contemplated staff would recommend consulting these organizations.

Since these regulations were enacted, staff is not aware of any community concerns that have arisen over the size of vessels. Reviewing permits for new or expanded private piers issued since 2005 show that the boats proposed to be moored at the sites ranged from approximately 40 to 85 feet in length.

With respect to potential environmental impacts associated with vessel size, it appears that state and federal agencies have approached mitigation of impacts associated with over water coverage by regulating the size of moorage structures, rather than vessels. The City has requested additional information from the Washington Department of Fish and Wildlife on this issue and will report back any information on this topic at the April 10th meeting.

In coordinating with other cities along Lake Washington, it appears that in general other jurisdictions also limit the potential adverse ecological impacts associated with additional overwater coverage through regulations on their piers and docks. For instance, Seattle has dealt with this by limiting the length of docks. Seattle also limits the height of a dock, though this may not be a limiting factor since gang plank or steps could be used to access larger boats. As another example, Kenmore limits placement of piles to a maximum of 80 feet from shore and 13 feet of water. They also limit the dock to two piles, which could be a limiting factor for large boats. Finally, there is a limit of total dock area, which can limit length in some cases. Bellevue also limits boat size by applying maximum over water coverage standards, though they may also be addressing the issue directly in the update process, perhaps through policies that address environmental impacts and visual access directly.

Given this background information, staff would like input from the Planning Commission on the need to include any specific policies addressing vessel size in the SMP.

3. **Motorized Watercraft near Natural Areas**

Staff is seeking direction on the need for new policies addressing operation of motorized watercraft near the City's natural park areas, including Juanita Bay and Yarrow Bay Wetlands. The following describes some of the existing regulations addressing watercraft operation on Lake Washington:

- The King County Marine Patrol is responsible for ensuring compliance with regulations addressing watercraft operation within Lake Washington. In King County, boating activities are largely regulated through the [King County Code Section 12.44](#)* In this section, speed regulation, lake specific boating restrictions, equipment requirements, and other related information is specified. Washington State marine laws also affect King County boaters. Regulation of Recreational Vessels can be found in the: [Revised Code of Washington \(RCW\) Chapter 79A.60](#)* Similar regulations affecting boaters can be found including the requirements for personal flotation device. (Also of note, since the U.S. Coast Guard classifies personal watercraft (such as jet skis) as Class A inboard boats, King County Code holds personal watercraft operation to the same basic rules and requirements as any other powerboat. The use of personal watercraft is also prohibited on the waters of Washington State from sunset until sunrise.).
 - In general, these regulations require that boaters keep their vessels under control at all times and never endanger the safety of others or harm property and wildlife. The provisions in KCC 12.44 address issues such as negligent and reckless operation of watercraft and required distance from power craft to swimmers and row boats.
 - KCC 12.44 also specifies speed limit information. Under these provisions, it is unlawful for any person to operate any watercraft or vessel at a speed in excess of eight miles per hour within one hundred yards of any shoreline, pier, restricted area or shore installation on Lake Washington.
 - It is unlawful to water ski within one hundred yards of shore. Water skiers may start at and return to shore by means of the most expeditious route. For purposes of starting at and returning to shore, water skiers may temporarily exceed the speed limit of eight miles per hour. No operator of a watercraft shall have in tow a person on water skis, aquaplane, surfboard or similar contrivance from sunset to sunrise.

The Parks Department has also worked with King County Marine patrol to place the buoys in Juanita Bay with the intent is to discourage boaters, personal water vehicles and even kayakers from entering the bay area with the intent of protecting nesting birds and wildlife in general.

Please evaluate Policy 19.1 in Attachment 4 to determine if this effectively addresses this issue.

4. **Overwater Residential Structures**

At the March 13th meeting, the Planning Commission requested additional information on the current regulations addressing overwater residential structures. Given the information presented below, please consider Policy SMP-6.2 and determine whether any revisions or additional policies are necessary to address these nonconforming structures.

There are approximately seven nonconforming overwater multi-family structures located within the City of Kirkland. These structures are: The Mariner, Harbor Lights, Lakeside, Bayshore, Parkside, Yarrow Bay and Pebble Beach (see Attachment 8). The primary aspect of nonconformance for these structures is the location of all or a portion of the structures waterward of the high waterline. These developments also contain other areas of nonconformance, such as density, lot coverage, view corridors, height and public access.

As a result of their degree of nonconformance, these structures present special challenges in determining how to regulate remodeling activities or rebuilding in the event of damage.

Regulations regarding these developments are found in both the Kirkland Zoning Code and the current Kirkland Shoreline Master Program. The Zoning code and Shoreline Master Program specifically prohibit structures, other than moorage structures and public access piers, to be located waterward of the high waterline.

Presently, there are potential conflicts between the provisions in the SMP and Zoning Code on the provisions for damaged improvements. The key area of difference is the percentage of damage that can occur to an existing structure, while still allowing for reconstruction. If there is a conflict between the two, as in the case with the percentage of damage provisions for nonconforming development, the more restrictive of the two applies.

Current Shoreline Master Program

General Provisions

In general, it should be noted that the Washington Administrative Code contains provisions relating to nonconforming shoreline development in WAC 173-27-080 (see Attachment 9). Any standards that the City adopts must be consistent with these provisions. The City may opt to adopt different or additional standards, provided that they are no less stringent than the State's requirements.

Legal nonconforming structures and uses are those which were lawfully established or built and which do not conform to the current SMP. A legal nonconforming use is one which no longer would be allowed within the shoreline environment, while a nonconforming structure would include those structures that are inconsistent with bulk, setback, height or density standards established in the SMP or are otherwise inconsistent with the City's current community vision. Generally, legal nonconforming structures are allowed to remain and can be repaired or maintained, but the long term goal would be elimination of nonconforming improvements. As a result, a nonconformity is generally not allowed to be enlarged or increased.

The current Shoreline Master program contains provisions for nonconforming development in KMC 24.05.210 (see Attachment 10).

Provisions for Damaged Improvements

The current Shoreline Master Program contains provisions for nonconforming development in Section KMC 24.05.210, which states:

If a nonconforming development is damaged to an extent not exceeding seventy-five percent of the replacement cost of the original structure, it may be reconstructed to those configurations existing immediately prior to the time the structure was damaged, so long as restoration is completed within one year of the date of damage.

The current shoreline provisions for damaged improvements are adopted generally from WAC 173-27-080(8). There are no provisions in the Shoreline Master Program for continued uses, as allowed in the Zoning Code, which provides for greater flexibility in its rebuild provisions in the case of damage.

Provisions for Remodeling

As provided for under KMC 24.05.210, nonconforming development may be continued provided that it is not enlarged, intensified, increased or altered in any way which increases its nonconformity.

Kirkland Zoning Code

Provisions for Damaged Improvements

The Zoning Code provisions for nonconforming development are found in Section 162.30 (Special Provisions for Damaged Improvements) of the Code, which states:

1. If a nonconforming improvement is damaged by sudden accidental cause and the damage does not exceed 50 percent of the assessed or appraised value of that improvement, whichever is greater, the applicant may reconstruct that improvement. The reconstructed improvement may not be more nonconforming than it was immediately prior to the damage. A building permit to rebuild the nonconforming improvement must be applied for within six months or the nonconformance shall be considered to be terminated and shall not be resumed.
2. If the damage exceeds 50 percent of the assessed or appraised value of the improvement, whichever is greater, the improvement, the use conducted in or on the improvement, and other site improvements that support the damaged improvement must conform to this code.

However, the Zoning Code does contain provisions for certain nonconformances to continue if they meet specified criteria. If a property meets the test to be considered a "continued use" under the provisions of Section 162.55 or 162.60, then the rules regarding rebuilding after casualty destruction are relaxed and

the residential structure may be rebuilt, subject to conditions, even it is fully destroyed by fire or other casualty. There are two classes of continued uses. The first class applies to existing legal uses of land which became nonconforming as to use or density solely as a result of the adoption of Ordinance 2347 (Zoning Ordinance adopted in 1977 which, in part, established a minimum lot area per dwelling unit of 3600 square feet in the WD I zone). The rebuild provisions for this class of nonconforming uses is addressed under KZC 162.60 (see Attachment 11). The second class applies to existing legal uses of land which became nonconforming as to maximum lot coverage solely as a result of Ordinance 2678 (Zoning Ordinance adopted in 1982 which changed the manner in which lot coverage was calculated from building footprint only to all impervious area). The rebuild provisions for this class of nonconforming uses is addressed under KZC 162.55 (see Attachment 12).

Presently, at least five of the residential overwater condominiums have applied for and received approval of a Certificate of Continued Use under the zoning code provisions.

Examples from other jurisdictions

The City of Seattle also contains a number of existing overwater residential structures. The existing shoreline provisions addressing these nonconforming improvements are found in Attachment 13. The City of Seattle contains additional provisions that allow the Director to require compliance with their standards for regulated public access, as a condition of a substantial development permit for expansion or alteration of a development nonconforming as to public access requirements.

Please consider Policy SMP-6.2 and determine whether any revisions or additional policies are necessary to address these nonconforming structures.

5. Covered Moorage and Boat Canopies

There are two different types of covers for watercraft that are at issue in this discussion: covered moorage, which generally would include a roof structure erected over a moorage slip, and boat canopies, which is a canopy installed over a boatlift (see Attachment 16 for a photo showing these two different types).

The current Kirkland Zoning Code and Shoreline Master Program prohibit covered moorage structures, including canopies, whether for commercial or private use. These two ordinances have prohibited covered moorage since the early 1970s. The City is aware of numerous covered moorage structures along our shoreline. In reviewing aerial photographs of Kirkland's shoreline, it appears that there are approximately 17 existing canopies and at 3 moorage covers. In 2005, the City Council decided to suspend pending enforcement action on boat canopies and send a letter to shoreline property owners advising them that this issue would be addressed as part of the SMP Update, during which a final decision would be made about whether or not to allow any type of covered moorage.

In general, there are at least two potential concerns associated with covered moorage: the negative impact of shading to fish habitat and aesthetics.

Environmental Impacts

Shade created by overwater structures affects behavior of juvenile salmon and/or predators. While there is still evolving scientific information on this issue, there is increasing acceptance by the scientific community that there is a connection between overwater coverage and predation on juvenile salmon. In addition, additional shading can alter the aquatic vegetation community, including density, species composition, and size.

The Army Corps of Engineers has set forth guidelines addressing watercraft lifts and canopies in a Regional General Permit (RGP-1) (see Category E on page 2 of Attachment 14); compliance with these standards allows expedited permitting through the Army Corps of Engineers. One of the requirements under these provisions is that the canopy material be composed of a translucent material. Also, only one canopy is permitted to be installed per single or joint use residential overwater structure; the RGP does not apply to commercial marinas. The guidelines also establish impact reduction and conservation measures that are applied to a proposal in order to offset losses to the aquatic environment resulting from the impacts of watercraft lifts and canopies. Installation of shoreline vegetation is an example of a type of measure that could be used to meet these requirements.

There appears to be no similar guidelines for moorage covers. As a result, shoreline property owners wishing to install a moorage cover would need to obtain approval from the U.S. Army Corps of Engineers (Corps) under an Individual permit.

Aesthetics

Aesthetically, covered moorage structures and boat canopies potentially affect water views, both from neighboring properties and public places. A proliferation of such structures could have a negative impact on the public’s ability to view and enjoy the water.

As part of the SMP update process, staff would like to review this issue and have a discussion about the pros and cons of these structures in order to evaluate whether or not to remove the existing prohibition and, if so, what conditions should be placed on either moorage covers or boat canopies.

As way of background, please note that staff has received communication from some shoreline property owners requesting that the City allow covered moorage (see Attachment 17).

The following is a brief description of the approach some other jurisdictions have taken, either through their critical areas ordinance or through their draft SMP update process. Please note that for those jurisdictions that have addressed this issue through their critical areas ordinance, they will need to re-evaluate this issue as part of their SMP update and may revise or include additional provisions as part of this process.

Jurisdiction	Code Section	Vegetation Management Standards
Bellevue	20.25E.080.N.6	For residential lots, allows installation of a translucent canopy in compliance with RGP-1 standards. Also contains standards limiting location relative to neighboring properties.
Sammamish	Draft SMP	Does not allow covered boat moorage.

Jurisdiction	Code Section	Vegetation Management Standards
Redmond	Draft SMP	Does not appear to allow coverage boat moorage.
Lake Forest Park	Draft SMP	<p>A moorage cover may be permitted over a boatslip or boat lift in the Shoreline Residential Environment provided that:</p> <ul style="list-style-type: none"> ➤ The cover must be constructed of light-permeable materials, ➤ The cover must be elevated above the water's surface to the maximum extent practicable, and ➤ The applicant demonstrates to the satisfaction of the Shoreline Administrator that the moorage cover is the minimum size necessary to serve the intended use of protecting the watercraft from the elements.

IV. ATTACHMENTS

1. Draft SMP Goal and Policy Language for the Introduction
2. Draft SMP Goal and Policy Language for the Shoreline Land Use Section
3. Draft SMP Goal and Policy Language for the Shoreline Environment Section
4. Draft SMP Goal and Policy Language for the Shoreline Parks, Recreation and Open Space Section
5. March 24, 2008 letter from Richard K. Sandaas
6. Sample shoreline planting plan, King County
7. City of Sammamish excerpts from Chapter 21A.50
8. Vicinity maps of nonconforming overwater structures
9. WAC 173-27-080
10. KMC 24.05.210
11. KZC 162.60
12. KZC 162.55
13. City of Seattle nonconforming provisions
14. Regional General Permit (RGP-1)
15. City of Bellevue Critical Area Ordinance requirements for shoreline buffers
16. Aerial photograph showing both canopies and moorage covers
17. Table Summarizing Public Comments

cc: File No. ZON06-00017, Sub-file #1

Introduction

Statutory Framework

The City of Kirkland manages the shoreline environment through implementation of the Shoreline Master Program. The Washington State Shoreline Management Act (SMA) provides guidance and prescribes the requirements for locally adopted Shoreline Master Programs. The goal of the SMA, passed by the Legislature in 1971 and adopted by the public in a 1972 referendum, is to “prevent the inherent harm in an uncoordinated and piecemeal development of the state’s shorelines”. The SMA establishes a broad policy giving preferences to uses that:

- Protect shoreline natural resources, including water quality, vegetation, and fish and wildlife habitat;
- Depend on the proximity to the shoreline (i.e. “water dependent uses”);
- Preserve and enhance public access or increase recreational opportunities for the public along shorelines.

The SMA establishes a balance of authority between local and state government. Under the SMA, Kirkland adopts a shoreline master program that is based on state guidelines but tailored to the specific needs of the community. The program represents a comprehensive vision of how shoreline areas will be used and developed over time.

The Department of Ecology has issued State guidelines for Shoreline Master Programs in WAC 173-26. The guidelines are intended to assist local governments in developing master programs, which must be accepted and approved by the Department of Ecology as meeting the policy objectives of the SMA established under RCW 90.58.020 as well as the criteria for state review of local master programs under RCW 90.58.090.

Vision

The City of Kirkland’s identity is strongly influenced and defined by its waterfront setting. Views of Lake Washington give Kirkland its sense of place and the City’s integrated network of trails, parks, and open spaces along the shoreline provide abundant opportunities for public access to the shoreline. The City’s waterfront parks provide places and host events where people can gather and interact. Kirkland’s shoreline commercial districts also provide opportunities for residents and visitors to enjoy the City’s unique natural setting along the shoreline. The waterfront provides many varied recreational opportunities to meet the needs of Kirkland citizens and provides a gateway to the City. It also provides vital habitat for fish and wildlife and the natural systems within the shoreline serve many essential biological, hydrological and geological functions.

The shoreline zone is one of the most valuable and fragile of Kirkland’s natural resources and, as a result, the utilization, protection, restoration, and preservation of the shoreline zone must be carefully considered.

The City developed its first Shoreline Master Program in 1974 as a component of the Comprehensive Plan. Key considerations within this plan and subsequent amendments have included conservation, public access to the shoreline, and the guidance for water-oriented recreational uses to locate along the Kirkland shoreline. These initial policy objectives are reflected in today’s protection of the City’s significant natural areas as open space, as well as the extensive shoreline trail system and network of shoreline parks which have been established over time.

~~Yet, o~~Over the significant time that has spanned since the original adoption of the City's first Shoreline Master Program, there have been substantial changes to the lakefront environment. Industrial uses, such as the shipyard previously located at Carillon Point, have left Kirkland's shoreline. The City has added significant publicly owned properties to our waterfront park system, most significantly the Yarrow Bay wetlands, Juanita Bay Park, Juanita Beach Park, and David E. Brink Park. Water quality within Lake Washington, once severely impacted by nutrient loading from sewage, has remarkably improved since regional wastewater treatment plants were constructed and the final plant discharging directly into the lake was closed in 1967.

The lake environment has also been impacted by new challenges. The shoreline character has continued to change over time, as additional docks and bulkheads have been built, contributing to a loss of woody debris and other complex habitat features along the shoreline. Impervious surfaces have increased both within the shoreline area and in adjacent watersheds and this, together with consequent reduction in soil infiltration, has been correlated with increased velocity, volume and frequency of surface water flows. These and other changes have impacted the habitat for salmonids, ~~resulting in~~ in 1999, the listing of chinook salmon and bull trout were listed as Threatened under the Federal Endangered Species Act in 1999. The region's response to this listing has resulted in new scientific data and research that has improved our understanding of shoreline ecological functions and their value in terms of fish and wildlife, water quality, and human health.

To address these changes, comply with the mandates of the Shoreline Management Act, and enable the City to as well as plan for emerging issues, the City has initiated an extensive update of its Shoreline Master Program. The new program is needed to respond to current conditions and the community's vision for the future.

In updating the program, the City's primary objectives are to:

- Enable current and future generations to enjoy an attractive, healthy and safe waterfront.
- ~~Provide a healthy environment along the shoreline to enable current and future generations to enjoy using it.~~
- Protect the quality of water and shoreline natural resources to preserve fish and wildlife and their habitats.
- ~~Provide a healthy environment along the shoreline to preserve fish and wildlife and their habitats.~~
- Protect the City's investments as well as those of property owners along and near the shoreline.
- Produce an updated Shoreline Master Program (SMP) that is supported by Kirkland's elected officials, citizens, property owners and businesses, the State of Washington, and other key interest groups with an interest in the shoreline.
- Efficiently achieve the SMP mandates of the State.

The City of Kirkland, through adoption of the Shoreline Master Program, intends to implement the Washington State Shoreline Management Act (RCW 90.58) and its policies, including protecting the State's shorelines and their associated natural resources, planning for and fostering all reasonable and appropriate uses, and providing opportunities for the general public to have access to and enjoy shorelines.

The City of Kirkland's Shoreline Master Program represents the City's participation in a coordinated planning effort to protect the public interest associated with the shorelines of the State while, at the same time, recognizing and protecting private property rights consistent with the public interest. The Program preserves the public's opportunity to enjoy the physical and aesthetic qualities of shorelines of the State and protects the functions of shorelines so that, at a minimum, the City achieves a 'no net loss' of ecological functions, as evaluated under the

Final Shoreline Analysis Report issued in December 2006. The Program also promotes restoration of ecological functions where such functions are found to have been impaired, enabling functions to improve over time.

The goals and policies of the SMA constitute one of the goals for growth management as set forth in RCW 36.70A.020 and, as a result, the goals and policies of this SMP serve as an element of Kirkland's Comprehensive Plan and should be consistent with other elements of the Comprehensive Plan. In addition, other portions of the SMP adopted under chapter 90.58 RCW, including use regulations, are considered a part of the city's development regulations.

Organization

The policies are grouped under four sections: Shoreline Land Use, Shoreline Parks, Open Space/Parks and Recreation, Natural Shoreline Environment and Transportation. The Shoreline *Land Use* section works together with other policies of the Shoreline Master Program contained in this Chapter of the Comprehensive Plan. The Shoreline Land Use section addresses the general distribution and location of shoreline uses, the Shoreline Parks, Open Space and Recreation section more specifically addresses issues of public park operations and maintenance and standards for private shoreline recreation uses and modifications. The Natural Shoreline Environment section more specifically addresses shoreline critical areas, water quality, vegetation, and shoreline modifications such as filling and dredging. The *Transportation* section addresses both public access and circulation within the shoreline area.

Shoreline Master Program Goals and Policies

Shoreline Land Use

Goal SMP-1: Provide a high quality shoreline environment where land use pattern along the shoreline that reflects the following priorities:

- (1) -Natural systems are preserved. Recognize and protect the statewide interest over local interest;***
- (2) Preserve the natural character of the shoreline; Ecological functions of the shoreline are maintained and improved over time.***
- (3) The public enjoys access to and views of the lake. Result in long term over short term benefit;***
- (4) Recreational opportunities are abundant. Protect the resources and ecology of the shoreline;***
- (5) Increase public access to the shoreline;***
- (6) Increase recreational opportunities for the public in the shoreline;***

The Kirkland shoreline forms the western boundary of the City and encompasses 32,238 lineal feet (6.1 miles) of Lake Washington waterfront. A significant portion of the City's shoreline is area zoned or designated as park/open space. Approximately 57 percent of the area within the shoreline jurisdiction, or a total of 132.7 acres of the shoreline, are within areas designated as park or open space. Except for a few anomalies, the high-functioning portions of the shoreline have been appropriately designated and preserved within these areas. The City's extensive network of parks also provides the public with significant access opportunities throughout the City.

Much of the remaining shoreline is fully developed with single-family residential uses or areas of concentrated, compact development containing commercial, multifamily, or mixed-uses. In general, this pattern of land use is stable and only minimal changes are anticipated in the planning horizon. Redevelopment on some properties may result in single-family residences converting over time to multifamily or with new commercial or mixed-uses replacing existing commercial uses. Given the lack of existing vacant land (only 10 percent of the land within the shoreline is vacant, and much of that is encumbered by sensitive areas), additional housing or commercial square footage within the shoreline area will come over time as redevelopment and additions occur to existing developed properties.

Management of the shoreline area will need to carefully balance and achieve both shoreline utilization and protection of ecological functions. To protect valuable shoreline resources, the Shoreline Master Program limits the extent and character of a number of land uses and activities. Shoreline policies allow for a broad range of uses within the shoreline, while establishing limits to protect these shoreline resources and adjacent uses.

Provisions aimed at protecting the natural environment should evaluate issues at both a larger landscape scale, focusing on natural systems, as well as at the scale of ecological functions, which are the physical, chemical, and biological processes that contribute to the maintenance of the aquatic and terrestrial environments that constitute the shoreline's natural ecosystem.

Issues that must be addressed by the Shoreline Use Element include:

- How to manage new growth and redevelopment to be sensitive to and not degrade habitat, ecological systems and other shoreline resources.
- How to foster those uses that are unique to or depend on the proximity to the shoreline or provide an opportunity for substantial numbers of the people to enjoy the shoreline.
- How to ensure that land uses and shoreline activities are designed and conducted to minimize damage to the ecology of the shorelines and/or interference with the public's use of the water and, where consistent with public access planning, provide opportunities for the general public to have access to the shorelines.
- How to protect the public right of navigation and ensure that uses minimize any interference with the public's use of the water.

Policy SMP-1.1 Allow for a diversity of appropriate uses within the shoreline area consistent with the varied character of the shorelines within the city.

The City's shoreline area is a collection of varied neighborhoods and business districts, each containing their own distinctive ~~land use pattern character~~ as well as biological and physical ~~character condition along of~~ the shoreline. Kirkland's shorelines contain valuable natural amenities, providing critical habitat for fish and wildlife within the Juanita Bay and Yarrow Bay wetlands, two high-functioning natural areas. The shoreline also contains portions of several business districts, each with its own distinctive identity, including the Central Business District, Juanita Business District, and Carillon Point. Medium to high density residential and commercial uses are located to the south of the Central Business District. The shoreline in these more urban areas is heavily altered with shoreline armoring, overwater coverage, and impervious areas. Single-family residential uses are prevalent in the area north of the Central Business District. The City also contains a system of waterfront parks, which provide a broad range of passive and active recreational activities and environmental protection.

Policy SMP-1.2 Preserve and enhance the natural and aesthetic quality of important shoreline areas while allowing for reasonable development to meet the needs of the city and its residents.

These different and unique shoreline areas each contain qualities that contribute to Kirkland's shoreline identity, including waterfront orientation, shoreline public views and access, numerous and diverse recreational opportunities, abundant open space, natural habitat, and waterfront access trails. The Shoreline Master Program should seek to support these and other features which significantly contribute to the City's desired character along the shoreline.

Policy SMP-1.3 Maintain existing and foster new uses that are dependent upon, or have a more direct relationship with the shoreline and Lake Washington.

Certain shoreline uses are more dependent on, or have a more direct relationship with the shoreline than others. The Shoreline Management Act requires that shoreline master programs give priority to:

- Water-dependent uses. A water-dependent use is dependent on the water by reason of the intrinsic nature of its operations, and cannot exist in any other location. Examples include swimming beaches, boat launches, boat docks, and marinas. Industrial water-dependent uses, such as ship building

facilities, are not currently found nor are planned along the City's waterfront. The Kirkland waterfront contains several facilities that would be considered water-dependent uses. The City contains one public marina and several private marinas. Large private commercial marinas include Carillon Point Marina, Yarrow Bay Marina and Kirkland Yacht Club. The Yarrow Bay Marina contains a retail fuel service facility for boats, while the tour boat operators working out of the City's public marina provide shoreline tours. The City should encourage these water-dependent uses to remain.

- Water-related uses. A water-related use is dependant on a shoreline location because it has a functional requirement associated with a waterfront location, such as the transport of goods by water, or uses that support water-dependant uses. Examples include boat sales and outfitters and manufacturers that transport goods by water. These uses are typically not located along Kirkland's shoreline, though the Yarrow Bay Marina contains a boat repair and service facility.
- Water-enjoyment uses. A water enjoyment use is a recreational use or other use that facilitates public access to the shoreline as a primary characteristic of the use, or a use that draws substantial numbers of people to the shoreline and that provides opportunities, through its design, location or operation, for the public to enjoy the physical and aesthetic benefits of the shoreline. Examples include parks and trails, museums, restaurants, and aquariums. Water enjoyment uses such as restaurants, retail stores, and offices are the primary commercial use along Kirkland's shoreline.
- Single family residential uses. The City contains a single-family residential neighborhood in the shoreline area within the Market Neighborhood.
- Shoreline recreation. The shoreline contains an extensive network of open spaces and public parks along the shoreline, providing places for fishing, swimming, boating, wildlife viewing and other recreational and educational activities.

Shoreline Environment Designations

Goal SMP-2: Provide a comprehensive shoreline environment designation system to categorize Kirkland's shorelines into similar shoreline areas to guide the use and management of these areas.

Environment designations are analogous to zoning designations for areas under SMP jurisdiction. Their intent is to encourage uses that will protect or enhance the current or desired character of a shoreline based on their physical, biological and development characteristics.

Managing Shoreline Land Uses

Goal SMP-3: ~~Shoreline uses shall be located, designed and manage shoreline uses~~ to prevent and, where possible, restore significant adverse impacts on water quality, fish and wildlife habitats, the environment and other uses.

It is important that shoreline development be regulated to control pollution and prevention of damage to the natural environment. Without proper management, shoreline uses can cause significant damage to the shoreline

area through cumulative impacts from shoreline armoring, stormwater runoff, introduction of pollutants, and vegetation modification and removal.

Given existing conditions, there is very little capacity for future development within the shoreline. However, it is anticipated that expansion, redevelopment or alteration to existing development will occur over time. With remodeling or replacement, opportunities exist to improve the shoreline environment. In particular, improvements to nearshore vegetation cover and reductions in impervious surface coverage are two key opportunity areas on private property to restore ecological function along the shoreline. Reduction or modification of shoreline armoring and reduction of overwater cover and in-water structures provide other opportunities.

Policy SMP-3.1 Establish development regulations that avoid, minimize and mitigate impacts
~~Shoreline Master Program development regulations shall ensure no net loss of to the ecological functions associated with the shoreline zone.~~

In deciding whether to allow uses and activities in shoreline areas, the potential adverse impacts associated with uses or activities should be considered and avoided, where possible. This can be done by carefully selecting allowed uses, providing policies and standards to prevent or minimize adverse impacts, and carefully reviewing development proposals to prevent or minimize adverse impacts.

Policy SMP-3.2 Provide adequate setbacks and buffers from the water and ample open space and pervious areas to protect natural features and minimize use conflicts.

The purpose of a setback is to minimize potential impacts of adjacent land uses on a natural feature, such as Lake Washington, and maximize the long-term viability of the natural feature. Setbacks perform a number of significant functions including reducing water temperature; filtering sediments and other contaminants from stormwater; reducing nutrient loads to lakes; stabilizing stream banks with vegetation; providing riparian wildlife habitat; maintaining and protecting fish habitats; forming aquatic food webs; and providing a visually appealing greenbelt and recreational opportunities.

Establishing the width of a setback so it is effective depends on the type and sensitivity of the natural feature and the expected impacts of surrounding land uses. In determining appropriate setbacks in the shoreline jurisdiction, the City should consider shoreline ecological functions as well as aesthetic issues.

Policy SMP-3.3 Require ~~New~~ development or-redevelopment should to include establishment or preservation of appropriate shoreline vegetation to contribute to the ecological functions of the shoreline area, ~~while still allowing for view protection.~~

Shoreline vegetation plays an important role in maintaining temperature, removing excessive nutrients, attenuating wave energy, sediment removal and stabilization, and providing woody debris and other organic matter along Lake Washington.

A native plant buffer can also provide homeowners with an attractive landscape that offers variety and seasonal color; reduced maintenance; more privacy without sacrificing views; increased property values, improved water quality; and a yard that is safer for families, pets and the planet. Proper plant selection and design can ensure that views are not diminished.

Policy SMP-3.4 ~~Development should i~~ncorporate low-impact development practices, where feasible, to reduce the amount of impervious surface area.

Low impact development strives to mimic nature by minimizing impervious surface, infiltrating surface water through biofiltration and bio-retention facilities, retaining contiguous forested areas and maintaining the character of the natural hydrologic cycle. Utilizing these practices can have many benefits, including improvement of water quality and reduction of stream and fish habitat impacts.

Policy SMP-3.5 Encourage the development of joint-use overwater structures, such as joint use docks, to reduce impacts to the shoreline environment.

The presence of an extensive number of docks has altered the shoreline. The construction of piers can modify the aquatic ecosystem by blocking sunlight and creating large areas of overhead cover. Minimizing the number of new docks by using joint facilities is one technique that can be used to minimize the effect of piers on the shoreline environment.

Policy SMP-3.6 Allow variations to development standards that are compatible with surrounding development in order to facilitate restoration opportunities along the shoreline.

The City should consider appropriate variations to development standards to maximize the opportunities to restore shoreline functions. For example, reductions in setbacks could be used to facilitate restoration in highly altered areas that currently provide limited function and value for such attributes as large woody debris recruitment, shading, or habitat.

Goal SMP-4: ~~The Shoreline Master Program should i~~ncorporate a variety of management tools, including improvement of City practices and programs, public acquisition, public involvement and education, incentives, and regulation and enforcement to achieve its goals for the shoreline area.

Because Kirkland's natural resources are located on both public and on private land, a variety of approaches is needed for effective management of the shoreline. Kirkland should ensure that it uses a mix of public education and involvement, acquisition, program funding, and improvement of City practices on City land, together with regulation and enforcement.

Goal SMP-5: ~~While implementing the Shoreline Master Program, Ensure that private property rights should be are~~respected.

A significant portion of Kirkland's shoreline is located in private ownership. Aspects of the Shoreline Master Program, including development regulations, setback requirements, environmental regulations and other similar regulatory provisions may take the form of limitations on the use of private property. In establishing and implementing these types of land use controls, the City should be careful to consider the public and private interests as well as the long term costs and benefits.

Residential

Goal SMP-6: Protect and enhance the character, quality and function of existing residential neighborhoods within the City's shoreline area.

Policy SMP-6.1 Permit Structures or other development accessory to residential uses ~~are permitted in the shoreline jurisdiction.~~

Accessory uses such as garages, sheds, accessory dwelling units, and fences are common features that are normally applicable to residential uses located landward of the ordinary high water mark and should be permitted.

Policy SMP-6.2 New overwater residences are not a preferred use and shall not be permitted. Existing non-conforming overwater residential structures should not be enlarged or expanded.

The City contains a number of existing overwater residential structures that were constructed prior to the City's limitation on overwater structures to water dependent uses. These existing structures have created large areas of overhead cover, impacting the aquatic environment. Many of these structures are likely to be remodeled and modernized in the future and these activities should be carefully reviewed to prevent additional adverse impacts and to improve existing conditions, where possible.

Policy SMP-6.3 Manage New subdivisions of land within the shoreline ~~should be designed to:~~

- *Avoid the creation of new parcels with building sites that would impact wetlands, streams, slopes, frequently flooded areas and their associated buffers.*
- *Ensure no net loss of ecological functions resulting from the division of land or build-out of the lots;*
- *Prevent the need for new shoreline stabilization or flood risk measures that would cause significant impacts to other properties or public improvements or a net loss of shoreline ecological functions; and*
- *Implement the provisions and policies for shoreline designations and the general policy goals of this Program.*
- *Provide public access along the shoreline.*

Though there is not a great capacity to add new units to the shoreline area through subdivision, if properties are divided they should be designed to ensure no net loss, minimize impacts, and prevent the need for new shoreline stabilization structures.

Policy SMP-6.4 Evaluate new Single-family development within areas impacted by critical areas ~~shall be carefully evaluated to protect ecological functions and ensure some reasonable economic use for all property within Kirkland's shoreline.~~

West of and contiguous with the Yarrow Bay wetlands adjacent to the City limits there are a number of properties that were previously platted for residential use but remain vacant, forested, and impacted by critical areas. In addition, a few properties along the Forbes Creek corridor and Juanita Bay may be similarly encumbered. When considering development proposals on these properties, the City should use a process designed to assure that proposed regulatory or administrative actions do not unconstitutionally infringe upon private property rights.

Commercial

Goal SMP-7: Plan for commercial development along the shoreline the will enhance and provide access to the waterfront.

Policy SMP-7.1 ~~Permit W~~water-enjoyment uses ~~are appropriate~~ within the shoreline area of the Central Business District.

Downtown Kirkland is an active urban waterfront which strongly benefits from its adjacency to Moss Bay. The Downtown area has a strong land use pattern that is defined by its restaurants, art galleries and specialty shops, which are connected within a pedestrian-oriented district. These uses draw substantial numbers of people to the Downtown and can provide opportunities, if appropriately designed and located, for the public to enjoy the physical and aesthetic benefits of the shoreline. For these reasons, water-enjoyment uses, such as restaurants, hotels, civic uses, and retail or other commercial uses should be encouraged within the Downtown provided they are designed to enhance the waterfront setting and pedestrian activity.

Policy SMP-7.2 ~~Manage development~~ Development standards for the in the shoreline area in-tof the Central Business District ~~should address~~to provide visual access and linkages to the shoreline.

Development along the shoreline has often “turned its back” to Lake Washington, with active areas located opposite the lake and separated from it by large surface parking lots. As a result of this historical development pattern, existing development along the shoreline area in the Downtown core is not well oriented to capitalize on its waterfront setting. Future growth and redevelopment along the shoreline in the Downtown should celebrate the waterfront setting by reorienting the downtown to the lake. Improvements should be made to the visual and physical linkage between buildings and the lake. One key opportunity is to develop a large public plaza over the Marina Park parking lot in order to better connect the Downtown to the lake and the park. Opportunities to connect existing pedestrian routes should also be a high-priority objective.

Existing development on the west side of Lake Street north of Second Avenue South and bordering the shoreline is presently low in height and, as a result, allows public views of the lake from many vantages around Downtown and also allows evening sun into the Downtown core. In general, lower building heights should be considered in this area, ~~unless greater building heights are offset by substantial public benefits, such as through-block public pedestrian access or view corridors.~~

Policy SMP-7.3 ~~Maximum public access, use, and visual access to the lake within~~ Development within Carillon Point and the surrounding commercial area ~~should continue to maximize public access, use, and visual access to the lake.~~

Carillon Point is a vibrant mixed use development that contains office space, restaurants, and retail space in addition to a hotel, day spa and marina facilities. The site has been designed to provide both visual and physical access to the shoreline, including expansive view corridors which provide a visual linkage from Lake Washington Blvd NE to the lake, as well as an internal pedestrian walkway system and outdoor plazas. The Central Plaza of Carillon Point is frequently used for public gatherings and events. The Plaza is encompassed by a promenade and Carillon Point's commercial uses. If new development or redevelopment occurs on this site, existing amenities related to public access, use and visual access to the lake should be preserved.

Immediately south of Carillon Point, the Yarrow Bay Marina and new office development provides opportunities for public use and enjoyment of the waterfront, including boat rental facilities, a public waterfront trail and waterfront access area with seating and interpretative signs. In addition, public views across the site have been preserved in an expansive view corridor.

If new development or redevelopment occurs in the commercial area, the strong public access to and along the water's edge, waterfront public use areas, water-dependent uses such as the marinas, and views from Lake Washington Blvd should be preserved to the greatest extent feasible.

Policy SMP-7.4 Enhance the physical and visual linkages to Lake Washington in the Juanita Business District.

The shoreline area of the Juanita Business District presently contains a mix of retail, office and residential uses. Visual linkages to the lake in the Juanita Business District are limited, with existing development blocking most of the shoreline. Waterfront access trails are missing in several key locations, limiting access between Juanita Bay Park and Juanita Beach Park, which border the Business District on the north and south.

The ability to enhance physical and visual access to the Lake is challenging in this area. Several of the shoreline properties are developed with residential condominiums, which are unlikely to redevelop. Some of the commercial properties are significantly encumbered by wetlands that are associated with Lake Washington. Should properties redevelop in this area, public access should be required as a part of any redevelopment proposal.

Despite these challenges, future redevelopment along the shoreline in the Juanita Business District should emphasize Juanita Bay as a key aspect of the district's identity, highlighting recreational opportunities available at Juanita Beach Park and providing better visual and pedestrian connections to both Juanita Bay and Juanita Beach Park and Lake Washington.

Policy SMP-7.5 ~~Allow limited commercial uses~~ should be allowed in the area located between the Central Business District and Planned Area 15 if public access to and use of the shoreline is enhanced.

Commercial uses which are open to and will attract the general public to the shoreline, such as restaurants, are appropriate within the urban area located between Downtown Kirkland and Carillon Point. These uses will enhance the opportunity for public access to this segment of the shoreline, and will compliment neighboring shoreline parks and, as a result, should be encouraged. To assure that these uses enhance the opportunity for the public to take advantage of the shoreline, these uses should include amenities where the public can view and enjoy the shoreline. These uses should also be limited and designed to assure that they do not adversely impact the natural environment and interfere with nearby uses.

Policy SMP-7.6 ~~Allow limited commercial uses, such as a hotel/motel and limited marina use,~~ should be allowed within Planned Area 3B.

Planned Area 3B is fully developed with multifamily residential uses and contains a private marina facility. The site is also used for overnight lodging. The site has also been improved with a public trail along its entire perimeter, providing public access to Lake Washington and visual access to the Yarrow Bay wetlands.

Policy SMP-7.7 Non-water oriented commercial development may be allowed if the site is physically separated from the shoreline by another property or right-of-way.

There are several commercial properties which do not have direct frontage on Lake Washington, either because they are separated by right-of-way (Lake Washington Blvd NE, Lake Street, and 98th Avenue NE) or by another property. These properties should be allowed a greater flexibility of uses, given the physical separation from the waterfront area.

Policy SMP-7.8 ~~Prohibit~~ Overwater commercial development other than docks, piers and similar features that support water dependent uses ~~should be prohibited~~.

Overwater structures can adversely impact the shoreline environment and should be avoided, except where necessary to support water dependent uses, and then only when appropriately mitigated.

Boating facilities

Goal SMP-9: Manage boating facilities to avoid or minimize adverse impacts.

Policy SMP-9.1: Locate new boating facilities and allow expansion of existing facilities at sites with suitable environmental conditions, shoreline configuration, and access.

One public marina and several private marinas are located on the lake within Kirkland. The Kirkland Public Dock is located downtown at Marina Park. Large private marinas include Carillon Point Marina, Yarrow Bay Marina and Kirkland Yacht Club. Other private marinas providing moorage for multifamily developments are also located along the shoreline.

As new boating facilities are established or existing ones expanded, the facility should be designed to:

- Meet health, safety, and welfare requirements, including provisions for pump-out facilities;
- Mitigate aesthetic impacts;
- Minimize impacts to neighboring uses;
- Provide public access;
- Assure no net loss of shoreline ecological functions and prevent other significant adverse impacts; and
- Protect the rights of navigation and access to recreational areas.

Policy SMP-9.2: Require restoration activities when substantial improvements or repair to existing boating facilities is planned.

The Kirkland waterfront has been extensively modified with piers and other overwater structures. These overwater structures impact the nearshore aquatic habitat, blocking sunlight and creating large areas of overhead cover. These impacts, where they exist, should be mitigated when substantial improvements or repair to existing boating facilities are planned.

Restoration activities could include reducing or eliminating the number of boathouses and solid moorage covers, minimizing widths of piers and floats, increasing light transmission through over-water structures, enhancing the shoreline with native vegetation, improving shallow-water habitat, reducing the overall number and size of pier piles, and improving the quality of stormwater runoff.

Goal SMP-10: Promote use of best management practices to control pollutants from boat use, maintenance and repair, as well as proper sewage disposal for boats and potential invasive vegetation transfer.

Marinas and the operation, maintenance and cleaning of boats can be significant sources of pollutants in water and sediments, as well as in animal and plant tissues. Toxic pollutants enter marina waters through discharges from boats or other sources, spills or stormwater runoff. These pollutants can elevate the level of metals and hydrocarbons in the water and decrease the level of dissolved oxygen required by fish and other aquatic organisms for survival. Moreover, metals and hydrocarbons may accumulate in higher concentrations in sediments than in the overlying water, and in turn affect the organisms attached to or burrowing in the sediment.

Untreated sewage from boats is one of several nonpoint sources of pathogens that pose a threat to human health. As indicated by the presence of fecal coliform bacteria, these pathogens may reside in the water column, and in sediments. Discharges of treated and untreated sewage from boats may be a problem in smaller bays with poor water circulation near swimming areas and marinas. Boat operations, including anchoring, can destroy habitat, resuspend bottom sediments and increase turbidity, thereby affecting the photosynthetic activity of algae and vegetation.

Significant steps have been taken at all levels of government and in the private sector to reduce the impacts of marinas and boating on the aquatic environment. The federal Clean Water Act provides the federal government with the authority to regulate the discharge of boat sewage. In addition, the Department of Ecology has developed environmentally protective guidelines for the design and siting of marinas and sewage disposal facilities. The State Parks and Recreation Commission's boater education program provides technical assistance and signage and other materials to marinas. At the local level, governments and private businesses participate in boater programs as well, educating their moorage clients and provide them with the means to dispose of their wastes properly.

Managing Shoreline Modifications

Goal SMP-11: Manage shoreline modifications to avoid, minimize, or mitigate significant adverse impacts.

Significant adverse impacts caused from shoreline modifications should be avoided, minimized, or ~~mitigated~~ **compensated** in the following sequential order of preference:

- Avoiding the impact altogether by not taking a certain action or part of an action.
- Minimizing the impact(s) by limiting the degree or magnitude of the action and its implementation, by using appropriate technology, or by taking affirmative steps, such as project redesign, relocation, or timing, to avoid or reduce impacts;
- Minimizing or eliminating the impact by restoring or stabilizing the area through engineered or other methods;
- Rectifying the impact by repairing, rehabilitating, or restoring the affected environment to the historical conditions or the conditions existing at the time of the initiation of the project;
- Reducing or eliminating the impact or hazard over time by preservation and maintenance operations during the life of the action;

- Compensating for the impact by replacing, enhancing, or providing substitute resources or environments; and
- Monitoring the hazard or other required mitigation and taking remedial action when necessary.

Policy SMP-11.1: Assure that shoreline modifications individually and cumulatively do not result in a net loss of ecological functions.

Shoreline modifications are man-made alterations to the natural lake edge and nearshore environment and primarily include a variety of armoring types (some associated with fill), piers, and other in-water structures. These modifications alter the function of the lake edge, change erosion and sediment movement patterns, affect the distribution of aquatic vegetation and are often accompanied by upland vegetation loss. Impacts from these shoreline modifications can be minimized by giving preference to those types of shoreline modifications that have a lesser impact on ecological functions and requiring mitigation of identified impacts resulting from shoreline modifications.

| *Fill*

Policy SMP-11.2: Limit fill waterward of the ordinary high water mark to support ecological restoration or to facilitate water-dependent or public access uses.

Fill allows for the creation of dry upland areas by the deposition of sand, silt, gravel or other materials onto areas waterward of the ordinary high water mark. Fill has traditionally been used in the shoreline area to level or expand residential yards and, in many cases, has been associated with armoring of the shoreline. This use of fill has resulted in an alteration of the natural functions of the lake edge and has often been accompanied by a loss of upland vegetation. As a result, this use of fill should be discouraged.

Alternatively, fill can also be used for ecological restoration, such as beach nourishment, when materials are placed on the lake bottom waterward of the ordinary high water mark. This type of fill activity should be encouraged, provided that it is designed, located and constructed to improve shoreline ecological functions.

| *Clearing and Grading*

Policy SMP-11.3: Limit clearing and grading activities in the shoreline area.

Clearing and grading activities are typically associated with upland development. These activities have the potential to cause erosion, siltation, increase runoff and flood volumes, reduce flood storage capacity and damage habitat and therefore should be carefully considered to ensure that any potential adverse impacts are avoided or minimized. Impacts from clearing and grading activities can be avoided through proper site planning, construction timing practices, and use of erosion and drainage control methods. Generally, these activities should be limited to the maximum extent necessary to accommodate the proposed use, and should be designed and located to protect shoreline ecological functions and ecosystem-wide processes.

Dredging

Policy SMP-11.4: Design and locate new shoreline development to avoid the need for dredging.

Policy SMP-11.5: Discourage dredging operations, including disposal of dredge materials.

Dredging is typically associated with a reconfiguration of the lake bed or stream channel to remove sediments, expand a channel, or relocate or reconfigure a channel. For instance, dredging can be used to excavate moorage slips that have been filled in with sediments or are located in shallow water. In other cases, dredging can be used to remove accumulated sediment that has disrupted water flow and, as a result, water quality, as is the case at Juanita Beach Park.

Dredging activities can have a number of adverse impacts, such as an increase in turbidity and disturbance to or loss of animal and plant species. Dredging activities can also release nutrients in sediments, and may temporarily result in increased growth of nuisance macrophytes such as milfoil after construction is completed. Dredging can also release toxic materials into the water column. As a result, dredging activities should be limited except when necessary for habitat or water quality restoration, or to restore access, and where impacts to habitat are minimized and mitigated.

Shoreline Stabilization

Policy SMP-11.6: Limit use of structural solutions hard structural stabilization measures to reduce shoreline damage.

Due to the potential for adverse impacts, it is the intent of this policy to require that shoreline stabilization be accomplished through the use of nonstructural measures, such as building setbacks or on-site drainage improvements, or soft structural measures, such as bioengineering or beach enhancement unless these methods are determined to be infeasible, based on a scientific or geotechnical analysis.

With the exception of our large natural park areas, Kirkland's shoreline has been highly modified by the presence of shoreline protective structures (e.g. bulkheads, rip rap, revetments). Approximately 60 percent of the shoreline is armored by either a vertical bulkhead (concrete or timber) or a boulder bulkhead. Shoreline armoring is pursued for many reasons, including:

- Protecting shoreline property by reducing wave impacts and decreasing erosion;
- Increasing or maintaining lawn areas, and/or
- Coordinating style of neighboring shoreline properties.

Historically, stabilization of the shoreline has been accomplished by structural means, including the use of concrete walls, large boulders and wood timbers. These types of structures have impacted the natural processes along the shoreline. Shoreline protective structures such as bulkheads create deeper water with steeper gradient and a coarser bottom substrate. Waves no longer are able to dissipate energy over distance as they hit shallower bottom, rocks, or shoreline vegetation. Rather, the wave reflects off a vertical wall, causing scouring of sediment at the base of the wall. The finer sands are removed as the gravel is eroded away and the bottom substrate

becomes coarser. The result is a much deeper and steeper nearshore environment, and often elimination of a beach. This impacts the habitat for juvenile salmon, which need shallow beaches with a gentle gradient to hide from predators that hunt in deeper waters. The scouring action can also cause failure of the bulkhead as the base erodes away or acceleration of erosion on neighboring properties as wave action is deflected onto adjoining properties.

Despite these potential ecological impacts, there are some areas along the City's shoreline, especially on shallow lots with steep banks, which may need some form of shoreline armoring in order to protect existing structures and land uses. ~~Due to the potential for adverse impacts, it is the intent of this policy to require that shoreline stabilization, if needed, be accomplished through the use of nonstructural measures, such as bioengineering or on-site drainage improvement, unless these methods are determined to be infeasible, based on a scientific or geotechnical analysis.~~

Policy SMP-11.7: Design, locate, size and construct new or replacement structural shoreline protection structures to minimize and mitigate the impact of these activities on the Lake Washington shoreline.

Shoreline protective structures should only be allowed as necessary to protect a legally established structure or use that is in danger of loss or substantial damage. The potential for damage must be conclusively shown, as documented by a geotechnical analysis, to be caused by shoreline erosion associated with wave action. Shoreline protective structures may also be allowed for reconfiguring the shoreline for mitigation or enhancement purposes.

Where allowed, shoreline protection structures should minimize impacts on shoreline hydrology, navigation, habitat, and public access. Shoreline protective structures should be designed for the minimum height, bulk and extent necessary to address an identified hazard to an existing structure. As noted above, vegetation and nonstructural solutions should be used rather than structural bank reinforcement, unless these methods are determined to be infeasible, as documented by a geotechnical analysis.

Policy SMP-11.8: Locate and design new development to eliminate the need for new shoreline modification or stabilization.

New development should be located and designed so that new structural shoreline protection features are not needed.

Policy SMP-11.9: Require enhancement to existing shoreline conditions ~~restoration of existing shoreline armoring~~ when substantial new upland development or repair to the shoreline protective structure is planned.

The extent of existing shoreline armoring has adversely impacted the ecological functions of Kirkland's shoreline, affecting shoreline upwelling and downwelling, structural complexity, substrate composition, and shoreline gradient. As a result, when substantial new upland development occurs or where substantial repair activities to an existing shoreline protective structure are undertaken, efforts should be made to improve these functions. Measures that should be evaluated include removal of the shoreline armoring and replacement with nonstructural measures, beach nourishment, and installation of overhanging vegetation.

Policy SMP-11.910: Encourage salmon friendly shoreline design during new construction and redevelopment by offering incentives and regulatory flexibility to improve the design of shoreline protective structures and revegetate shorelines.

In recent years, many bioengineered techniques have been developed to provide alternative shoreline protection methods. These features may employ the use of gravel substrate material, terraces, large flat rocks, shallow pools, logs, and vegetation to prevent erosion and provide an attractive, usable shoreline. The aim of these designs is to reduce bank hardening, restore overhanging riparian vegetation, and replace bulkheads with sand beaches and gentle slopes. These techniques can provide many ecological benefits, including:

- Less turbulence.
- Shallower grade.
- Protection from predators.
- Finer sandy bottom.
- Increased food source.

Generally, these measures are implemented at and landward of the ordinary high water mark. In some cases, the depth of the lot can impact the ability to effectively incorporate soft shoreline stabilization measures. In those cases, the harder elements of soft shoreline stabilization measures that provide restoration of shoreline ecological functions may be permitted waterward of the ordinary high-water mark.

Policy SMP-11.1011: Expand outreach to lakeside property owners about shoreline landscape design, maintenance, and armoring alternatives.

These designs can also offer the following benefits to landowners:

- Easier access to beach and water, especially if you have a kayak or other human-powered craft.
- Shallow gradient shore and water can be safer, especially if you have small children.
- More usable shoreline with beach and cove.
- Reduced maintenance.
- Potential for increased property values.

In-stream Structures

Policy SMP-11.121: Limit the use of in-stream structures.

"In-stream structure" means a structure placed by humans within a stream waterward of the ordinary high water mark that either causes or has the potential to cause water impoundment or the diversion, obstruction, or modification of water flow. Within Kirkland, these features typically include those for flood control, transportation, utility service transmission, and fish habitat enhancement.

In-stream structures should only be used in those circumstances where it is demonstrated to provide for the protection and preservation of ecosystem-wide processes, ecological functions, and cultural resources, including, but not limited to, fish and fish passage, wildlife and water resources, shoreline critical areas, hydrogeological processes, and natural scenic vistas. The location and planning of in-stream structures should be determined

with due consideration to the full range of public interests, watershed functions and processes, and environmental concerns, with special emphasis on protecting and restoring priority habitats and species.

Breakwaters and similar features

Policy SMP-11.1213: Limit the use of breakwaters and other similar structures..

A breakwater typically refers to an off-shore structure designed to absorb and/or reflect wave energy back into the water body. Breakwaters can be floating or fixed in location and may or may not be connected to the shore. These modifications are limited within the City, but can be found at Kirkland Yacht Club as well as at Juanita Beach Park, where a breakwater has been installed around the overwater boardwalk to shelter the swimming area. Breakwaters have the potential to adversely impact the shoreline environment, including impacts to sediment transport, deflection of wave energy, a decrease in water flushing and water exchange, to name a few. As a result, the installation of new breakwaters should be limited to those circumstances when it is shown to be necessary to support water-dependent uses, public access, shoreline stabilization, or other specific public purpose. In these circumstances, the feature should be carefully designed to avoid, minimize, and then mitigate any adverse ecological impacts.

Piers and Docks

Goal SMP-12: Minimize impacts to the natural environment and neighboring uses from new or renovated piers and docks.

Policy SMP-12.1: Design and locate private piers and docks so that they do not interfere with shoreline recreational uses, navigation, or the public's safe use of the Lake and shoreline.

Private piers and docks should be located and designed to provide adequate separation from public parks, other adjoining moorage facilities and adjacent properties in order to limit any adverse impacts to safe navigation or recreational uses.

Policy SMP-12.2: Design and construct new or expanded piers and docks and their accessory components, such as boatlifts and canopies, to minimize impacts on native fish and wildlife and their habitat.

The Kirkland waterfront has been extensively modified with piers and other overwater structures. These overwater structures impact the nearshore aquatic habitat, blocking sunlight and creating large areas of overhead cover. Piers and other overwater structures also shade the lake bottom and inhibit the growth of aquatic vegetation. These types of structural modifications to shorelines are now known to benefit non-native predators (like largemouth and smallmouth bass), while reducing the amount of complex aquatic habitat formerly available to salmonids rearing and migrating through Lake Washington. This can impact juvenile salmonids, in particular, due to their affinity to nearshore, shallow-water habitats. Chemical treatments of pier components, such as creosote pilings, installed prior to today's standards, have also impacted water and sediment quality in the lake.

The combined effect of an overwater structure and a dramatic change in aquatic vegetation results in a behavior modification in juvenile salmonids, which will often change course to circumvent large piers or other overwater

structures rather than swimming beneath them. These behavior modifications disrupt natural patterns of migration and can expose juvenile salmonids to increased levels of predation.

Minimizing overwater coverage and associated support structures can benefit salmon. Studies related to shading effects from varying types of pier decking indicate that grated decking provides significantly more light to the water surface than traditional decking methods and may lead to improved migratory conditions for juvenile chinook salmon.

Impact minimization measures, which have been identified by state and federal agencies, include, but are not limited to:

- Shared use of piers;
- Reducing or eliminating the number of boathouses and solid moorage covers (e.g. use of clear, translucent materials proven to allow light transmission for new canopies);
- Minimizing the size and widths of piers and floats;
- Increasing light transmission through any over-water structures (e.g. use of grated decking);
- Maximizing the height of piers above the water surface;
- Enhancing the shoreline with native vegetation;
- Improving shallow-water habitat;
- Reducing the overall number and size of pier piles; and
- Improving the quality of stormwater runoff.

Policy SMP-12.3: Minimize aesthetic impacts of piers and docks and their accessory components.

In order to minimize aesthetic impacts, piers and docks should make use of non-reflective materials, minimize lighting facilities to that necessary to locate the dock at night, and focus illumination downward to minimize glare.

Shoreline Habitat and Natural Systems Enhancement Projects

Goal SMP-13: Restore shoreline areas that have been degraded or diminished in ecological value and function as a result of past activities.

Policy SMP-13.1: Include provisions for shoreline vegetation restoration, fish and wildlife habitat enhancement, and low impact development techniques in projects located within the shoreline, where feasible.

Shoreline habitat and natural systems enhancement projects include those activities proposed and conducted specifically for the purpose of establishing, restoring, or enhancing habitat for priority species in shorelines. Such projects may include shoreline modification actions such as modification of vegetation, removal of nonnative or invasive plants, shoreline stabilization, dredging, and filling, provided that the primary purpose of such actions is clearly restoration of the natural character and ecological functions of the shoreline.

The City's shoreline has been impacted by past actions and, as a result, there are many opportunities available for restoration activities that would improve ecological functions. For example, enhancement of riparian vegetation, reductions or modifications to shoreline hardening, and improvements to fish passage would improve the ecological function of the City's shoreline. Many of these restoration opportunities exist throughout the City on

private property, as well as on City property, including parks, open spaces, and street-ends. Both public and private efforts are needed to restore habitat areas. Opportunities include public-private partnerships, partnerships with other agencies and tribes, capital improvement projects, and incentives for private development to restore and enhance fish and wildlife habitat.

Shoreline Environment

Goal SMP-14: Preserve, protect, and restore the shoreline environment.

Kirkland is enriched with valued natural features within the shoreline area that enhance the quality of life for the community. Natural systems serve many essential functions that can provide significant benefits to fish and wildlife, public and private property, and enjoyment of the shoreline area.

Shoreline Critical Areas

Note: The Natural Environment Chapter of the Comprehensive Plan contains a set of policies relating to critical areas, including Goals NE –1, together with related Policies NE-1.1 through NE-1.6, Goal NE-2, together with related policies NE-2.1 through NE-2.7, and Goal NE–4.

Critical areas found within the shoreline area include geologically hazardous areas, frequently flooded areas, wetlands, and fish and wildlife habitat conservation areas. Floodplains, while not a designated critical area, are also addressed in this section due to the relationship with frequently flooded areas within the City. No critical aquifer recharge areas are mapped within the City.

Policy SMP-14.1: Conserve and protect critical areas within the shoreline area from loss or degradation.

Environmentally critical areas within the shoreline area are important contributor:s to Kirkland's shoreline environment and high quality of life. Some natural features are critical to protect in order to preserve the important ecological functions they provide. ~~The City also regulates and restrict development within critical areas, either~~ because of the hazards they present to public health and safety ~~or the important ecological functions they provide.~~ This policy is intended to ensure that the ecological functions and ecosystem-wide processes of these natural systems are maintained and improved.

Policy SMP-14.2: Locate and design public access within and adjacent to critical areas to ensure that ecological functions are not impacted.

While public access for educational and public access purposes is an important objective, the location and design of public access must be carefully considered to avoid impacts to critical areas.

Geologically Hazardous Areas

Policy SMP-14.3: Manage development to avoid risk and damage to property and loss of life from geological conditions.

Geologically hazardous areas include landslide hazard areas, erosion hazard areas and seismic hazard areas. These areas, as a result of their slope, hydrology, or underlying soils, are potentially susceptible to erosion, sliding, damage from earthquakes or other geological events. These areas can pose a threat to health and safety, if development is not appropriately managed and the area studied as a condition of permitting construction.

Wetlands

Policy SMP-14.4: Protect and manage shoreline-associated wetlands.

Wetlands are areas that, under normal conditions, are inundated or saturated by surface or groundwater at a frequency and duration to support, ~~and that under normal conditions do support,~~ a prevalence of vegetation typically adapted for life in saturated soils conditions. The wetlands located within the shoreline area perform many ecological functions, including habitat for fish and wildlife, flood control, and groundwater recharge, as well as surface and groundwater transport, storage and filtration. Additionally, wetlands provide opportunities for research and scientific study, outdoor education, and passive recreation.

Kirkland's shoreline contains two extensive high-quality wetland systems: the wetlands located contiguous with the shoreline at Juanita Bay Park and extending up through the Forbes Valley (Forbes 1) and the Yarrow Bay wetlands (Yarrow 1). It is estimated that these wetlands combined are over 156 acres in size. The Forbes 1 wetland has several different vegetation classes, including forested, scrub-shrub, emergent, open water, and aquatic bed. The wetland contains a variety of plant species and types, including native red alder, willow, cottonwood, salmonberry, spiraea, red-osier dogwood, skunk cabbage, buttercup, small-fruited bulrush, lady fern, soft rush, horsetail, cattail, and non-native Himalayan blackberry, reed canarygrass and purple loosestrife. Within the *Final Kirkland Shoreline Analysis Report* (2006), this system has been rated "high quality" for several functions, including habitat, water and sediment storage, water quality improvement, wave energy attenuation and bank stabilization, and nutrient and toxic compound removal.

The Yarrow Bay wetland complex similarly contains a number of wetland classes, including forested, scrub-shrub, emergent, open water, and aquatic bed. The Yarrow Bay complex also contains a mixture of plant species and types, including native red alder, willow, cottonwood, salmonberry, spiraea, red-osier dogwood, and cattail and non-native Himalayan blackberry and reed canarygrass. The *Final Kirkland Shoreline Analysis Report* (2006) also rates this system "high quality" for numerous functions.

The Forbes 1 and Yarrow 1 wetlands are also mapped as priority wetlands by Washington Department of Fish and Wildlife (WDFW) (2006). Priority wetlands are those wetlands that have "[c]omparatively high fish and wildlife density, high fish and wildlife species diversity, important fish and wildlife breeding habitat, important fish and wildlife seasonal ranges, limited availability, [and] high vulnerability to habitat alteration."

This policy is intended to ensure that the City achieves no net loss of wetlands through retention of wetland area, functions and values. Mitigation sequencing is used to ensure impacts to wetlands are avoided, where possible, and mitigated, when necessary.

Wetlands are protected in part by buffers, which are upland areas adjacent to wetlands. Wetland buffers serve to moderate runoff volume and flow rates; reduce sediment loads; remove waterborne contaminants such as excess nutrients, synthetic organic chemicals (e.g., pesticides, oils, and greases), and metals; provide shade for surface water temperature moderation; provide wildlife habitat; and deter harmful intrusion into wetlands.

Fish and Wildlife Habitat Conservation Areas

Policy SMP-14.5: Protect and restore critical freshwater habitat.

Fish and wildlife habitat conservation areas provides food, protective cover, nesting, breeding, or movement for threatened, endangered, sensitive, monitor, or priority species of plants, fish, or wildlife. Within the City, there are several areas that fall within this classification.

Lake Washington is known to support a diversity of salmonids, including chinook salmon, steelhead trout, bull trout (listed as threatened under the Endangered Species Act), coho salmon, sockeye salmon, and kokanee salmon.

Several streams pass through the City of Kirkland, discharging into Lake Washington. Several of these streams are known to support fish use, including chinook (juvenile use of the mouths of several streams), coho, sockeye salmon, and steelhead and cutthroat trout. Some of the most prominent fish-bearing streams include Yarrow Creek, Forbes Creek, and Juanita Creek, which are protected within City parks at their outlet to Lake Washington. Salmonid and other fish species are also known to inhabit other Lake Washington tributaries such as Carillon Creek.

The Forbes Creek corridor is designated by WDFW as a priority "riparian zone" because it has been determined to meet these criteria: "[h]igh fish and wildlife density, high fish and wildlife species diversity, important fish and wildlife breeding habitat, important wildlife seasonal ranges, important fish and wildlife movement corridors, high vulnerability to habitat alteration, unique or dependent species."

Both the Yarrow Bay wetlands and Juanita Bay Park extending up the Forbes Creek corridor provide excellent habitat for birds (including songbirds, raptors, waterfowl), amphibians, mammals and even reptiles. Bald eagles and ospreys regularly perch in trees adjacent to Juanita and Yarrow Bays, and forage in the Bays. Pileated woodpeckers (a State Candidate species) also reportedly nest in the Juanita Bay wetlands, and according to the East Lake Washington Audubon Society, purple martins (a State Candidate species) used nesting gourds installed in early 2006 around the Juanita Bay. Although a bald eagle nest is mapped in the Yarrow Bay wetlands, it was last active in 1999 and the nesting pair relocated to Hunts Point. However, the mapped great blue heron nesting colony is still active.

This policy is intended to ensure that the ecological functions and ecosystem-wide processes associated with critical freshwater habitats are protected to assure no net loss, and that improvements are made through restoration activities. The City has worked to protect these valuable habitat areas through acquisition and management of public areas, as well as development controls, including protection of streams and wetlands and their associated buffers and coordination with federal and state agencies on protection issues associated with listed species.

Frequently Flooded Areas and Floodplains

Goal SMP-15: Limit new development in floodplains.

Policy SMP-15.1: Regulate development within the 100-year floodplain to avoid risk and damage to property and loss of life.

Frequently flooded areas help to store and convey storm and flood water; recharge ground water; provide important riparian habitat for fish and wildlife; and serve as areas for recreation, education, and scientific study. Development within these areas can be hazardous to those inhabiting such development, and to those living

upstream and downstream. Flooding also can cause substantial damage to public and private property that result in significant costs to the public as well as to private individuals.

The primary purpose of frequently flooded areas regulations is to regulate development in the 100-year floodplain to avoid substantial risk and damage to public and private property and loss of life. Lake Washington does not have a floodplain due to its lake elevation control by the Corps. However, floodplains are designated for both Yarrow Creek wetlands in association with Yarrow Creek and the low-gradient riparian area associated with Forbes Creek.

In both cases, the potential channel migration zone is protected as wetlands associated with Lake Washington. This protection limits development and modifications in those areas where the creeks have the potential to migrate. This protection limits the potential for migration to affect existing or future structures.

Water Quality and Quantity

Note: The Natural Environment Chapter of the Comprehensive Plan contains a set of policies relating to water systems and addressing water quality and quantity, including Goal NE-2, together with related policies NE-2.1 through NE-2.7. The Utilities Chapter also contains policies addressing storm water, including Goal U-4, together with related policies U-4.1 through U-4.11.

Goal SMP-16: Manage activities that may adversely impact surface and ground water quality or quantity.

While most of the storm water entering streams and the lake do not come from the shoreline jurisdiction, surface water management is still a key component of the shoreline environment, due to the potential of activities in the larger watershed basin to contribute to water quantity and quality conditions in streams and the lake.

As part of the Kirkland's Surface Water Utility, Surface Water Master Plan, and implementation of the NPDES Phase II Municipal Stormwater permit requirements, the City is pursuing activities and programs within the larger watershed basin to address flood protection, water quality improvement, and habitat protection and restoration.

Within the shoreline jurisdiction, the City can regulate development and provide education and incentives to minimize impacts to water quality and limit the amount of surface water runoff entering the lake.

Policy SMP-16.1: Manage storm water quantity to ensure protection of natural hydrology patterns and avoid or minimize impacts to streams.

Native forest communities with healthy soil structure and organic contact help to manage the amount and timing of runoff water that reaches streams and lakes by intercepting, storing, and slowly conveying precipitation. As these systems are impacted and forests are replaced by impervious surfaces like roads, parking areas, and rooftops, larger quantities of water leave the developed watershed more quickly. Impervious surfaces affect the amount of water that seeps into the ground and washes into streams; they also affect how quickly the water gets there. When land is covered with pavement or buildings, the area available for rainwater and snowmelt to seep into the ground and replenish the groundwater is drastically reduced; in many urban areas it is virtually eliminated. The natural movement of water through the ground to usual discharge points such as springs and

streams is altered. Instead, the natural flow is replaced by storm sewers or by more concentrated entrance points of water into the ground and surface drainages.

Changing the timing and amount of water run-off can lead to too much water going directly into streams in the rainy months of winter instead of soaking into the ground. Consequently, there is not enough water in the ground to slowly release into streams in the dry months of summer. Too much water in the winter causes unnaturally swift currents that can erode stream banks and scour and simplify the stream channels, damaging fragile fish habitat. In contrast, not enough water in streams in the summer leads to water temperatures too high to support fish and isolation of fish in small pools. These fundamental changes to hydrology alter watersheds in several ways, including the following:

- The size, shape, and layout of stream channels change to accommodate the new flow regime, thus changing physical habitat conditions for aquatic species.
- Erosion increases suspended solid concentrations and turbidity in receiving properties which can impair survival of aquatic species, including salmon.
- Opportunities for soils and vegetation to filter pollutants from stormwater are reduced, leading to water quality degradation. Stormwater can also carry heavy metals, household wastes, excess nutrients, and other pollutants to the shoreline area.
- Reduced streamside vegetation can lead to increased water temperatures that reduce survival of aquatic species, including salmon. Fine sediment smothers fish eggs, impacting future populations.

Discharges into the tributary streams, such as Forbes Creek, can have a significant impact on in-stream habitat complexity, peak flow magnitude and duration, bank stability, substrate composition, and a number of other parameters.

Policy SMP-16.2: Prevent impacts to water quality.

This policy is intended to prevent impacts that would result in a net loss of shoreline ecological functions, or a significant impact to aesthetic qualities or recreational opportunities.

Water is essential to human life and to the health of the environment. Water quality is commonly defined by its physical, chemical, biological and aesthetic (appearance and smell) characteristics. A healthy environment is one in which the water quality supports a rich and varied community of organisms and protects public health. Water quality influences the way in which Kirkland uses water for activities such as recreation and scientific study and education, and it also impacts our ability to protect aquatic ecosystems and wildlife habitats.

The degradation of water quality adversely impacts wildlife habitat and public health. This is particularly relevant to the shoreline, since all of the regulated surface waters, both natural and piped, are discharged ultimately to Lake Washington. The water quality impact of stormwater inputs is also significant. Stormwater runoff carries pesticides, herbicides and fertilizers applied to lawns and sports fields; hydrocarbons and metals from vehicles; and sediments from construction sites, among other things. All of these things can harm fish and wildlife, their habitats, and humans.

Presently, Lake Washington is considered at risk for chemical contamination from hydrocarbon input from the urbanized watershed. The lake has also exhibited problems with levels of fecal coliform, ammonia, and PCBs present (Final Kirkland Shoreline Analysis Report, 2006).

The City has various programs to control stormwater pollution through maintenance of public facilities, inspection of private facilities, water quality treatment requirements for new development, source control work with businesses and residents, and spill control and response. These programs are managed under the Surface Water Utility, whose goals are:

- Flood protection
- Water quality improvement, and
- Habitat protection and restoration.

Kirkland has also adopted a *Surface Water Master Plan* (2005) that sets goals and recommends actions for flood reduction, water quality improvement, and aquatic habitat restoration. This plan contains plans and programs to address water quality and high flow impacts from creeks and shoreline development through a number of mechanisms, including the following:

- Participation in WRIA 8 activities.
- Adoption of regulations and best management practices consistent with the NPDES Phase II permit requirements.
- Increased public education and outreach.
- Construction of projects that address existing flooding problems.
- Increased inspection and rehabilitation of the existing stormwater system.
- Identifying pollution "hot spots" for possible water quality treatment.
- Examining City practices and facilities to identify where water quality improvements can be made.
- Combining flow controls with in-stream habitat improvement projects in Juanita and Forbes creek watersheds.

Policy SMP-16.3: Support public education efforts to protect and improve water quality.

Many residential yards within the shoreline area are dominated by lawn and landscaping, which can contribute water quality contaminants such as fertilizers, herbicides, and pesticides. Fertilizers and herbicides can affect the aquatic vegetation community, stimulating overgrowth of some species which can have a multitude of deleterious effects and suppress growth of other species. Pesticides also directly affect fish. Fish use their olfactory sense to find their way home. Garden chemicals that get into our lakes and streams may mask the smell fish use for homing. Scientists have found that pesticides also interfere with the ability of salmon to reproduce and avoid predators. Presently, nutrient levels in Lake Washington do not represent a problem for salmonids (Final Kirkland Shoreline Analysis Report, 2006). Encouraging natural yard care practices and salmon-friendly landscape design can help to reduce the contaminant load into Lake Washington. Should nutrient levels continue to increase and represent a more significant problem, regulations limiting the use of pesticides, fertilizers and herbicides in the shoreline environment may become necessary.

Boat maintenance can also impact the aquatic environment with hydrocarbons, oils and other chemicals, and solvents. Providing information on boating practices, including operation and maintenance practices that can help prevent harmful substances from entering the water such as gasoline, two-stroke engine fuel, paint, and

wood conditioner and other boat related substances, can also improve water quality. The City should also assist property owners by providing information on environmentally friendly methods of maintaining docks and decks.

Finally, the City should continue its efforts to increase the public's awareness of potential impacts of certain practices on water bodies and water quality, including improper disposal of hazardous materials.

Vegetation Management

Note: The Natural Environment Chapter of the Comprehensive Plan contains policies relating to vegetation, including Goal NE-3, together with related policies NE-3.1 through NE-3.3. The Natural Resources Management Plan also addresses issues relating to vegetation management in Section C, Land and Vegetation.

Goal SMP-17: Protect, conserve and establish vegetation along the shoreline edge.

Policy SMP-17.1: Plan and design new development or substantial reconstruction to retain or provide shoreline vegetation.

Vegetation along the Lake Washington shoreline has been significantly altered over time, as bulrush and willow have been affected first by the Corps's lowering of the Lake's natural elevation by 9 feet and subsequently by shoreline development with accompanying landscaping. Presently, vegetation within Kirkland's shoreline is dominated by residential and urban landscaping, except for the high-quality wetland areas of Yarrow Bay and Juanita Bay. The loss of natural shoreline vegetation has reduced complex shoreline features such as overhanging and emergent vegetation, woody debris, and indirectly gravel and cobble beaches.

Vegetation within the shoreline environment is essential for fish and wildlife habitat, providing habitat complexity and, in the case of native lakeshore vegetation, such as rushes, willow, dogwoods and cottonwoods, supporting the insects that provide an important food source for salmon. Shoreline vegetation is also important in helping to camouflage young salmon as they hide amidst stumps, root wads, beneath overhanging vegetation, or within branches that have fallen into the water. Vegetation also helps to support soil stability, reduce erosion, moderate temperature, produce oxygen, and absorb significant amounts of water, thereby reducing runoff and flooding.

Presently, shoreline vegetation and riparian structure are not properly functioning within Lake Washington (Final Kirkland Shoreline Analysis Report, 2006). The intent of this policy is to protect existing shoreline vegetation, in particular existing trees, and establish new vegetation, including native trees, shrubs and groundcover, along the shoreline edge to improve shoreline vegetation and riparian structure and the ecological functions that these shoreline conditions affect.

Policy SMP-17.2: Limit tree clearing and thinning activities along the shoreline.

As a result of the functions that shoreline vegetation provides, it is important that vegetation conservation measures be implemented along the shoreline. Significant trees located between structures and the shoreline should be preserved to the greatest extent feasible. Tree removal or topping for the purposes of creating views should be prohibited. Limited thinning of trees to enhance views may be appropriate in certain circumstances, provided that this activity does not adversely impact tree health, ecological functions, and/or slope stability.

Policy SMP-17.3: Provide outreach and education materials to lakeside property owners about the importance and role of shoreline vegetation.

A native plant buffer can also provide homeowners with an attractive landscape that offers variety and seasonal color; reduced maintenance; more privacy without sacrificing views; increased property values, improved water quality; reduced use by geese and other waterfowl; and a yard that is safer for families, pets and fish and wildlife. Proper plant selection and design can ensure that views are not diminished.

Goal SMP-18: Design aquatic vegetation management efforts to use a mix of various control methods with emphasis on the most environmentally sensitive methods.

Noxious weeds of Washington State are non-native, invasive plants defined by law as a plant that when established is highly destructive, competitive or difficult to control by cultural or chemical practices. These plants have been introduced intentionally and unintentionally by human actions. Most of these species have no natural enemies, such as insects or diseases, to help keep their population in check. As a result, these plants can often multiply rapidly. The two most common invasive species that are impacting Lake Washington's and Kikland's marinas, residential waterfront owners and wildlife are Eurasian watermilfoil and white water lily. Eurasian watermilfoil, an aquatic plant found in lakes and slow-moving streams, can lower dissolved oxygen and increase pH, displace native aquatic plants, and increase water temperature.

Some aquatic weeds are controlled because they interfere with human needs such as boating and swimming in the lakes. Others pose a threat to the environment. The introduction of any non-native species has an effect on native species and habitats, although it is often difficult to predict those effects. However, there is a growing number of non-native aquatic plant and animal species whose current or potential impacts on native species and habitats are known to be significant. Potential threats may be evidenced by the degree of negative impact these species have upon the environment, human health, industry and the economy (WDFW 2001). Potential negative impacts relevant to the Lake Washington environment include:

- loss of biodiversity;
- threaten ESA-listed species such as salmon;
- alterations in nutrient cycling pathways;
- decreased habitat value of infested waters;
- decreased water quality;
- decreased recreational opportunities;
- increased safety concerns for swimmers; and
- decrease in property values.

Non-native species can be controlled through a variety of mechanisms, including mechanical and physical means (hand pulling, hand tools, bottom barrier, weed roller, mechanical cutters, and harvesters) biological controls and herbicides. ~~In general, chemical treatment should be pursued as a last resort.~~ Depending on the method of control ~~chosen~~, there can be impacts associated with mechanical or physical removal of aquatic vegetation. For instance, there could be disturbance of the substrate, reduction in benthic invertebrates (which are an important food source), and increased risk of spread of the invasive species to other areas. Depending on the condition of the sediments, substrate disturbance can result in acute, although temporary, increases in turbidity and may re-introduce pollutants bound to the sediments back into the water column. In addition, reductions in aquatic

vegetation, whether native or non-native, reduce primary productivity, which is the foundation of the lake food chain. This could result in reduced fish production at the top of the food chain.

Use of herbicides also may pose impacts. Herbicide use may have unwanted impacts to people who use the water and to the environment. Non-targeted plants as well as nuisance plants may be controlled or killed by some herbicides. Depending on the herbicide used, it may take several days to weeks or several treatments during a growing season before the herbicide controls or kills treated plants. Rapid-acting herbicides like endothall and diquat may cause low oxygen conditions to develop as plants decompose. Low oxygen can cause fish kills. To be most effective, generally herbicides must be applied to rapidly-growing plants. Some expertise in using herbicides is necessary in order to be successful and to avoid unwanted impacts. Finally, many people have strong feelings against using chemicals in water.

Despite these potential impacts, control and aquatic vegetation may be necessary in certain circumstances, such as when native plant communities and associated habitats are threatened or when an existing water-dependent use is restricted by the presence of weeds.

~~However, control of invasive aquatic vegetation may be biologically justifiable where the plants are so dense that dissolved oxygen (DO) levels fall to suboptimal or even lethal levels (2-4 mg/L). DO levels drop below dense surface mats because light is blocked to the submerged aquatic vegetation which produces the majority of the oxygen to the water column. Much of the oxygen produced by the surface mats of vegetation is lost to the atmosphere. Decomposition of submerged dead material also depletes the water column of oxygen. In addition, dense vegetation can reduce wave action at the surface, which would otherwise help oxygenate the water. Reduced wave action can also contribute to increased water temperature, as the cooler water from deep areas does not flush the warmer, vegetated shallow areas. Warmer water holds less oxygen than cold water.~~

~~Presently, habitat elements within the lake are not properly functioning due, in part, to the prevalence of invasive species which out-compete native species and reduce the overall structural complexity (Final Kirkland Shoreline Analysis Report, 2006).~~

In general, herbicide application should be limited to those circumstances where other weed removal or control techniques are not sufficient. Herbicide application may prove necessary in some circumstances, such as large-scale dense infestations that are having significant adverse effects on human or wildlife use of the water. When used in these applications, herbicides should be part of an integrated plan for noxious weed control.

In response to the problem of invasive, non-native species entering Washington waters, laws have now been enacted requiring that all boats leaving a Washington boat launch be free of aquatic weeds and other debris, or otherwise risk being ticketed.

Aquatic vegetation management will likely take coordination on a larger-scale to effectively manage. As a result, the City should work with landowners and neighboring jurisdictions to develop aquatic vegetation management plans on a large-scale basis.

Shoreline Parks, Recreation, and Open Space

Public Parks

Note: The 2001 Comprehensive Park, Open Space and Recreation Plan provides policies and planning for parks, open space and recreating within the City of Kirkland, including waterfront parks.

Goal SMP-15: Provide substantial recreational opportunities for the public in the shoreline area.

With miles of shoreline, the City has preserved significant portions of its waterfront in public ownership as parks. Kirkland's waterfront parks are the heart and soul of the City's park system. They bring identity and character to the park system and contribute significantly to Kirkland's charm and quality of life. The 13 waterfront parks stretch from the Yarrow Bay wetlands to the south to Juanita Bay and Juanita Beach Parks to the north, providing Kirkland residents year-round waterfront access. Kirkland's waterfront parks are unique because they provide citizens a diversity of waterfront experiences for different tastes and preferences. Park activities and facilities include public docks and fishing access, boat moorage, boat launches, swimming, interpretative trails, and picnicking. Citizens can enjoy the passive and natural surroundings of Juanita Bay and Kiwanis Parks and the more active swimming and sunbathing areas of Houghton and Waverly Beach Parks.

Policy SMP-15.1: Acquire, develop, and renovate shoreline parks, recreational facilities, and open spaces that are attractive, safe, functional, and respect or enhance the integrity and character of the shoreline.

While Kirkland is blessed with extraordinary waterfront parks, we should never lose sight of capturing opportunities if additional waterfront property on Lake Washington becomes available. If privately held lakefront parcels adjacent to existing beach parks or at other appropriate locations become available, effort should be made to acquire these pieces. As new shoreline parks are acquired and developed, the ecological functions of the shoreline should be protected and enhanced.

Policy SMP-15.2: Encourage water-oriented activities and programs within shoreline parks.

Kirkland's recreational programs provide opportunities for small craft programs such as canoeing/kayaking, sailing, rowing, and sail-boating. Programs oriented around non-motorized boating activities provide excellent opportunities to teach recreation skills emphasizing water and boating safety and should be expanded, where appropriate.

In addition, the City awards contracts to parties interested in occupying dock space in the Kirkland Marina and Second Avenue South Dock for commercial use. The City may also expand concession facilities within its parks. These types of commercial recreational uses, which expand opportunities for the public to enjoy the shoreline, should be encouraged within the City's shoreline parks.

Policy SMP-15.3: Continue use of opened waterfront street ends for public access.

Street ends are also wonderful opportunities to expand the public's access to the waterfront. The City has developed three street ends for the public's use and enjoyment. They are located along Lake Washington

Boulevard at 10th Avenue South and 5th Avenue South and located at Second Street West. The City has investigated the potential to open 4th Street West and 5th Street West, but has determined that this is not feasible due to problems with existing access to the shoreline area. These street ends should be retained in public ownership for open space purposes.

Policy SMP-15.4: Ensure that development of recreation uses do not adversely impact shoreline ecological functions.

The development of recreational facilities has the potential to adversely impact shoreline ecological functions, for instance by increasing the amount of physical access and activity as well as overwater coverage and motorized watercraft access. As a result, recreational uses shall be appropriately sited and planned to minimize any resultant impacts.

Goal SMP-19: Protect and restore publicly owned natural resource areas located within the shoreline area.

Policy SMP-19.1: Manage natural areas within the shoreline parks to protect and restore ecological functions, values and features.

Kirkland is fortunate to have two of Lake Washington's largest and most important wetland and wildlife resources in its public park system: Juanita Bay Park and the Yarrow Bay wetlands, both of which have been mapped as priority wetlands by the Washington Department of Fish and Wildlife (WDFW). Both the Yarrow Bay wetlands and Juanita Bay Park extending up Forbes Creek corridor provide excellent habitat for birds, amphibians, mammals and reptiles. The outlets for three of the most prominent streams within the City, Juanita Creek, Forbes Creek and Yarrow Creek, are also located within the City's shoreline parks. These streams are known to support anadromous fish salmonids. In addition, the Forbes Creek corridor has been designated by WDFW as a priority "riparian zone" due to its high fish and wildlife density, species diversity, important fish and wildlife breeding habitat, important wildlife seasonal ranges, high vulnerability to habitat alteration, and presence of unique or dependent species.

Preserving wildlife habitat, water quality, and forested areas is an important aspect of good park resource management. The existence of these natural areas also offers a variety of opportunities for aesthetic enjoyment, and passive and low-impact recreational and educational activities.

In order to protect wildlife habitat within Juanita and Yarrow Bay, it may be necessary to manage watercraft access, such as establishing restricted areas or limiting vessel speeds or other operations.

Policy SMP-19.2: Promote habitat and natural resource conservation through acquisition, preservation, and rehabilitation of important natural areas, and continuing development of interpretive education programs.

The City parks also present an opportunity to implement restoration activities to improve degraded wetlands and habitat, control the spread of noxious plants, and improve the water quality of streams. As noted in the Final Kirkland Shoreline Analysis Report (December 2006), the City has initiated several studies to address restoration opportunities within Juanita Beach Park and Juanita Bay Park. In addition, the City has adopted a 20-Year Forest Restoration Plan to restore Kirkland's urban forests by removal of invasive plants and planting native species for

the sustainability of the forest and its habitat. The City has acquired properties within the shoreline area near the Yarrow Bay wetlands impacted by critical areas and will continue to explore similar acquisition opportunities. The Parks Department has also established an interpretative program in Juanita Bay Park and will evaluate appropriate opportunities to expand this type of educational resource within natural areas.

Goal SMP-20: Use a system of best management practices and best available technologies in the construction, maintenance and renovation of recreational facilities located in the shoreline environment.

The high visibility and use of Kirkland's waterfront parks require high levels of maintenance, periodic renovation, and security. Swimming beaches, docks, recreational moorage facilities, boat ramps, and shoreline walkways must be kept safe and in good condition for the public's enjoyment and use. Maintenance of these recreational facilities should be done in a way that minimizes any adverse effects to aquatic organisms and their habitats. Renovation of these areas also provides an opportunity to restore areas impacted by historical shoreline modifications such as alteration of shoreline vegetation, construction of bulkheads, and piers and docks.

Policy SMP-20.1: Incorporate salmon friendly dock design for new or renovated docks and environmentally friendly methods of maintaining docks in its shoreline parks.

Overwater coverage and in-water structures can adversely impact ecological functions and ecosystem-wide processes. As the City renovates or constructs new overwater structures, it should incorporate impact minimization measures, such as minimizing widths of piers and floats, increasing light transmission through any over-water structures, enhancing the shoreline with native vegetation, improving shallow-water habitat, and reducing the overall number and size of pier piles, in order to minimize the impacts of these structures. Opportunities exist to reduce overwater coverage and in-water structures in a number of shoreline parks, including Juanita Beach Park, Waverly Beach Park, the Lake Avenue West street end park, Marina Park, David E. Brink Park, Marsh Park, and Houghton Beach Park.

Kirkland contains a number of docks and piers within its shoreline parks, including at Houghton Beach Park, Marsh Park, David E. Brink Park, Marina Park, Waverly Beach Park, Juanita Beach Park, Juanita Bay Park, Settler's Landing, and the Second Avenue Right-of-Way in the Downtown. To maintain these docks and piers, replacement of the decking is needed on a routine basis. The City has obtained a Hydraulic Project Approval from the Washington Department of Fish and Wildlife to cover this maintenance activity and, as part of this permit, grating will be installed in lieu of existing solid boards when the boards are replaced, allowing for greater light transmission through these overwater structures.

Policy SMP-20.2: Minimize impacts to the natural environment and neighboring uses from boat launch facilities to the greatest extent feasible.

Kirkland's public boat launch at Marina Park contains a one-lane facility for trailerable boats. This facility provides important access to Lake Washington, but has experienced several problems including poor traffic circulation and congestion. The City employs use regulations for this facility in order to minimize impact; these regulations are monitored under the Dock Masters program. Recently, the trailer parking was improved in Waverly Park. Continued management of the facility should be ~~completed-maintained~~ in order to minimize these impacts to the greatest extent feasible.

If, in the future, the boat launch at Marina Park were to relocate, the City should cooperate with other jurisdictions to assure that this regional need is addressed with regional participation and resources.

Policy SMP-20.3: Incorporate salmon-friendly landscape design practices in shoreline parks.

The City's parks and natural areas are a reflection of the values of the Kirkland community. The Parks Department strives to ensure that the public landscape remains attractive, while meeting the expectations of our users and preserving our parks and natural spaces for generations to come.

Opportunities exist to improve nearshore native vegetation in a number of shoreline parks, including Juanita Beach Park, Waverly Beach Park, the Lake Avenue West street end park, Marina Park, David E. Brink Park, Settler's Landing, Marsh Park, and Houghton Beach Park. Restoration activities could include such practices as native plant buffers at the shoreline edge, control of noxious and invasive species, implementation of sound horticultural practices, use of Integrated Pest Management (IPM) techniques, organic fertilizers, and natural lawn care practices.

Since 1998, the Kirkland Parks Department has been following an Integrated Pest Management (IPM) program. IPM is a sustainable approach to managing pests by combining cultural, mechanical, biological and chemical methods in a way that provides effective and efficient maintenance of the City's park system.

The objectives of the IPM policy are:

- Protect the health, safety and welfare of the environment and community.
- Provide efficient, cost effective maintenance of the City's park system using non-chemical controls whenever possible.
- Design new and renovate existing landscape areas that suit site conditions with sustainable maintenance practices.
- Restore, create and protect environmentally valuable areas such as wetlands, riparian areas, forests, meadows, and wildlife habitat.

The IPM decision making process brings into play multiple strategies that are utilized as tools to help implement the program, including (but not limited to):

- The use of sound horticultural practices to optimize plant health and suppress insects, disease and weed growth
- Site appropriate design with the use of disease and drought tolerant native plants.
- The use of natural control agents that act as predators or parasites of pest species.
- The use of beneficial organisms that improve plant health by enhancing the soil quality.
- The use of a variety of tools, equipment and, most importantly, people to assist with pest control.

The long-range goal of this program is for the parks and open spaces to be pesticide-free.

The Kirkland Parks Department is undertaking efforts to control invasive vegetation, including eradication and replanting with native vegetation, within Juanita Bay Park, under the recommendations contained within the *Juanita Bay Park Vegetation Management Plan* prepared in 2004 by Sheldon & Associates Inc. It divides the park into 10 management areas by habitat type that are distributed among three landscape zones based on location

and historic use. Goals and objectives were established for each landscape zone, and then treatments were suggested for each management area within the landscape zones. The primary objective for the less developed landscape zones is removal of invasive species and replacement with native species, as well as supplementation of existing native vegetation to increase species and habitat diversity.

The Kirkland Parks Department has also initiated a program to install water intakes in Lake Washington for use as irrigation of Kirkland Parks. The water withdrawn from Lake Washington by Parks would be used to irrigate eight parks, which are currently provided with irrigation water from the City's potable water system. The hookups to the City's water system would be maintained in the event that lake waters become temporarily contaminated by spills or herbicide treatments of aquatic vegetation in the Yarrow Point or Hunts Point areas and are temporarily unsuitable for application to City parks. In conjunction with this project, the Parks Department plans to install vegetation along the shoreline edge.

Policy SMP-20.4 Minimize impacts from publicly initiated aquatic vegetation management efforts.

The Kirkland Parks Department undertakes mechanical aquatic vegetation management efforts at both Houghton and Waverly Beach Parks to control milfoil. After attempts to use biological and mechanical means to control aquatic invasive species at Juanita Bay Park, the Kirkland Parks Department has initiated an herbicide application. Aquatic vegetation management efforts can have potential negative impacts relevant to the Lake Washington environment and therefore control efforts should be designed to use a mix of various methods with emphasis on the most environmentally sensitive methods.

Policy SMP-20.5: Control non-native species which impact Kirkland's shoreline.

The City Parks Department periodically undertakes programs involving the control of non-native species along the shoreline. For instance, the Parks Department has planned improvements within Juanita Beach Park to reduce the area of lawn adjacent to the beach and create a visual barrier using shrubs to reduce waterfowl impacts at this park.

Policy SMP-20.56: Implement Low Impact Development techniques, where feasible, in development of or renovations to recreational facilities along City shorelines.

Low impact development strives to mimic nature by minimizing impervious surface, infiltrating surface water through biofiltration and bio-retention facilities, retaining contiguous forested areas, and maintaining the character of the natural hydrologic cycle. Utilizing these practices can have many benefits, including improvement of water quality and reduction of stream and fish habitat impacts. The Parks Department has successfully incorporated low-impact development techniques with park development efforts, such as Waverly Park and Watershed Park. These techniques should also be considered for any improvements within shoreline parks.

Opportunities exist to reduce impervious surface coverage in a number of shoreline parks, including, Waverly Beach Park, Street End Park, and Marsh Park and LID should be explored as a means to reduce this coverage.

Policy SMP-20.67: Reduce or modify existing shoreline armoring within Kirkland's shoreline parks to improve and restore the aquatic environment.

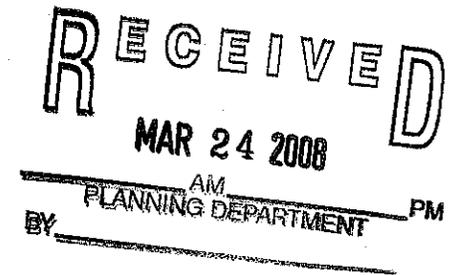
Bulkheads or other types of shoreline armoring can adversely impact ecological functions and ecosystem-wide processes. Kirkland contains a number of structural shoreline stabilization measures, such as concrete or rip-rap bulkheads, within its shoreline parks. Opportunities exist to reduce shoreline armoring in a number of shoreline parks, including Waverly Beach Park, Marina Park, David E. Brink Park, Settler's Landing, Marsh Park, and Houghton Beach Park. If repair or replacement is needed to these existing structures, the Parks Department should explore the use of nonstructural measures. Further, new development within the City's parks should be located and designed to eliminate the need for new shoreline modification or stabilization.

Goal SMP-21: Undertake restoration opportunities to improve shoreline ecological functions and ecosystem-wide processes where feasible.

The City's shoreline parks present opportunities for restoration that would improve ecological functions, including reduction of shoreline armoring, reduction of over-water cover and in-water structures, improvement of nearshore native vegetation cover, reduction of impervious surface coverage, control of invasive vegetation, and improvement of fish passage where possible.

In addition, many projects planned under the Surface Water Management Utility would provide wetland enhancement, fish passage improvement, bioengineered streambank erosion, restoration of armored streambanks, flood abatement, and water quality improvement. While many of these projects are planned 'upstream' of shoreline jurisdiction, they can still have positive effects on the shoreline environment.

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March 24, 2008

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Reference: Kirkland's Shoreline Master Program Update

In this letter I am providing comments to the recent materials prepared for the Kirkland Planning Commission and the Houghton Community Council, these being the proposed goals and policies addressing the Shoreline Environment, and Shoreline Parks, Recreation and Open Spaces in the new Shoreline Chapter of the Comprehensive Plan.

By way of background, I am a long time shoreline property owner in the Proposed Annexation Area in Holmes Point and currently serve as Chair of the Shoreline Property Owners and Contractors Association, SPOCA. I have been following Kirkland's Shoreline Master Program update process and have provided comments at various times beginning with the Fall of 2006.

Several points are important to reiterate from previous comments as a backdrop:

- None of Lake Washington's shoreline is natural. It was altered by the construction of the Locks and the Ship Canal when it was lowered 9 feet. And since that time considerable development has occurred along its shoreline. It is an urban lake.
- As stated in the DOE Guidelines for the Shoreline Master Program updates, the intent is not to return shorelines to pre-development conditions. Objectives that are keyed to, or focus on, conditions that are predevelopment in nature simply are not realistic or attainable.
- The Shoreline Management Act is not "broken". It has been an effective tool and the results are graphic along Kirkland's shoreline: stopping non-water dependent overwater developments; protection

of Juanita Bay/Forbes Creek and Yarrow Bay Wetlands; creating public access to the shoreline; and because of political and staff leadership, significant acquisition of shoreline parcels for public use and water access.

- The updates should reflect accurate and complete information and have conclusions drawn on scientific and technical data that is sound and applicable. SPOCA's comments are provided to help attain that end and are in concert with our mission of "...a rational permitting process...balanced...accountable...based on sound science".

+++++++

These comments are directed at Draft SMP Goal and Policy Language for the Shoreline Environment Section, and for the Shoreline Parks, Recreation and Open Space Section of the new Shoreline Chapter.

An overall observation is that these policies may reflect outcomes that are unfeasible, impractical, and/or not acceptable to the public.

Would the public accept the transformation of Kirkland's parks and their shoreline to stumps, root wads, overhanging vegetation, and branches in the water? Picture this condition at Marina Park or any of the other developed parks in Kirkland. Would the public accept the erosion of the shoreline in those areas? Public access and use is an important component of the Shoreline Management Act and goals and policies must be balanced so as to include that.

A measure of cost effectiveness linked to measurable results should be an important threshold in evaluating and adopting goals and policies. To this end where is the most ecological benefit derived from both private and public expenditures? When the SMP update process moves to the step of identifying remediation projects and measures, the goals and policies on which they are based should reflect getting the 'most bang for the buck'.

Basic cause questioning should be an inherent part of developing the goals and policies. For instance if non-native predator fish are a threat to the salmon, why not eradicate these species rather than embark on very expensive and difficult to implement shoreline modifications? And most importantly, why not ensure that the salmon have clean water to inhabit through measures to implement comprehensive and systematic control of storm water, non-point pollution, and invasive weeds?

Here are specific comments on the policies:

SMP-10.1 - 10.3

Water quality and non-point source pollution are the biggest threats to the ecology of Lake Washington. Herein lies an opportunity to support the Planning Commission's idea of "raising the bar" beyond the no net loss standard of ecological functions. Even though the SMP update process is confined to the 200 foot shoreline zone, linking this to the implementation of the City's Surface Water Master Plan provides an opportunity for a systematic comprehensive approach to deal with the pollution impacts of storm water on Lake Washington.

SMP-11

This deals with vegetation management and utilizes pre-development conditions as reference points. The loss of natural vegetation stated in this goal occurred more than 90 years ago with the lowering of the lake. Since that time development has occurred and residential and park landscaping is the result. Getting to a condition depicted in this goal - stumps, root wads, overhanging vegetation, branches in the water - is simply not going to happen. A realistic and implementable approach is one that should be identified in this goal.

SMP-12

This covers noxious weeds and invasive plants. It states that chemical treatment should be pursued as a last resort. Furthermore, **SMP 17.4** also mentions ..."potential negative impacts" when referring to the Kirkland Parks Department using herbicide application. We are not aware of any scientific basis to support these statements. In Portage Bay there is a ten year history of dealing with the eradication of invasive weeds. There, the Seattle Yacht Club and the Queen City Yacht Club have researched and experimented with the methods mentioned in this goal. The treatment option is the only one which has worked and has brought significant improvement to Portage Bay. The Department of Ecology has approved the use of herbicides for invasive weed control and permits its use. Attached is a fact sheet which provides more details. We urge changing this goal to reflect the reality of the safe and effective use of herbicides to control invasive weeds. Eradication of these weeds will provide significant ecological improvement to Lake Washington.

SMP-13.6 - 13.10

These deal with shoreline stabilization, i.e. bulkheads. It is important to understand why bulkheads have been constructed in the first place. It began with the lowering of the lake by nine feet in 1916. Most of the shoreline along Lake Street was exposed at that time. Land developers installed bulkheads and backfilled behind them to form buildable lots.

Other bulkheads were placed to protect properties as much of the shoreline is exposed to heavy wave action during winter storms.

The staff comments cite that the "City's shorelines are heavily armored". It is again important to define the extent of this armoring. The Final Shoreline Analysis Report, Table 7, page 15 shows that within Kirkland, the percentage of shoreline that is vertical (bulkheaded) constitutes 32 percent of the entire shoreline. Shoreline that is boulder (provide open spaces and support habitat) constitutes another 28 %. This means that 40 percent of Kirkland's shoreline is natural, and 68% is either natural or boulder, which is contrary to the statement of "heavily armored".

SMP-13.6 provides a description of impacts of bulkheads:

..."bulkheads create deeper water with steeper gradient... waves scouring sediment at the base of the wall. The result is a deeper and steeper near shore environment. The scouring action can also cause failure of the bulkhead as the base erodes away or wave action is deflected onto adjacent properties."

This depiction is contrary to my experience of living 33 years on the shoreline of Lake Washington with property that is protected by a bulkhead. This bulkhead was constructed during the 1920's for two important reasons: to enable construction on what was formerly underwater land, and to protect the shoreline from extensive wave action resulting from the fetch of 8 miles of open water. Adjacent properties are similarly bulkheaded. There has been no erosion, steeper near shore slope, or failures during my residency.

Policies for retrofitting shoreline armoring should incorporate several factors in their development. The reasons for the original installation of a bulkhead should be examined and determined if those reasons are still valid today. Additionally, unintended consequences must be thoroughly understood and evaluated. And then a cost benefit analysis should be conducted to determine if there are quantifiable results which justify the expenditure for the retrofits. Finally, there is the practicality of it all. What incentives are there for a private property owner to embark on a bulkhead removal project that would be in the six figure range that would in many instances reduce the usable area of their lakeside yard? With all of the other expenses involved in shoreline ownership it is unlikely this project would be at the top of anyone's list. More realistically, bulkhead removal when meeting specific and well founded criteria could best be attained when re-development occurs with property consolidation and structure knockdowns as suggested in **SMP-13.9**.

SMP-13.9

This draft policy produces an interesting conflict. And that comes from the combination of the ideas of eliminating bulkheads and providing overhanging vegetation to provide shade. It mentions replacing bulkheads with sand beaches and gentle slopes. This doesn't provide any ability for vegetation to overhang the water. It will be washed away during the first wind storm or after a busy weekend from boat wakes. The most effective way to plant overhanging vegetation is on a bulkhead as demonstrated on several locations along the lake shore. Here branches do extend over the water but they do not provide effective shade because of the western exposure due to the north-south orientation of the shoreline which is the orientation of most of Kirkland's shoreline. During most of a sunny day, the sun is directed to the shoreline from the south and then from the southwest, west, and northwest. Attaining shade from shoreline vegetation that is on a scale suitable for urban landscaping on a western exposure, with the angle and direction of the sun, may not even be attainable.

SMP-20

Many of the impacts depicted in this policy are either illegal or prohibited. Marina operations and maintenance of boats do not routinely produce sources of pollutants and impacts described here. Discharge of untreated sewage is mentioned as a nonpoint source of pollution. This discharge is illegal and to infer that it is a routine result of boating activity is not correct. Impacts of anchoring are mentioned to what point?

To be clear, shoreline property owners have a strong interest in protecting and improving the ecology of water bodies. We want to see feasible and effective goals and policies developed through the SMP update process and want to work constructively with local agencies in reaching this goal.

We again appreciate the opportunity to be involved in Kirkland's SMP update process. Please let me know if you have any questions or need additional information about these comments.

Very truly yours,

Richard K. Sandaas
Chair, SPOCA
PAA shoreline owner



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CONTROL OF NOXIOUS AND INVASIVE WEEDS IN LAKE WASHINGTON BASIN

There are two types of weeds in Lake Washington Basin that are not native and are listed on the Department of Ecology of Washington as noxious. These are *Myriophyllum Spicatum* (Eurasian milfoil) and *Egeria densa* (Brazilian elodea). The Department of Ecology surmises that both weeds have propagated throughout the Basin as a result of the disposal of decorative growth for fish tanks by the general public.

These weeds have produced serious, detrimental changes to areas of the Basin, choking the littoral areas, heightening water temperatures and reducing oxygen content. Clear water access into the littoral areas is severely reduced or eliminated, thereby restricting the light necessary to healthy grounds for salmon and other aquatic species. Even predator species, such as small and large mouth bass are unable to traverse some of the infested areas. Swimmers are unable to use these areas without experiencing leg-tangling weeds, together with some reported loss of life. Boaters experience propellers and rudders ensnared in the weeds.

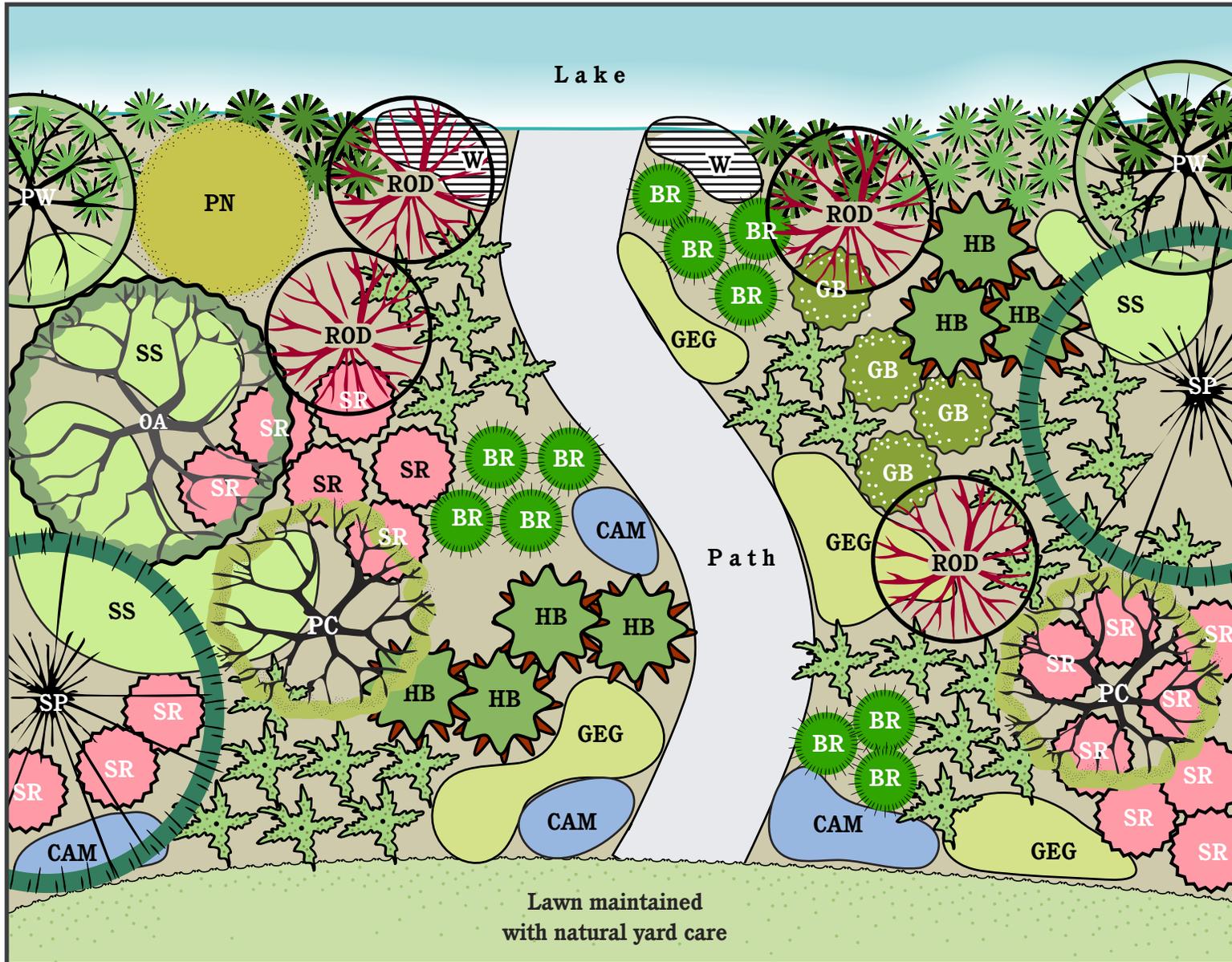
A number of methods have been used to attempt to eradicate or control the weeds. Such methods have included harvesting (mowing). This becomes a short term solution, possibly good for only a month or two before the weeds have regrown into their previous infested areas, and in addition it is virtually impossible to recapture all the leavings permitting a rampant regrowth and spread of the infected areas. Raking has produced little success as have bottom barriers with their propensity to be sucked up by the prop wash of power boats, and diving is prohibitively expensive over larger areas.

The State of Washington, Department of Ecology and the Department of Fisheries regulates that type, amount and timing of application of herbicides that are able to control or eradicate the weeds. The herbicides have been preapproved by FIFRA, a federal agency and have not been shown to be of harm to aquatic, animal or human beings. As a precaution, the Department of Fisheries regulates the timing of certain herbicides that only suppress the weeds to certain windows during the year when salmon migration occurs. Other herbicides that will eradicate the weeds are permitted by the Department of Fisheries without control windows of time.

The issuance of permits for application of herbicides under licensing provided by the Department of Ecology has been challenged a number of times, but the challengers have been unable to produce any scientific basis for cessation of application of the herbicides. As a result, the Pollution Control Hearing Board of the State of Washington has rejected these challenges. As part of their decisional process, the Board examined the alternative methods of treatment in addition to herbicides and concluded they are impractical.

Organizations that have utilized the herbicides have concluded they are the most efficacious and efficient method, have produced clear waters, fish have returned to the areas, and bottom soil samples have yielded negative results with respect to concentration of any chemicals resulting from herbicide treatments.





SYMBOL	PLANT
	Shore pine
	Oregon ash
	Pacific willow
	Pacific crabapple
	Pacific ninebark
	Red osier dogwood
	Highbush cranberry
	Swamp rose
	Goat's beard
	Hard stemmed bulrush
	Small fruited bulrush
	Lady fern
	Bog rosemary
	Slough sedge
	Wapato
	Golden eyed grass
	Camas

PLANTING PLAN:
Wet, Sunny Conditions

0 2 4 6 Feet

Produced by: DNRP GIS, Visual
Communications and Web Unit
File: 0604_WetSun.ai lprc



King County
Department of Natural Resources and Parks
Water and Land Resources Division



Excerpted from the City of Sammamish's Environmentally Critical Areas Regulations, Chapter 21A.50

21A.50.351 Lakes and ponds – Development standards.

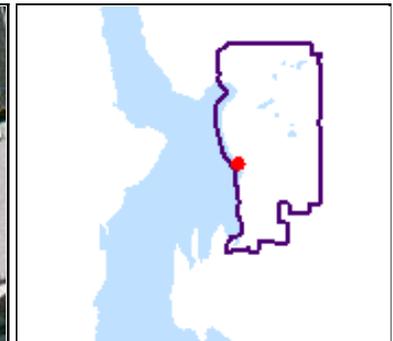
A development proposal on a parcel or parcels containing a lake, pond or associated buffer or setback shall meet the following requirements:

- (1) **Lake Sammamish buffer.** A 45-foot standard buffer shall be established from the ordinary high water mark, as defined by the Shoreline Management Act, of Lake Sammamish provided that up to 25 percent, or no less than 15 feet, of the lake frontage may be used for shoreline access.
- (2) **Increased Lake Sammamish buffers.** The department may require the Lake Sammamish buffer to be increased when necessary to protect other fish and wildlife habitat conservation areas. Where the lake exists adjacent to a stream or wetland located landward of the ordinary high water mark, the standards that provide greater protection shall prevail. Where the lake buffer includes a landslide hazard area, the buffer width shall be the greater of either the lake buffer or 25 feet beyond the top of the landslide hazard area.
- (3) **Lake Sammamish buffer reduction.** The Lake Sammamish buffer may be reduced when buffer reduction impacts are mitigated using any combination of the following mitigation options and result in equal or greater protection of lake functions. In no case shall the buffer be less than 15 feet. The Lake Sammamish buffer may be reduced by:
 - (a) 15 feet for:
 - (i) Removal of an existing bulkhead located at, below, or within 5 feet landward of the lake's ordinary high water mark (OHWM) and subsequent restoration of the shoreline to a natural or semi-natural state, including restoration of topography, soil composition, and vegetation;
 - (ii) Restoration of shoreline to a natural or semi-natural state if no bulkhead is present, but other existing unnatural shoreline contours are present; or
 - (iii) Preservation of existing natural shoreline conditions if no bulkhead or other unnatural shoreline features are present;
 - (b) 10 feet for preservation of existing trees and native vegetation or restoration of native vegetation, as necessary, in the remaining Lake Sammamish buffer to be retained along at least 75 percent of the site's lake frontage. Up to 25 percent by area of preserved and/or restored vegetation can be comprised of non-invasive, non-native vegetation. Up to 25 percent, or no less than 15 feet, of the lake frontage may be used for shoreline access, provided that access areas are located to avoid areas of greater sensitivity and habitat value. Restoration of native vegetation shall consist of a mixture of trees, shrubs and groundcover and be designed to improve habitat functions;
 - (c) 5 feet for preservation of existing native vegetation or restoration of native vegetation, as necessary, in the minimum 5-foot-wide nearshore area below the lake's ordinary high water mark (OHWM);
 - (d) 5 feet for preparation of, and agreement to adhere to, a shoreline vegetation management plan that includes appropriate limitations on the use of fertilizer, herbicides, and pesticides as needed to protect lake water quality; and
 - (e) 5 feet for limiting lawn area to no greater than 20% of the lot area. Landscaped areas outside of the lawn and buffer areas shall be maintained or planted in non-invasive vegetation.

Changes to Consider....

- SMC 21A.50.351(3)(b) could be clarified through revision to specify 75% by area (square footage) of the buffer to be retained must be restored with native vegetation – instead of along 75% of the lake frontage as is currently stated.
- SMC 21A.50.351(3)(e) could be clarified through revision to specify that if lawn is removed to meet this criteria, it must be replaced with native vegetation. This could be further revised, with yet to be determined language, to specify that this criterion cannot be met through simple absence of lawn. As it is currently written there is nothing to prevent lots covered with impervious surfaces in lieu of lawn from meeting this criterion, which is obviously not the intent of the standard. For example, a specific impervious surface limit could also be tied to this standard.

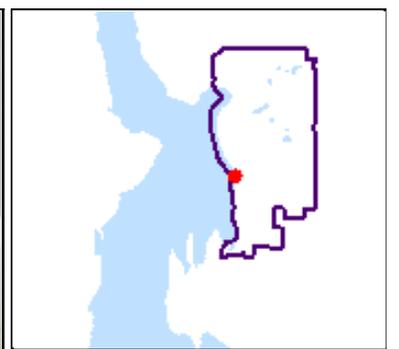
The Mariner



Approximate
Scale 1:733
1 in = 61 ft

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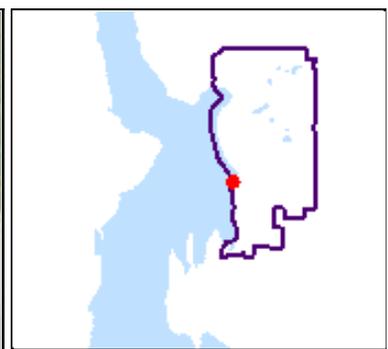
Harbor Lights



Approximate
Scale 1:733
1 in = 61 ft

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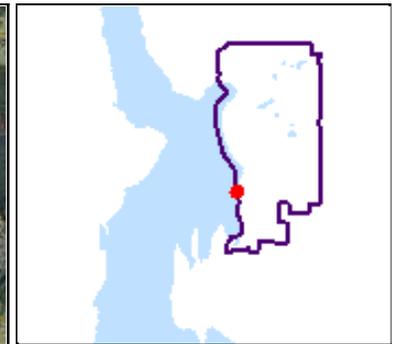
Lakeside



Approximate
Scale 1:733
1 in = 61 ft

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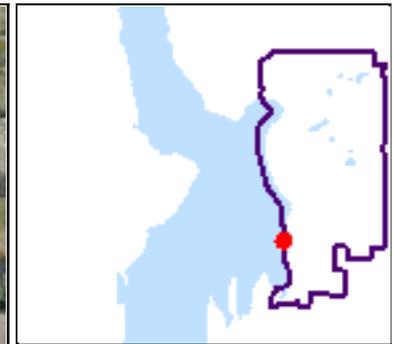
Bayshore



Approximate
Scale 1:733
1 in = 61 ft

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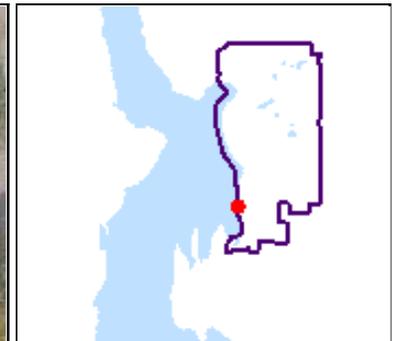
Pebble Beach



Approximate
Scale 1:733
1 in = 61 ft

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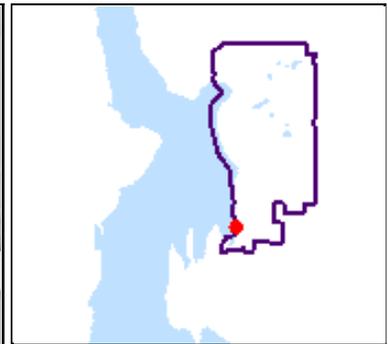
Parkside



Approximate
Scale 1:733
1 in = 61 ft

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Yarrow Bay



Approximate
Scale 1:733
1 in = 61 ft

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[Graphic Version](#)

173-27-070 << 173-27-080 >> 173-27-090

WAC 173-27-080
Nonconforming use and development standards.

No Washington State Register filings since 2003

When nonconforming use and development standards do not exist in the applicable master program, the following definitions and standards shall apply:

(1) "Nonconforming use or development" means a shoreline use or development which was lawfully constructed or established prior to the effective date of the act or the applicable master program, or amendments thereto, but which does not conform to present regulations or standards of the program.

(2) Structures that were legally established and are used for a conforming use but which are nonconforming with regard to setbacks, buffers or yards; area; bulk; height or density may be maintained and repaired and may be enlarged or expanded provided that said enlargement does not increase the extent of nonconformity by further encroaching upon or extending into areas where construction or use would not be allowed for new development or uses.

(3) Uses and developments that were legally established and are nonconforming with regard to the use regulations of the master program may continue as legal nonconforming uses. Such uses shall not be enlarged or expanded, except that nonconforming single-family residences that are located landward of the ordinary high water mark may be enlarged or expanded in conformance with applicable bulk and dimensional standards by the addition of space to the main structure or by the addition of normal appurtenances as defined in WAC 173-27-040 (2)(g) upon approval of a conditional use permit.

(4) A use which is listed as a conditional use but which existed prior to adoption of the master program or any relevant amendment and for which a conditional use permit has not been obtained shall be considered a nonconforming use. A use which is listed as a conditional use but which existed prior to the applicability of the master program to the site and for which a conditional use permit has not been obtained shall be considered a nonconforming use.

(5) A structure for which a variance has been issued shall be considered a legal nonconforming structure and the requirements of this section shall apply as they apply to preexisting nonconformities.

(6) A structure which is being or has been used for a nonconforming use may be used for a different nonconforming use only upon the approval of a conditional use permit. A conditional use permit may be approved only upon a finding that:

(a) No reasonable alternative conforming use is practical; and

(b) The proposed use will be at least as consistent with the policies and provisions of the act and the master program and as compatible with the uses in the area as the preexisting use.

In addition such conditions may be attached to the permit as are deemed necessary to assure compliance with the above findings, the requirements of the master program and the Shoreline Management Act and to assure that the use will not become a nuisance or a hazard.

(7) A nonconforming structure which is moved any distance must be brought into conformance with the applicable master program and the act.

(8) If a nonconforming development is damaged to an extent not exceeding seventy-five percent of the replacement cost of the original development, it may be reconstructed to those configurations existing immediately prior to the time the development was damaged, provided that application is made for the permits necessary to restore

the development within six months of the date the damage occurred, all permits are obtained and the restoration is completed within two years of permit issuance.

(9) If a nonconforming use is discontinued for twelve consecutive months or for twelve months during any two-year period, the nonconforming rights shall expire and any subsequent use shall be conforming. A use authorized pursuant to subsection (6) of this section shall be considered a conforming use for purposes of this section.

(10) An undeveloped lot, tract, parcel, site, or division of land located landward of the ordinary high water mark which was established in accordance with local and state subdivision requirements prior to the effective date of the act or the applicable master program but which does not conform to the present lot size standards may be developed if permitted by other land use regulations of the local government and so long as such development conforms to all other requirements of the applicable master program and the act.

[Statutory Authority: RCW 90.58.140(3) and [90.58].200. 96-20-075 (Order 95-17), § 173-27-080, filed 9/30/96, effective 10/31/96.]

24.05.210 Special regulations—Nonconformance.

Where nonconforming development exists, the following definitions and standards shall apply:

(1) "Nonconforming development" means a shoreline use or structure which was lawfully constructed or established prior to the effective date of the act or the applicable master program, or amendments thereto, but which does not conform to present regulations or standards of the program or policies of the act.

(2) Nonconforming development may be continued provided that it is not enlarged, intensified, increased or altered in any way which increases its nonconformity.

(3) A nonconforming development which is moved any distance must be brought into conformance with the applicable master program and the act.

(4) If a nonconforming development is damaged to an extent not exceeding seventy-five percent of the replacement cost of the original structure, it may be reconstructed to those configurations existing immediately prior to the time the structure was damaged, so long as restoration is completed within one year of the date of damage.

(5) If a nonconforming use is discontinued for twelve consecutive months or for twelve months during any two-year period, any subsequent use shall be conforming. It shall not be necessary to show that the owner of the property intends to abandon such nonconforming use in order for the nonconforming rights to expire.

(6) A nonconforming use shall not be changed to another nonconforming use, regardless of the conforming or nonconforming status of the building or structure in which it is housed.

(7) An undeveloped lot, tract, parcel, site or division which was established prior to the effective date of the act or the applicable master program but which does not conform to the present lot size or density standards may be developed so long as such development conforms to other requirements of the applicable master program and the act. (Ord. 3153 § 1 (part), 1989; Ord. 2938 § 1 (part), 1986)

162.60 Special Provisions for Continued Uses – Density

The provisions of this section set forth when, and under what circumstances, residential property with nonconforming density may continue in existence or be rebuilt or redeveloped. An existing lawful use of a residential structure which became nonconforming as to density either as a result of amendatory Ordinance No. 2347 or due to other zoning changes implemented to bring about conformity with the Comprehensive Plan shall be allowed to continue in existence, or be remodeled, repaired or maintained subject to the conditions listed below. Redevelopment or rebuilding may not occur unless the structure is destroyed by fire or other casualty (see subsection (4) of this section).

1. The provisions of this section apply only to multifamily structures in areas designated by the Comprehensive Plan for multifamily use.
2. Any change in use shall conform to the Comprehensive Plan and zoning regulations in effect at the time such change is made.
3. Any change in density shall comply with the provisions of this section.
4. Ordinary repairs and maintenance may be carried out consistent with the provisions of this chapter; provided, that there shall be no limitation on the amount or cost of such repairs and maintenance.
5. Remodeling may be carried out consistent with the provisions of this chapter; provided, that within any 24-month period, the value of all improvements may not exceed 50 percent of either the assessed valuation of the existing structure based on the King County assessed valuation of the structure, or the value of the existing building as determined by the most current Building Standards as published by the International Conference of Building Officials, whichever is greater. If there is no King County assessment for the structure to be remodeled, the most current Building Standards as published by the International Conference of Building Officials shall be used to determine valuation.

The remodeled density must be at least 75 percent of that contained in the original structure. The major exterior dimensions of the structure shall not exceed the major exterior dimensions of the previous structure. Except as noted in this subsection and subsection (7) of this section, this provision shall not reduce any requirements of the zoning, building, or fire codes in effect when the structure is remodeled.

6. Residential property with nonconforming density shall not be subject to the provisions of this chapter relating to destruction by fire or other casualty. In the event a residential structure that is nonconforming as to density is destroyed to any extent by fire or other casualty, the structure may be rebuilt as a residential structure; provided, however, that the number of dwelling units, gross floor area of the structure, and major exterior dimensions of the structure shall not exceed the same dimensions or standards of the previous structure. This subsection shall not reduce any requirements of the zoning, building, or fire codes in effect when the structure is rebuilt. The property owner shall also have the option of rebuilding the structure at a reduced density, as described in subsection (5) of this section. The provisions of this subsection shall only be available if an application for a building permit is filed within 12 months of fire or other casualty and construction is commenced and completed in conformance with the provisions of the building code then in effect.
7. Should the number of parking stalls provided on-site be insufficient to meet zoning regulations in effect at the time of remodeling, this deficiency shall be allowed to remain with the remodel; provided, that the number of stalls may not be reduced from the number of stalls on-site with the original structure. Any surplus of parking stalls above those required by the zoning regulations in effect at the time of remodeling may be eliminated.

8. The owner of a continued use nonconforming as to density may request the issuance of a "certificate of continued use" which shall identify the property, existing use, density and site characteristics for which the certificate is issued and which shall include the provisions of this chapter.

162.55 Special Provisions for Continued Uses – Lot Coverage

As used in this chapter, the term “continued use” shall mean an existing lawful use of land (and structures) which became nonconforming as to use solely as a result of this amendatory Ordinance No. 2347 or which becomes nonconforming solely as a result of the maximum lot coverage provision of this code, Ordinance No. 2678, effective on October 2, 1982.

A continued use shall be permitted to exist as a lawful use subject only to the following conditions:

1. Any change in use shall conform to the Comprehensive Plan and zoning regulations in effect at the time such change is made.
2. Ordinary repairs and maintenance may be carried out consistent with the provisions of this chapter; provided, that there shall be no limitation on the amount or cost of such repairs and maintenance.
3. A continued use shall not be subject to the provisions of this chapter relating to destruction by fire or other casualty. In the event a structure so designated as a continued use is destroyed to any extent by fire or other casualty, the structure may be rebuilt; provided, however, that the gross floor area of the structure and major exterior dimensions of the structure shall not exceed the same dimensions or standards of the previous structure. This provision shall not reduce any requirements of the building or fire codes in effect when such structure may be rebuilt.

The provisions of this section shall only be available if any application for a building permit is filed within 12 months of such fire or other casualty and construction is commenced and completed in conformance with the provisions of the building code then in effect.

4. A continued use shall be subject to the provisions of this chapter relating to the abandonment of structure or use.
5. The owner of a continued use may request the issuance of a “certificate of continued use” which shall identify the property, existing use, density and site characteristics for which the certificate is issued and which shall include the provisions of this chapter.



City of Seattle Legislative Information Service

Seattle Municipal Code

Information retrieved
March 31, 2008 11:58
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Title 23 - LAND USE CODE
Subtitle III Land Use Regulations
Division 3 Overlay Districts
Chapter 23.60 - Shoreline District
Subchapter III General Provisions

SMC 23.60.124 Nonconforming structures.

A. A nonconforming structure may be maintained, renovated, repaired or structurally altered but shall be prohibited from expanding or extending in any manner which increases the extent of nonconformity, or creates additional nonconformity, except as otherwise required by law, as necessary to improve access for the elderly and disabled or to provide regulated public access. When the development is nonconforming as to lot coverage, existing lot coverage may not be transferred from the dry-land portion of the site to the water.

B. A nonconforming structure or development which is destroyed by fire or other act of nature, including normal deterioration of structures constructed in or over the water, may be rebuilt to the same or smaller configuration existing immediately prior to the time the structure was destroyed; provided that action toward replacement must be commenced within twelve (12) months after demolition or destruction of a structure in the CN, CP, CR, CM, CW, UR, UH and US Environments or within twenty-four (24) months after demolition or destruction of a structure in the UM, UG, or UI Environments. A rebuilt nonconforming

structure housing a nonconforming eating and drinking establishment use in an Urban Stable environment may consolidate other existing nonconforming structures on the property, provided that no increase in height or cumulative expansion of the area of nonconforming structures and no increase in overwater coverage occurs, and provided that the Director finds that the reconfiguration will allow removal of other nonconforming structures, resulting in improved view corridors or regulated public access.

C. The Director may require compliance with the standards of Section 23.60.152 **EE**, General development, for part or all of a lot as a condition for new development of part of a lot if it is found that continued nonconformity will cause adverse impacts to air quality, water quality, sediment quality, aquatic life, or human health.

D. The Director may require compliance with Section 23.60.160 **EE**, Standards for regulated public access, as a condition of a substantial development permit for expansion or alteration of a development nonconforming as to public access requirements.

(Ord. 113466 Section 2(part), 1987.)

[Definitions](#) _____ of terms

*used in Land Use Code
as they apply to Chapter 23.60.*

[Special definitions](#) _____ of

*terms used in Chapter
23.60, Shoreline
Program.*

Link to [Recent](#) _____
[ordinances](#) _____ passed since

*9/24/07 which may
amend this section.
(Note: this feature is
provided as an aid to
users, but is not*

guaranteed to provide comprehensive information about related recent ordinances. For more information, contact the Seattle City Clerk's Office at 206-684-5474, or by e-mail at clerk@seattle.gov)





US Army Corps
of Engineers
Seattle District

Special Public Notice

Regulatory Branch
Post Office Box 3755
Seattle, Washington 98124-3755
Telephone (206) 764-3495
ATTN: Ms. Kristina Tong

Public Notice Date: February 2, 2007

ERRATUM

REVISION TO REGIONAL GENERAL PERMIT 1 FOR WATERCRAFT LIFTS

ANNOUNCEMENT: On January 27, 2007, the U.S. Army Corps of Engineers, Seattle District, Regulatory Branch (Corps) issued a Special Public Notice announcing the revised Regional General Permit (RGP) 1 which authorizes the installation, repair, maintenance, replacement and/or retention of watercraft lifts and canopies in certain fresh and marine/estuarine waters within the State of Washington.

After issuance of the January 27, 2007 Special Public Notice, further review of RGP-1 revealed the need for clarification and updates. The updated revised RGP-1 text is attached to this document and is dated January 29, 2007. This RGP-1 text supercedes the RGP-1 text dated January 27, 2007.

The updated text includes:

The wording of the new Category "F" regarding replacement, repair or maintenance of existing watercraft lifts has been updated and clarified. Category "A" was also updated.

Required notification to the Corps for certain activities. Required notification between the Corps and the National Marine Fisheries Service (NMFS) for certain activities.

If the proposed watercraft lift and/or canopy is closer than 30 feet from the ordinary high water/mean high water mark on the shoreline, pre-construction notification (submittal of a completed Appendix A) to and approval by the Corps is required. This has been updated to state that this applies to all categories of work except Category "F". The previous text stated including Category "A" and "F".

Attachment: Revised RGP-1 text, which includes revised Appendix A - Application Form



US Army Corps
of Engineers
Seattle District

Department of the Army Regional General Permit



RGP 1 Watercraft Lifts In fresh and marine/estuarine waters Within the State of Washington

Effective Date: February 14, 2005

Expiration Date: February 14, 2010

Revised Date: January 29, 2007

Permit Number: RGP 1

Permit Title: Watercraft Lifts in certain fresh and marine/estuarine waters within the State of Washington.

Authority: In accordance with 33 CFR 325.2(e)(2), the Seattle District of the U.S. Army Corps of Engineers (Corps) is issuing Regional General Permit 1(RGP 1) that authorizes watercraft lifts and canopies in certain fresh and marine/estuarine waters within the State of Washington upon the recommendation of the Chief of Engineers, pursuant to Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act.

Issuing Office: U.S. Army Corps of Engineers, Seattle District
Regulatory Branch, CENWS-OD-RG
Post Office Box 3755
Seattle, Washington 98124-3755
Telephone: (206) 764-3495

Purpose: The purpose of RGP 1 is to authorize watercraft lifts and canopies in certain fresh and marine/estuarine waters within the State of Washington for the purpose of safe watercraft moorage.

Use of this RGP: The permittee is responsible for ensuring that the authorized work complies with all applicable provisions of RGP 1, including any project-specific special conditions that may be added by the District Engineer. Failure to abide by the requirements of this RGP may constitute a violation of the Clean Water Act and/or Rivers and Harbors Act. For purposes of this RGP, the term "permittee" shall include all successors in interest.

RGP 1 contains provisions intended to protect the environment and endangered species. Work that will not comply with these provisions is not authorized by this RGP and may require Department of the Army authorization by standard individual permit. Moreover, compliance with the provisions of RGP 1 does not itself guarantee that the work is authorized by this RGP. Activities that appear to comply with the provisions of this RGP but would have an unacceptable adverse impact on the public interest are not authorized.

Activities authorized by this RGP: Work authorized by RGP 1 is limited to the activities described below. Activities authorized include the installation, maintenance, repair, replacement, and retention of

noncommercial watercraft lifts at existing residential waterfront structures (e.g., pier, float, ramp, bulkhead, buoy, etc). Watercraft lifts includes but is not limited to lifts for motorized boats, kayaks, canoes, jet skis, and float planes. This RGP does not authorize watercraft lifts or canopies at commercial marinas. The applicant must, to the maximum extent practicable, orient the watercraft lift and canopy (lengthwise) in a north-south direction to minimize shading impacts. Definitions, descriptions, and/or examples of terms used in this RGP are located in Appendix E of this document.

Categories of Activities:

Category A: Installation or retention of one ground-based or floating watercraft lift without a canopy, per adjacent upland property, where no other watercraft exists. If watercraft lifts are proposed to be installed at a joint-use pier owned by two upland property owners, under this Category, only one can be installed.

Category B: Installation, repair, maintenance, replacement or retention of one watercraft lift, without a canopy, and the placement of no more than 2 cubic yards of fill to anchor the lift. "Fill" only includes the placement of rock or pre-cast concrete blocks. Fill does not mean installation of piling.

1. Fill can only be used if the substrate prevents the use of anchoring devices which can be embedded into the substrate (e.g., compacted substrate portions of Lake Chelan).
2. The fill must be clean.
3. The fill must consist of rock or pre-cast concrete blocks.
4. The fill must only be used to anchor the watercraft lift.
5. The minimum amount of fill must be utilized to anchor the watercraft lift.
6. To the maximum extent possible, work must be performed in the dry.

Category C: Installation or retention of additional watercraft lifts beyond one, without a canopy, at a single residential use waterfront structure. A maximum of 3 lifts are allowed at a single residential use overwater structure. However, only two lifts can be ground-based, all other lift(s) must be floating or suspended lift(s).

Category D: Installation or retention of additional watercraft lifts beyond one, without a canopy, at a joint use waterfront structure. There is no limitation to the maximum amount of watercraft lifts at an existing joint use structure. However, different project impact reduction and mitigation measures will be required based on the type of additional lifts (e.g., floating or suspended versus ground-based).

Category E: Installation or retention of a translucent canopy on a new or existing watercraft lift.

1. In fresh waters, the canopy and structure should be located waterward of the 9-foot depth elevation (based on OHW or MHHW). If this condition cannot be met, additional project impact reduction measures are required.
2. The lowest edge of the canopy must be at least 8 feet above the plane of OHW or MHHW.
3. Only 1 (one) canopy can be installed per single or joint use residential overwater structure.

4. The watercraft lift with the canopy must be oriented with the length in the north-south direction to the maximum extent practicable.

Category F: Replacement, repair or maintenance of existing watercraft lifts. This includes parts which are located above or below the plane of ordinary high water (OHW) or mean high water (MHW) including parts which make contact with the substrate of the waterbody. If a watercraft lift is being replaced, it must be replaced in the same footprint as the original one or in a location at the same water depth or deeper on the same property.

Pile Driving Requirements: If a drop hammer pile driver for steel piling is utilized, a sound attenuation device or system must be implemented during pile driving. The diameter of steel piling cannot exceed 12 inches.

1. For piling with a diameter of 10 inches or less, the sound attenuation device must include one of the following: the placement of a block of wood (minimum of 6 inches thick) between the hammer and the piling during pile driving or use a bubble curtain that distributes air bubbles around 100% of the perimeter of the piling over the full depth of the water column or any other Corps approved sound attenuation device. Information on bubble curtain design is available on the Corps' website at www.nws.usace.army.mil/reg.html.
2. For piling with a diameter greater than 10 inches, up to 12 inches, the sound attenuation device must include both the placement of a block of wood (minimum of 6 inches thick) between the hammer and the piling during pile driving **and** use a bubble curtain that distributes air bubbles around 100% of the perimeter of the piling over the full depth of the water column or any other Corps approved sound attenuation device.

Work Windows: To minimize impacts to fish species and bald eagles, work is restricted to certain time periods. There are different work window restrictions for fish species and bald eagles. For projects with work windows for both fish and bald eagles, construction can only occur during the times where the windows overlap.

Fish species timing and equipment restrictions:

1. For activities not contacting the substrate (e.g., repair of above substrate portions of the lift, installation of a canopy, or installation of floating or suspended watercraft lifts) or work performed in the dry, there are no work window restrictions. Work can occur at any time.

2. For activities contacting the substrate (e.g., installation of a ground-based watercraft lift) refer to current allowable work windows located on the Corps' website at www.nws.usace.army.mil click on Regulatory – Regulatory Permits --Endangered Species Act -- Allowable Work Windows.

Bald eagle timing and equipment restrictions:

1. For activities only requiring the use of hand or powered hand tools, there are no work window restrictions. Work can occur at any time.

2. For activities requiring the use of equipment **beyond hand or powered hand tools**, refer to current allowable work windows located on the Corps' website at www.nws.usace.army.mil click on Regulatory – Regulatory Permits --Endangered Species Act -- Allowable Work Windows.

Location of Authorized Activities: RGP 1 is applicable in all waters of the United States, including navigable waters of the United States, within the State of Washington except in the main stem of the Snake River and the Pend Oreille River. On the main stem of the Columbia River above Priest Rapids Dam, only activities meeting Category A and F can be authorized by this RGP. All other categories of this RGP cannot be authorized by this RGP in the Columbia River above Priest Rapids Dam.

Application Procedure: The application procedure varies based on the category of work (Categories A – F described above). All categories require submittal of drawings in the format described in Appendix D. Any applicant proposing work in any of the categories requiring pile driving, must submit an application and receive approval before any work in waters of the U.S. can commence. Any applicant proposing work in any of the categories except Category F, closer than 30 feet from the OHW mark or MHW mark on the shoreline, must submit an application and receive approval before any work in waters of the U.S. can commence.

Categories A, B and F: Appendix A must be completed and submitted **before or within 30 days after** the work is completed. Work may only commence within the approved work windows.

Exception: For work proposed under Category B in the Lake Washington and Lake Sammamish system which includes but is not limited to Lake Washington, Lake Sammamish, Lake Union, and the Lake Washington Ship Canal, the applicant must obtain permit approval before any work commences. Individual consultation must be completed before the work can be authorized under this RGP for Category B work in the Lake Washington and Lake Sammamish system. The applicant may submit Appendix A as their permit application and the form will be utilized as a Reference Biological Evaluation and the Corps will initiate an individual ESA consultation.

Categories C and D: Appendix A must be submitted **before** the work can commence. Written approval must be obtained from the Corps before any work can commence for these activities.

Categories E: Appendix A must be submitted to the Corps **before** the work can commence. Written approval must be obtained from the Corps before any work can commence for this category of work.

For work in the Lake Washington and Lake Sammamish system that includes but is not limited to Lake Washington, Lake Sammamish, Lake Union, and the Lake Washington Ship Canal, the applicant may submit Appendix A as their permit application but the form will be utilized as a Reference Biological Evaluation and the Corps will initiate an individual ESA consultation. Individual consultation must be completed before the work can be authorized under this RGP for this category of work in the Lake Washington and Sammamish system.

Project Impact Reduction and Conservation Measures: *While the individual activities described above will have minimal impacts to the aquatic environment, direct, indirect, and cumulative impacts from these structures have not been fully avoided.*

Salmonids, including juvenile chinook salmon and sub-adult and adult bull trout use the nearshore areas of Puget Sound for feeding, rearing, and/or as a migratory corridor. As small individuals, they stay in shallow waters to avoid large fish predators found in deeper water, and to rear and feed.

The watercraft lift structure itself and canopy inhibits light from entering the water. This loss of light reduces the ability of aquatic vegetation to grow. This subsequently has an impact on the feeding and rearing habitat of fish. Also, the shadow created by the structures may provide cover for predators of salmonid fish species. Therefore, the amount of shade created by these structures needs to be

minimized. Also, because the shallow water habitat is an important habitat feature, structures should be placed in deeper water to minimize impacts to the shallow water habitat.

The purpose of these measures is to offset losses to the aquatic environment resulting from direct, indirect, and cumulative impacts of watercraft lifts and canopies. These mitigation measures will restore or create important fish habitat to offset the impact of the project.

The number of "Mitigation Points" required is dependent upon the category of work, water depths, and aquatic habitats at the project site.

Table 1 lists the required number of mitigation points for different categories of work located at different water depths, located in different aquatic habitats at the project site.

Table 1. Number of Required Mitigation Points for Certain Categories, Water Depths and Habitats

Project Work Description	Location of Proposed Work	
	A	B
	Landward most side of the watercraft lift is in or over a water depth of 9 feet or greater (based on OHW or MHHW)	Landward most side of the watercraft lift is in or over a water depth less than 9 feet (based on OHW or MHHW)
	# Required Mitigation Points	# Required Mitigation Points
Category A or B or F	0	0
Category C or D For <u>each</u> floating or suspended watercraft lift installed beyond one	2	4
Category C or D For <u>each</u> ground based watercraft lift installed beyond one	4	6
Category E (mitigation points for this category is <u>added</u> to any of the other applicable categories) For a translucent canopy.	0	2

Table 2 is a list of different types of project impact reduction measures the applicant can select from to mitigate for the proposed watercraft lift(s) and/or translucent canopy. Each project impact reduction measure is given a point value. Based on the size of the project, a certain number of mitigation points will be required to mitigate for the impacts. Table 2 describes the method to be used to determine how many mitigation points are required for the proposed project. Mitigation work should be accomplished onsite if possible. If mitigation work cannot be completed onsite, the mitigation work may occur at a Corps' approved offsite location.

Note: Fractional numbers 0.5 or above are rounded up and fractional numbers below 0.5 are rounded down. Examples: The number 7.3 would be rounded down to 7. The number 6.5 would be rounded up to 7.

Table 2. Project Impact Reduction and Mitigation Measure Options and Corresponding Mitigation Points

(Note: The term "remove" means remove from the area waterward of MHHW or OHW and dispose of, or place in, an appropriate upland or approved disposal area.)

Mitigation Measure Option #	Number of Mitigation Points	Project Impact Reduction and Mitigation Measure Description
1	2	Plant 1 tree and 1 shrub (from the planting list and per planting specifications in this RGP) within 15 feet landward of MHHW or OHW and parallel to the shoreline
2	2	Remove 1 pile (if the pile is treated wood, use MMO#4 instead)
3	2	Permanently prevent an existing permitted float, which currently grounds out, from resting on the tidal substrate (at least 1 foot above the tidal substrate)
4	2	Remove 1 treated wood pile located waterward of MHHW or OHW Guidance on disposal and disposal location of treat wood materisl is located at www.ecy.wa.gov/programs/hwtr/demodebris/pages2/demowood.html
5	2	Remove 9 square feet of an existing overwater structure. This includes the permanent removal of a covered moorage, opaque watercraft lift canopies, and skirting.
6	2	Permanently prevent an existing anchor line from scouring the tidal substrate
7	6	Remove 3 linear feet of hardened shoreline and plant removal area with native vegetation (see Table 3)
8	1	Remove manmade debris (e.g., concrete rubble, tires, etc.) covering 9 square feet This option will require before and after photos of debris removal and removal area, a description of the type of debris and a vicinity map showing the location of the debris and removal area.
9	Varies	Removal of an entire or portion of an existing groin, The number of mitigation points varies depending on the size of the groin. Three mitigation point = 9 square feet (footprint) of groin removed. This option will require before and after photos of the groin and removal area and a vicinity map showing the location of the groin. For example: The groin to be removed is 9 feet long and 3 feet wide. This structure has a footprint of 27 square feet. 27 divided by 3 equals 9 mitigation points.
10	Varies	Removal of an entire or portion of an existing boat ramp, The number of mitigation points varies depending on the size of the boat ramp. Three mitigation point = 9 square feet (footprint) of boat ramp removed.

Mitigation Measure Option #	Number of Mitigation Points	Project Impact Reduction and Mitigation Measure Description
		<p>This option will require before and after photos of the boat ramp and removal area and a vicinity map showing the location of the boat ramp.</p> <p>For example: The boat ramp to be removed is 12 feet long and 8 feet wide. This structure has a footprint of 96 square feet. $96 \div 9 = 10.7$ times 3 equals 32 mitigation points.</p>
11	Varies	<p>Removal of an entire or portion of an existing marine railway (two rails and support structures), in its entirety. The number of mitigation points varies depending on the length of the marine railway. One mitigation point = 2 linear feet of a pair of rails removed. Note: each rail is not counted separately.</p> <p>This option will require before and after photos of the marine rail and removal area and a vicinity map showing the location of the boat ramp.</p> <p>For example: The marine railway to be removed is 14 feet long. $14 \div 2 = 7$ mitigation points.</p>
12	Varies	<p>Install grating on an existing overwater structure with a solid deck surface. Three mitigation point = 9 square feet of installed grating</p> <p>For example: A boatlift will be installed adjacent to a pier which has the surface area completely decked with wood, no open surface area. The decking is removed from an area 6- by 3-feet and grating is installed for a total area of 18 square feet. $18 \div 9 \text{ sq. ft.} = 2$ times 3 → 6 mitigation points.</p>

Grating: The grating must have at least 60 percent open area. The grating must be oriented to maximize the amount of light passage. To ensure that light transmission is not impeded, grating must not be covered or blocked underneath with any objects, such as, but not limited to, buildings, planters, storage sheds or boxes, nets, carpets, boards, tables, lawn furniture, and utility conduits or boxes.

Note: No "credit" is given for constructed mitigation points exceeding the required amount of required mitigation points.

Mitigation Planting Requirements. *The purpose of mitigation planting is to offset losses to the aquatic environment resulting from the installation of an overwater structure. The mitigation planting establishes a plant community and associated food web that can be utilized by foraging and migrating salmonids as they pass through the project area and in tidal systems, provides complex shade for upper intertidal spawning forage fish.*

To this end, the prospective permittee is required to establish and preserve the planting plot(s) at the project site for the duration that the watercraft lift and/or canopy is in place. A drawing of the proposed planting area must be recorded with the Registrar of Deeds per General Condition 26 of this RGP.

The planting plot(s) will be planted (cuttings, burlapped roots or 1 – 5 gallon pots) with native shrubs and trees. The plot needs to be on the property but does not need to be located adjacent to the overwater structures and/or watercraft lift. The plantings must be located within 15 feet landward of MHHW or OHW, planted in an alignment nearest to the water parallel to the shoreline. The shrubs will be planted at intervals of 3-feet on center, and the trees will be planted at intervals of 10-feet on center. The Corps must approve a planting plan submitted by the prospective permittee prior to issuance of an RGP to the permittee. The plant species must be from the plant list in Table 3, or must be a species approved by the Corps.

EXAMPLE OF A PLANTING PLAN:

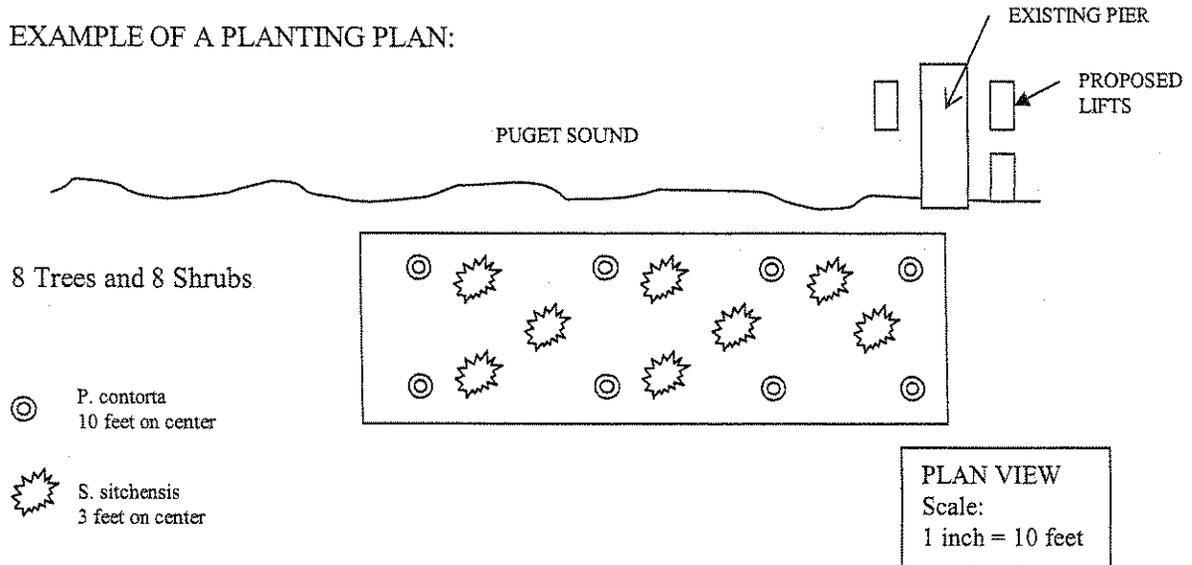


Table 3. List of Approved Plant Species

Common Name	Scientific Name
Shrubs:	
Sitka willow	<i>Salix sitchensis</i>
Souler willow	<i>S. scouleriana</i>
Sandbar willow	<i>S. exigua</i>
Pacific willow	<i>S. lasiandra</i>
Hooker willow	<i>S. hookeriana</i>
Red osier dogwood	<i>Cornus stolonifera</i>
Red flowering currant	<i>Ribes sanguineum</i>
Nootka rose	<i>Rosa nutkana</i>
Baldhip rose	<i>Rosa gymnocarpa</i>
Thimbleberry	<i>Rubus parviflorus</i>
Red elderberry	<i>Sambucus racemosa</i>
Snowberry	<i>Symphoricarpos albus</i>
Vine maple	<i>Acer circinatum</i>
Western serviceberry	<i>Amelanchier alnifolia</i>
Ocean spray	<i>Holodiscus discolor</i>
Hazelnut	<i>Corylus americana</i>
Sweet gale	<i>Myrica gale</i>
Tall Oregon grape	<i>Mahonia aquifolium</i>
Dull Oregon grape	<i>M. nervosa</i>
Trees:	
Black cottonwood	<i>Populus trichocarpa</i>
Douglas fir	<i>Pseudotsuga menzeisii</i>
Sitka spruce	<i>Picea sitchensis</i>
Shore pine	<i>Pinus contorta</i>
Ponderosa pine	<i>Pinus ponderosa</i>
Cascara	<i>Rhamnus purshiana</i>
Big leaf maple	<i>Acer macrophyllum</i>
Red alder	<i>Alnus rubra</i>
Birch species	<i>Betula spp.</i>
Pacific dogwood	<i>Cornus nuttallii</i>
Choke cherry	<i>Prunus virginiana</i>

Mitigation Planting Performance Standards. One hundred percent survival of all planted trees and shrubs is required during the first and second years after planting the plot(s). During the third through fifth years after planting, 80 percent survival is required. The permittee must protect the planting plot(s) against predation—the Corps recommends fencing. Individual plants that die must be replaced with native shrubs and trees taken from the species list above. Maintenance of the mitigation area includes removal and replacement of dead or dying plants and removal of invasive and/or noxious weeds. Maintenance does not include trimming or mowing of the plants. The plants must be allowed to develop

naturally. If during the 5 years of monitoring, contingency plans are required (e.g., additional plantings, planting different species), the permittee must implement any Corps required contingency plans.

Mitigation Reports. Mitigation reports must be submitted to the Corps for all projects where mitigation is required.

a. Mitigation must be completed within one year of permit issuance. A report on mitigation completion, including as-built drawings, must be submitted to the Corps 12 months from the date the Corps issues an RGP to the permittee. The permittee can meet this reporting requirement by submitting to the Corps a completed *Report for Mitigation Work Completion*, Appendix B.

b. **If plantings are implemented:** Mitigation planting monitoring reports will be due annually, no later than November 30 of each monitoring year, for 5 years from when Corps accepts the as-built drawings. The mitigation monitoring report will include written and photographic documentation on tree and shrub mortality and replanting efforts. Photographs must be taken between June – August (the best time of year to show plant growth). Photographs must show a panoramic view of the entire mitigation planting area. A set point from where photos are taken must be established and used repeatedly for each monitoring year. The date of the photos must be noted on the monitoring report. The permittee can meet this reporting requirement by submitting to the Corps a completed *Mitigation Planting Monitoring Report*, Appendix C.

Water Quality Certification: The Corps requested that the Washington Department of Ecology (Ecology) pursuant to Section 401 of the CWA and Chapters 173 - 225 of the Washington Administrative Code (WAC), and the Environmental Protection Agency, and Puyallup and Chehalis Tribes pursuant to Section 401 of the CWA, certify that those activities authorized by Category C of this RGP for which these agencies are responsible, will not violate established State water quality standards. All of these agencies waived the requirement of a water quality certification for activities described in this RGP.

Coastal Zone Management Consistency: The Corps requested that the Washington Department of Ecology pursuant to the requirements of the U.S. Coastal Zone Management Act (16 U.S.C. 1452 et seq.) and its implementing regulations (15 CFR 923-930) concur that the activities authorized by this RGP will be consistent with the requirements of the State of Washington's CZM program. Ecology waived the requirement for coastal zone management consistency for activities described in this RGP.

Endangered Species: The Endangered Species Act (ESA) of 1973, as amended, requires all Federal agencies to consult with the National Marine Fisheries Service (NMFS) and/or the U.S. Fish and Wildlife Service (FWS), pursuant to Section 7 of the ESA, on any action, or proposed action, permitted, funded, or undertaken by the agency that may affect a species listed as threatened or endangered under the ESA, or its designated critical habitat. Informal consultation was initiated for all activities described in this RGP except Categories B and E in the Lake Sammamish and the Lake Washington System. Concurrence was received from both agencies. Work in Categories B and E in the Lake Sammamish and the Lake Washington System require individual ESA consultation separate from the programmatic consultation for the RGP.

Essential Fish Habitat: The Magnuson-Stevens Fishery Conservation and Management Act (MSA), as amended by the Sustainable Fisheries Act of 1996, requires all Federal agencies to consult with the NMFS on all actions, or proposed actions, permitted, funded, or undertaken by the agency that may adversely affect Essential Fish Habitat (EFH). This RGP will not adversely affect EFH for federally managed fisheries in Washington waters. No further consultation is required.

Permit Conditions: Department of the Army authorization under this RGP is subject to the following special and general conditions:

SPECIAL CONDITIONS

1. The permittee must put the Department of the Army (DA) permit reference name and number on the authorized watercraft lifts. The name and number must be written such that the marking is permanent, is located above the water surface, and can be clearly seen. The Corps will provide the DA reference name and number to the permittee.
2. No work may be performed over or within 50 feet of eelgrass and macroalgae beds.
3. No work may be performed in or within 50 feet of Washington State documented spawning habitat for listed or proposed forage fish species. Contact the Washington State Department of Fish and Wildlife for a determination.
4. During the installation and utilization of the watercraft lift(s) no large woody debris may be removed from the aquatic habitat.
5. All structural steel members must be pre-painted and dried prior to installation.
6. If watercraft lifts include wood, only non-treated wood shall be used in fresh waters. In tidal waters, no creosote, pentachlorophenol, CCA, or comparably toxic compounds not approved for marine use, shall be used for any portion of the overwater structure. For any ACZA treated wood, the wood must be treated by the manufacturer per the Post Treatment Procedures outlined in "BMP Amendment #1 - Amendment to the Best Management Practices (BMPs) for the Use of Treated Wood in Aquatic Environments; USA Version - Revised July 1996", by the Western Wood Preservers Institute, as amended April 17, 2002 or the most current BMPs. This information is available on the internet at www.WWPInstitute.org. Third party certification that the material was produced according to these BMPs must be provided to the Corps before authorized work can commence.
7. Only two new piles may be driven and only if necessary for watercraft lift installation.
8. If a barge is used, the barge must not ground out and the barge must not be located over or adjacent to vegetated shallows (except where such vegetation is limited to Washington State designed noxious weeds).
9. Existing watercraft lifts to be removed must be removed in their entirety.
10. If a floating watercraft lift is installed, it must not rest on the substrate at any time.
11. Work that disturbs the substrate, bank, or shore of a water of the United States shall occur in the dry whenever practicable.
12. Equipment shall be operated from an out-of-water location whenever possible. Equipment shall be operated in a manner that minimizes the suspension of particulates. All equipment used in or around waters shall be clean and inspected daily prior to use to ensure that the equipment has no fluid leaks. Should a leak develop during use, the leaking equipment shall be removed from the

site immediately and not used again until it has been adequately repaired. No equipment may be stored or fueled so close to a surface water that the activity could adversely affect the waterbody.

GENERAL CONDITIONS

1. Reliance on Permittee's Information. In verifying a permittee's authorization under this RGP, the Department of the Army has relied, in part, on the information provided by the permittee. If this information proves to be false, incomplete, or inaccurate, the permittee's authorization may be modified, suspended, or revoked, in whole or in part.
2. Compliance with Terms and Conditions. Projects authorized by this RGP shall comply with all terms and conditions herein. Failure to abide by these terms and conditions invalidates this authorization and may result in a violation of Federal law, which may require that the permittee restore the site or take other remedial action. Activities requiring Department of the Army authorization that are not specifically authorized by this RGP are prohibited unless authorized by another Department of the Army permit.
3. Contractor's Copy of Permit. The permittee shall provide complete copies of this permit and the Corps' verification letter (if appropriate) for the authorized project to each contractor involved in the project and keep copies of this permit and Corps' verification letter available for inspection at the project site.
4. Access for Inspection. The permittee shall allow the District Engineer or his authorized representative to inspect the project whenever deemed necessary to ensure that the activity is in compliance with the terms and conditions prescribed herein.
5. Limits of Authorization. This permit does *not*:
 - a. Obviate the requirement to obtain all local, State, or other Federal authorizations required by law for the activity authorized herein, including any authorization required from Congress.
 - b. Convey any property rights, either in real estate or material, or any exclusive privileges.
 - c. Authorize any injury to property, invasion of rights, or any infringement of local, State, or Federal laws or regulations.
 - d. Authorize the interference with any existing or proposed Federal project.
6. Limits of Federal Liability. This permit is not an approval of the design features of any authorized project or an implication that such project is adequate for the intended purpose; a Department of the Army permit merely expresses the consent of the Federal Government to conduct the proposed work insofar as public rights are concerned. In issuing this RGP, the Federal Government does not assume any liability for the following:
 - a. Design or construction deficiencies associated with the authorized work.

- b. Damages to the permitted project or uses thereof as a result of other permitted activities or from natural causes, such as flooding.
 - c. Damages to persons, property, or to other permitted or unauthorized activities or structures caused by the activity authorized by this permit.
 - d. Damages associated with any future modification, suspension, or revocation of this permit.
 - e. The removal, relocation, or alteration of any structure or work in navigable waters of the United States ordered by the Secretary of the Army or his authorized representative.
 - f. Damage to the permitted project or uses thereof as a result of current or future activities undertaken by, or on behalf of, the United States in the public interest.
7. Tribal Rights. No activity may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.
 8. Obstruction of Navigation. Permittees understand and agree that, if future operations by the United States require the removal, relocation, or other alteration of the work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work unreasonably obstructs the full and free use of navigable waters of the United States, the permittee shall, upon due notice from the Corps, remove, relocate, or alter the obstructions caused thereby, without expense to the United States. If the permittee fails to comply with the direction of the Corps, the District Engineer may restore the navigable capacity of the waterway, by contract or otherwise, and recover the cost thereof from the permittee.
 9. Stability. Permittees shall design projects to be stable against the forces of flowing water, wave action, and the wake of passing vessels.
 10. Maintenance. Permittees shall properly maintain all authorized structures and fills, including maintenance necessary to ensure public safety.
 11. Marking Structures. Permittees shall install and maintain any lights, signals, or other appropriate markers necessary to clearly designate the location of structures or work that might pose a hazard to public safety. Permittees shall abide by U.S. Coast Guard requirements concerning the marking of structures and work in navigable waters of the United States.
 12. Endangered Species. This RGP does not authorize any activity that is likely to jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation or any listed or proposed critical habitat, as identified under the ESA.
 13. Historic Properties. This RGP does not authorize any activity that may affect historic properties listed, or eligible for listing, in the National Register of Historic Places (NRHP) until the provisions of 33 CFR 325, Appendix C, have been satisfied. Historic properties include prehistoric and historic archeological sites, and areas or structures of cultural interest. A prospective permittee must notify the District Engineer if the proposed activity may affect an historic property that is listed, eligible for listing, or may be eligible for listing in the NRHP, and shall not begin the activity until notified by the District Engineer that the requirements of the National Historic Preservation Act have been satisfied and that the activity is authorized. If a

previously unknown historic property is encountered during work authorized by this RGP, the permittee shall immediately cease all ground activities in the immediate area, notify the Corps within 1 business day of discovery. The permittee shall perform any work required by the Corps in accordance with Section 106 of the National Historic Preservation Act and Corps regulations and avoid any further impact to the property until the District Engineer verifies that the requirements of 33 CFR Part 325, Appendix C, have been satisfied.

14. Wild and Scenic Rivers. No activity may occur in a component of the National Wild and Scenic River System or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status unless the appropriate Federal agency (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service), with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status.
15. Water Quality Standards. All activities authorized herein that involve a discharge of dredged or fill material into waters of the United States shall, at all times, remain consistent with all applicable water quality standards, effluent limitations and standards of performance, prohibitions, pretreatment standards, and management practices established pursuant to the Clean Water Act (P.L. 92-500; 86 Stat. 816) or pursuant to applicable State and local law.
16. Minimization of Environmental Impact. Permittees shall make every reasonable effort to conduct the authorized activities in a manner that minimizes the adverse impact of the work on water quality, fish and wildlife, and the natural environment, including adverse impacts to migratory waterfowl breeding areas, spawning areas, shellfish beds, and aquatic resource buffer zones.
17. Soil Erosion and Sediment Controls. Permittees shall use and maintain appropriate erosion and sediment controls in effective operating condition and permanently stabilize all exposed soil and other fills, including any work below the ordinary high water mark or high tide line, at the earliest practicable date using native vegetation to the maximum extent practicable. The permittee shall remove all installed controls as soon as they are no longer needed to control erosion or sediment.
18. Equipment. Permittees shall place heavy equipment working in wetlands on mats, or take other appropriate measures to minimize soil disturbance.
19. Aquatic Life Movements. Permittees shall not substantially disrupt the necessary life-cycle movement of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the primary purpose of the activity is to temporarily impound water.
20. Management of Water Flows. To the maximum extent practicable, the activity must be designed to maintain downstream flow conditions. Furthermore, the activity shall not permanently restrict or impede the passage of normal or expected high flows unless the primary purpose of the fill is to temporarily impound water. Permittees should limit the work conducted in waters of the United States to low- or no-flow periods.
21. Water Supply Intakes. Permittees shall ensure that activities authorized by this RGP have no more than a minimal adverse impact on public water supply intakes.

22. Practicable Alternatives. Activities authorized by this RGP shall be designed and constructed to avoid and minimize adverse impacts to waters of the United States to the extent practicable through the use of practicable alternatives. Alternatives that shall be considered include those that minimize the number and extent of discharges of dredged or fill material into waters of the United States.
23. Suitable Material. Any material or structure placed in waters of the United States, whether temporary or permanent, shall be free of toxic pollutants in toxic amounts.
24. Removal of Temporary Fills. Temporary fills must be removed in their entirety and the affected area returned to pre-construction contours.
25. Disposal of Excess Material. All construction debris and any other material not authorized by the Corps for permanent placement into waters of the United States shall be disposed of in an upland location in a manner that precludes it from entering waters of the United States.
26. Deed Restriction: For projects with mitigation, a copy of this permit, permit drawings, mitigation planting plan (if applicable), and final authorization letter shall be recorded with the Registrar of Deeds, within 60 days after final Corps authorization, to ensure that subsequent property owners are aware of the installation, use, and mitigation requirements. Proof of this must be provided to the Corps within 65 days after the date of the Corps' RGP verification letter to the permittee.

Modification, suspension, or revocation of the RGP: This RGP may be modified or suspended in whole or in part if the Secretary of the Army or his authorized representative determines that the individual or cumulative impacts of work that would be authorized using this procedure are contrary to the public interest. Any such modification, suspension, or revocation shall become effective 30 days after the issuance of a public notice announcing such action. The final decision whether to modify, suspend, or revoke this permit, in whole or in part, shall be made pursuant to procedures prescribed by the Chief of Engineers. Following such revocation, any future activities heretofore authorized by this RGP will require alternate Department of the Army authorization.

The authorization of an individual project under this RGP may also be summarily modified, suspended, or revoked, in whole or in part, if the permittee either fails to abide by the terms and conditions of this permit or provides information that proves to be false, incomplete, or inaccurate, or upon a finding by the District Engineer that such action would be in the public interest. If a permittee's authorization is revoked, the permittee shall, upon notice of such revocation, without expense to the United States and in such time and manner as the Secretary of the Army or his authorized representative may direct, restore the waterway to its former condition. If the permittee fails to comply with the direction of the Secretary of the Army or his authorized representative, the Secretary or his designee may restore the waterway to its former condition, by contract or otherwise, and recover the cost thereof from the permittee.

Expiration of the RGP: This permit shall become effective on the date of the signature of the District Engineer or his authorized representative and will automatically expire 5 years from that date unless the permit is modified, revoked, or extended prior to that date. Activities that have commenced (e.g., are under construction) or are under contract to commence in reliance upon this permit will remain authorized provided that the activity is completed within 1 year of the date of this permit's expiration, modification, or revocation, unless discretionary authority has been exercised on a case-by-case basis to modify, suspend, or revoke the authorization.

BY AUTHORITY OF THE SECRETARY OF THE ARMY:

14 February 2005, Rev. 29 January 2007

Date

Michelle Walker

MICHAEL MCCORMICK
Colonel, Corps of Engineers
District Engineer

APPENDIX A
Application Form
For RGP 1, Watercraft Lifts
Version: January 29, 2007

Please fully complete this form and attach vicinity, plan and elevation drawings and any other relevant information. Submit the information to: U.S. Army Corps of Engineers, Regulatory Branch, P.O. Box 3755, Seattle, Washington 98124-3755.

This application is for watercraft lifts and canopies in certain fresh and marine/estuarine waters within the State of Washington for the purpose of safe watercraft moorage. You may use this application whether or not your project meets all requirements of Regional General Permit 1 (RGP 1). However, projects not meeting all requirements or for Category B and E in the Lake Washington and Sammamish system, must undergo Section 7 Endangered Species Act (ESA) consultation with the National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (USFWS). Section 7 ESA consultation may involve a more conservative design or additional mitigation. Therefore, projects not meeting all requirements should provide a greater amount of mitigation than is required by RGP 1 in order to offset impacts to the aquatic environment.

Eligibility for RGP

- a. Corps reference number: _____ [To be completed by the Corps]
- b. This application:
- Meets all of the requirements of RGP 1.
- Does not meet all of the requirements of RGP 1. This form constitutes an application for an individual permit and a reference biological evaluation in association with
- NMFS reference: 2003/01572
- USFWS reference: I-3-05-PI-0032

1. Permittee name, address, and telephone number:

Single or Joint Use (adjacent waterfront structure): _____. If joint use, you must list the other waterfront property owners: name, address, and telephone number, as co-applicants.

2. Authorized agent's name, address, and telephone number:

3. Contractor name, address, telephone number, and point of contact:

4. Specific location of project area:
Name of Waterway _____
Street Address _____
Section _____ Township _____ Range _____
Latitude _____ Longitude _____
City/County _____, Washington State
Adjacent Property Owners (names and addresses) _____

5. Description of the proposed work and drawings (attach drawings on 8 1/2- by 11-inch sheets, including a vicinity map, a plan view, and an elevation view; the drawings must include information as detailed on Appendix E – Drawing Checklist). The drawings must clearly show the factors detailed in the project description section of this RGP. The work is proposed under Category _____ of RGP 1.

6. Description of the Single or Joint Use Overwater Structure adjacent to proposed activity:

7. Number of existing watercraft lifts and/or canopy(ies) at the existing overwater structure:
ground-based lifts _____ floating lifts _____ suspended lifts _____ canopies _____

8. Number of the previously identified (item 8) existing lifts to be replaced, maintained, or repaired: ground-based lifts _____ floating lifts _____ suspended lifts _____ canopies _____

9. Number of brand new: ground-based lifts _____ floating lifts _____ suspended lifts _____ canopies _____

10. Depth of landward most end of proposed watercraft lift(s) and/or canopy(ies) _____ feet

11. Pile driving: Y/N _____ ; If yes, number of: _____ wood piling _____ steel piling; If using an impact hammer for steel piling, list sound attenuation device(s): _____

12. In marine waters: Eelgrass survey performed: preliminary _____ intermediate _____; attach findings

13. In marine waters: Forage fish habitat? Y/N _____; attach documentation

14. Required Mitigation Points (MP): _____ (show calculations); location of mitigation site onsite/offsite _____; Mitigation Measure Option(s) # _____; Description of proposed mitigation activity: _____

15. Work Window:
Work will be performed in the dry: Yes No
Work will contact substrate: Yes No
Distance to bald eagle nest: _____
Type(s) of equipment utilized for watercraft installation: _____

Date Work Completed: _____ (if application is submitted after completion of work)

Endangered Species Act (ESA) Information: Special Project Information

In order to meet all ESA requirements for authorization under this Regional General Permit (RGP), all applicable Requirements summarized below must be implemented. Check each item that you agree to implement. Check each item "not applicable" if they do not apply to your project. For example, if your project is in freshwater, check "not applicable" next to the Requirement 5 regarding eelgrass and macroalgae beds.

Will Implement	Will Not Implement	Not Applicable	Requirements
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. The proposed work is within the limitations of Category A – F types of work authorized by RGP 1.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2. Pile Driving Requirements: If a drop hammer pile driver for steel piling is utilized, a sound attenuation device or system must be implemented during pile driving. The diameter of any steel piling cannot exceed 12 inches.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3. The required fish work window will be met.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4. The required bald eagle work window will be met.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5. The appropriate amount of project impact reduction and mitigation measures will be implemented.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6. Mitigation must be completed within one year of permit issuance. A report on mitigation completion, including as-built drawings, must be submitted to the Corps 12 months from the date the Corps issues an RGP to the permittee.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7. For projects with mitigation, a copy of this permit, permit drawings, mitigation planting plan (if applicable), and final authorization letter shall be recorded with the Registrar of Deeds, within 60 days after final Corps authorization, to ensure that subsequent property owners are aware of the installation, use, and mitigation requirements. Proof of this must be provided to the Corps within 65 days after the date of the Corps' RGP verification letter to the permittee (General Condition 26).
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8. Mitigation planting monitoring reports will be due annually, no later than November 30 of each monitoring year, for 5 years from when Corps accepts the as-built drawings.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9. The permittee must put the Department of the Army (DA) permit reference name and number on the authorized watercraft lifts. The name and number must be written such that the marking is permanent, is located above the water surface, and can be clearly seen. The Corps will provide the DA reference name and number to the permittee (Special Condition 1).
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10. No work may be performed over or within 50 feet of eelgrass and macroalgae beds (Special Condition 2).
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	11. No work may be performed in or within 50 feet of Washington State documented spawning habitat for listed or proposed forage fish species (Special Condition 3).
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	12. During the installation and utilization of the watercraft lift(s) no large woody debris is removed (Special Condition 4).

Will Implement	Will Not Implement	Not Applicable	Requirements
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9. All structural steel members are pre-painted and dried prior to installation (Special Condition 5).
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10. If watercraft lifts include wood, only non-treated wood shall be used in fresh waters. In tidal waters, no creosote, pentachlorophenol, CCA, or comparably toxic compounds not approved for marine use, shall be used for any portion of the overwater structure. For any ACZA treated wood, the wood must be treated by the manufacturer per the Post Treatment Procedures outlined in "BMP Amendment #1 - Amendment to the Best Management Practices (BMPs) for the Use of Treated Wood in Aquatic Environments; USA Version - Revised July 1996", by the Western Wood Preservers Institute, as amended April 17, 2002 or the most current BMPs. This information is available on the internet at www.WWPInstitute.org . Third party certification that the material was produced according to these BMPs must be provided to the Corps before authorized work can commence (Special Condition 6).
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	11. Only two (2) new piles may be driven and only if necessary for watercraft lift installation (Special Condition 7).
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	12. If a barge is used, the barge does not ground out and the barge is not over or adjacent to vegetated shallows (except where such vegetation is limited to Washington State designated noxious weeds) (Special Condition 8).
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	13. Existing watercraft lifts to be removed are removed in their entirety (Special Condition 9).
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	14. If a floating watercraft lift is installed, it must not rest on the substrate at any time (Special Condition 10).
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	15. Work that disturbs the substrate, bank, or shore of a water of the United State shall occur in the dry whenever practicable (Special Condition 11).
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	16. Equipment shall be operated from an out-of-water location whenever possible. Equipment shall be operated in a manner that minimizes the suspension of particulates. All equipment used in or around waters shall be clean and inspected daily prior to use to ensure that the equipment has no fluid leaks. Should a leak develop during use, the leaking equipment shall be removed from the site immediately and not used again until it has been adequately repaired. No equipment may be stored or fueled so close to a surface water that the activity could adversely affect the waterbody (Special Condition 12).
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	17. All applicable General Conditions will be met.

I CERTIFY THAT I AM FAMILIAR WITH THE INFORMATION CONTAINED IN THIS APPLICATION, AND THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF, SUCH INFORMATION IS TRUE, COMPLETE, AND ACCURATE. I FURTHER CERTIFY THAT I POSSESS THE AUTHORITY TO UNDERTAKE THE PROPOSED ACTIVITIES. I HEREBY GRANT TO THE AGENCIES TO WHICH THIS APPLICATION IS MADE, THE RIGHT TO ENTER THE ABOVE-DESCRIBED LOCATION TO INSPECT THE PROPOSED, IN-PROGRESS, OR COMPLETED WORK. I AGREE TO START WORK ONLY AFTER ALL NECESSARY PERMITS HAVE BEEN RECEIVED.

If the applicant has checked "Will Not Implement" for any of the above items, then the following items must be completed by the applicant:

You must attach a completed Coastal Zone Management form.

Note: This form can be found on the Corps' website: www.nws.usace.army.mil/reg click on Regulatory - Regulatory/Permits - Forms.

Based on the existing environmental conditions and the proposed work, the applicant is proposing additional mitigation (beyond the requirements of Table 1) as described below: _____

Signature of Applicant

Date

Signature of Authorized Agent

Date

Signature of Contractor

Date

APPENDIX B

Status Report for Mitigation Work Completion for RGP 1

Within one (1) year of the date your permit was issued, submit this completed form to: U.S. Army Corps of Engineers, Regulatory Branch, P.O. Box 3755, Seattle, WA 98124-3755. You must submit a new form annually until the Corps accepts your as-built drawings of the mitigation construction.

Corps Reference Number: _____

Date the Corps Issued Your Permit: _____

Date this Report is Due: _____

Number of Mitigation Points Required by Corps: _____

Your Name: _____

Your Address: _____

Your City/State/Zip Code: _____

Location of Mitigation: _____

You must attach to this form: As-built drawing(s) of planting areas (if installed), and
 Photographs of the mitigation area.

Describe mitigation activity performed: _____

Date completed: _____

(If applicable) Conditions of your Corps permit require at least two trees be planted in each planting plot. The vegetation you plant must be taken from this list of native species below. Shrubs should be planted at 3-foot-on-center intervals and trees should be planted at 10-foot-on-center intervals. Be sure to protect your plantings—fencing is recommended.

Name of Species You Planted	Number Planted
Total Planted:	

Native tree list: *Populus trichocarpa*, *Pseudotsuga menziesii*, *Picea sitchensis*, *Pinus contorta*, *P. ponderosa*, *Rhamnus purshiana*, *Acer macrophyllum*, *Alnus rubra*, *Betula spp.*, and *Cornus nuttallii*

Native shrub list: *Salix sitchensis*, *S. scouleriana*, *S. exigua*, *S. hookeriana*, *S. lasiandra*, *Cornus stolonifera*, *Ribes sanguineum*, *Rosa nutkana*, *R. gymnocarpa*, *Rubus parviflorus*, *Sambucus racemosa*, *Symphoricarpos albus*, *Acer circinatum*, *Amelanchier alnifolia*, *Holodiscus discolor*, *Corylus americana*, *Myrica gale* (Note: You can suggest other species but the Corps must approve the species before planting commences.)

APPENDIX C

Mitigation Planting Monitoring Report for RGP 1

Submit this completed form to: U.S. Army Corps of Engineers, Regulatory Branch, P.O. Box 3755, Seattle, WA 98124-3755. A completed form must be submitted 1, 2, 3, 4 and 5 years after the Corps accepts your as-built drawing of the mitigation planting area.

Corps Reference Number: _____

Date Your As-Built Were Accepted by the Corps _____

Date This Report Is Due: _____

Number of Mitigation Points Required by the Corps: _____

Your Name: _____

Your Address: _____

Your City/State/Zip Code: _____

You must attach to this form: Photographs of the mitigation area (preferably taken during June – August).

Conditions of your Corps permit require 100% survival of all planted trees and shrubs during the first and second years after planting. During the third through fifth years after planting, 80% survival is required. Individual plants that die must be replaced with a species from the list below. You must protect your mitigation area—fencing is recommended.

Date of Inspection	Species name of Dead Plants	Number of Dead Plants	Name of Species Replanted	Number Replanted

Native tree list: *Populus trichocarpa*, *Pseudotsuga menziesii*, *Picea sitchensis*, *Pinus contorta*, *P. ponderosa*, *Rhamnus purshiana*, *Acer macrophyllum*, *Alnus rubra*, *Betula spp.*, and *Cornus nuttallii*

Native shrub list: *Salix sitchensis*, *S. scouleriana*, *S. exigua*, *S. hookeriana*, *S. lasiandra*, *Cornus stolonifera*, *Ribes sanguineum*, *Rosa nutkana*, *R. gymnocarpa*, *Rubus parviflorus*, *Sambucus racemosa*, *Symphoricarpos albus*, *Acer circinatum*, *Amelanchier alnifolia*, *Holodiscus discolor*, *Corylus americana*, *Myrica gale* (Note: You can suggest other species but the Corps must approve the species before planting commences.)

APPENDIX D - DRAWING CHECKLIST

1. GENERAL

- Use clear black lettering and fewest number of sheets possible; use 8 1/2- by 11-inch sheets
- State the purpose of the proposed or existing work
- List property owners and indicate number by number on plan view drawing
- Show datum used in plan and elevation drawings
- Use a graphic scale on all drawings
- Use a north arrow; prepare drawing with north being directed to the top of the page
- Label all proposed and existing work as such (e.g., Proposed Pier, Proposed Fill...)

2. TITLE BLOCK

- A completed title block (first example) must be on every sheet; for subsequent sheets you can use the abbreviated form (second example)

PURPOSE: DATUM: ADJACENT PROPERTY OWNERS: 1. 2.	APPLICANT 2004 LOCATION ADDRESS	PROPOSED: IN: NEAR/AT: COUNTY: STATE: WA SHEET * OF * DATE:
---	---	---

Reference: 2004 Applicant: Proposed: At Washington Sheet * of * Date
--

3. VICINITY MAP

- Clearly show location of project (e.g., arrow, circle, etc.)
- List latitude, longitude, section, township, and range
- Name waterways
- Show roads, streets, and/or mileage to nearest town or city limits

4. PLAN VIEW

- Show shorelines:
 - Tidal: Show mean high water (MHW) line, mean higher high water (MHHW) line
 - Lakes or streams: Show the ordinary high water (OHW) line
- Show dimensions of proposed structures/fills; distance to property lines; encroachment beyond applicable shoreline; show wetland boundaries and specific impacts to wetlands
- Indicate location, quantity, and type of fill, if any
- Show all existing structures or fills on subject and adjacent properties
- Show direction of currents such as tidal ebb and flood
- Indicate adjacent property ownership

5. ELEVATION AND/OR SECTION VIEW

- Show shorelines, MHW line, MHHW line, OHW line, wetland boundary
- Show original and proposed elevations, water depths, dimensions of proposed structures or fills, and pertinent vertical dimensions to top and base of structure/fill; use the same vertical and horizontal scale, if possible

APPENDIX E

Definitions, descriptions, and/or examples of Terms

“*Bank*” is the rising ground bordering the waterbody forming an edge or steep slope

“*Commercial marinas*” are marinas where anybody can purchase and/or lease the use of a slip. This does not include marinas or joint use piers owned by a homeowners association. Marinas or joint use piers owned by homeowners associations allow the use of the facility by only members of typically adjacent residences in the designed homeowners group and typically include fees in the maintenance fees or cost of the home.

“*Eelgrass*” is a grass-like marine flowering vascular plant (*Zostera spp.*) with dark green, long, narrow, ribbon-shaped leaves which are typically 8 – 20 inches in length.

A “*floating watercraft lift*” is any lift that does not and will not in the normal course of events contact the waterbody substrate at any time - including but not limited to low tide events.

“*Forage fish spawning habitat*” Detailed descriptions of forage fish habitat can be found at <http://www.wa.gov/wdfw/fish/forage/forage.htm>. Very generally, spawning habitat for the following forage fish are as follows: Pacific Herring – eelgrass and macroalgae located between 0 to -10 feet tidal elevation; Surf Smelt – substrate consisting of pea gravel or coarse sand (gravel diameter 0.005 – 0.35 of an inch) between MHHW to +7 feet tidal elevation relative to the Seattle tide gauge; Pacific Sand Lance – substrate consists of pure fine grain sand beaches between MHHW to +5 feet tidal elevation, relative to the Seattle tide gauge.

“*Groin*” is a rigid structure (constructed of rock, wood, or other durable material) built out from the shore, usually perpendicular to the shore, to protect the shore from erosion or to trap sand.

A “*ground-based watercraft lift*” is any lift wherein any part of the lift attaches to, or will at any time in the future attach to, rest on, or otherwise be in contact with or be supported by the waterbody substrate.

“*Hardened shoreline*” includes but is not limited to concrete, rock or timber bulkheads, riprap, or concrete boat ramp access.

“*Joint-use*” piers, ramps, and floats are constructed and utilized by more than one contiguous residential waterfront property owner or by a homeowner’s association. This does not include commercial marinas.

“*Macroalgae*” includes large red, green, or brown algae and what are commonly known as seaweed or kelp. For the purposes of this RGP only, any reference to macroalgae is a reference to macroalgae *attached to a substrate*, not drift macroalgae.

“*Mean higher high water (MHHW)*” is the elevation on the shore of tidal waters reached by the plane of the average of the higher of the two daily high tides, generally averaged over a period of 19 years. This elevation has been established at set tide gauges throughout Washington State. The MHHW for these tide gauges may be obtained by checking the following website: www.nws.usace.army.mil Select Civil Works – Civil Works Home – Water Management – Tidal Datums.

“*Mean high water (MHW)*” is the elevation on the shore of tidal waters reached by the plane of the average of the lower of the two daily high tides, generally averaged over a period of 19 years. This elevation has been established at set tide gauges throughout Washington State. The MHW for these tide gauges may be obtained by checking the following website: www.nws.usace.army.mil Select Civil Works – Civil Works Home – Water Management – Tidal Datums.

“*Offsite*” means outside the property boundaries of the waterfront property owner(s) proposing the project. For the purpose of this RGP, the property boundary in the water, unless already shown on a deed or legal description, is a straight-line extension of the property line on the land, projected waterward, and perpendicular to the shoreline.

“*Onsite*” means within the property boundaries of the waterfront property owner(s) proposing the project. For the purpose of this RGP, the property boundary in the water, unless already shown on a deed or legal description, is a straight-line extension of the property line on the land, projected waterward, and perpendicular to the shoreline.

“*Opening size*” of grating is the area enclosed between the rectangular bars and cross rods in bar grating, or the area enclosed between the bonds and strands in expanded grating.

“*Ordinary high water*” Line on the shore of non-tidal streams and lakes “established by fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank; shelving; changes in the character of the soil; destruction of terrestrial vegetation; the presence of litter and debris; or other appropriate means that consider the characteristics of the surrounding areas.” It is the line of jurisdiction in freshwaters for the Corps of Engineers regulatory program. For tidally influenced waterbodies, OHW correlates to the line of Mean Higher High Water (MHHW).

“*Overwater structures*”, for the purposes of this RGP, includes piers, ramps, floats, and their associated structures.

“*Percent open area*” is a relative measure of the degree which light can pass through grating. The manufacturer often provides this value. Otherwise, it can be calculated by dividing the opening size by the sum of the opening size and the surface area of the adjacent rectangular bars and cross rods.

“*Single residential use*” pier, ramp, and float constructed and utilized by only one residential waterfront property owner

“*Suspended lifts*” include floating watercraft lifts and any watercraft lift which can be affixed to the existing overwater structure with no parts contacting the substrate.

“*Translucent canopy*” is a canopy constructed of material which allows sunlight to pass through and which is translucent enough for a person to read the text of this RGP.

“*Uplands*” (for the purposes of this RGP) are areas landward of the high tide line.

“*Watercraft*” includes but is not limited to motorized boats, kayaks, canoes, jet skis, and float planes.

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provided that parking supporting parks uses shall be allowed in a critical area buffer only if no technically feasible alternative, as demonstrated through application of the criteria of subsection C.2.a above exists.

- h. Existing Landscape Maintenance. Routine maintenance of existing legally established landscaping and landscape features developed prior to August 1, 2006 in the critical area or critical area buffer may be continued in accordance with this section. For purposes of this section, routine maintenance include mowing, pruning, weeding, planting annuals, perennials, fruits and vegetables, and other activities associated with maintaining a legally established ornamental or garden landscape and landscape features. Also, for purposes of this subsection, landscape features refers to fences, trellises, rockeries and retaining walls, pathways, arbors, patios, play areas and other similar improvements. To be considered routine maintenance, activities shall have been consistently carried out so that the ornamental species predominate over native or invasive species. Maintenance shall be performed with hand tools or light equipment only, and no significant trees may be removed, except in accordance with a Vegetation Management Plan under subsection i below. Use of fertilizers, insecticides and pesticides is prohibited unless performed in accordance with the City of Bellevue's "Environmental Best Management Practices" now or as hereafter amended.
- i. Vegetation Management. Modification of vegetation in a critical area or critical area buffer that is not considered routine maintenance under subsection h above may be allowed if it meets the requirements of this section. Except where otherwise noted, a critical areas land use permit is required. The following activities may also require a clearing & grading permit, BCC Ch. 23.76 and/or SEPA review and must comply with all other Land Use Code provisions related to tree preservation and landscaping, including but not limited to LUC 20.20.520 and 20.20.900.
 - i. Noxious Species. The removal of the following vegetation with hand labor and hand-operated equipment from a critical area buffer, or from a geologic hazard critical area, is allowed without requiring a critical areas land use permit or a Vegetation Management Plan:
 - (A) Invasive and noxious weeds;
 - (B) English Ivy (*Hedera helix*);
 - (C) Himalayan blackberry (*Rubus discolor*, *R. procerus*); and
 - (D) Evergreen blackberry (*Rubus laciniatus*).
 - ii. Hazard Trees. The removal of trees from the critical area or critical area buffer that are hazardous, posing a threat to public safety, or posing an imminent risk of damage to an existing structure, public or private road or sidewalk, or other permanent improvement, is allowed without requiring a critical areas land use permit or a Vegetation Management Plan, provided that:
 - (A) The applicant submits a report on a form provided by the director from a certified arborist, registered landscape architect, or professional forester that documents the hazard and provides a replanting schedule for the replacement trees;

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- (B) Tree cutting shall be limited to pruning and crown thinning, unless otherwise justified by a qualified professional. Where pruning or crown thinning is not sufficient to address the hazard, trees should be converted to wildlife snags and completely removed only where no other option removes the identified hazard;
 - (C) All vegetation cut (tree stems, branches, etc.) shall be left within the critical area or buffer unless removal is warranted due to the potential for creating a fire hazard or for disease or pest transmittal to other healthy vegetation;
 - (D) The landowner shall replace any trees that are removed pursuant to a restoration plan meeting the requirements of LUC 20.25H.210 ;
 - (E) If a tree to be removed provides critical habitat, such as an eagle perch, a qualified wildlife biologist shall be consulted to determine timing and methods or removal that will minimize impacts; and
 - (F) Hazard trees determined to pose an imminent threat or danger to public health or safety, to public or private property, or of serious environmental degradation may be removed or pruned by the landowner on whose property the tree is located prior to receiving the permits required under this Part 20.25H, provided that the landowner makes reasonable efforts to notify the city, and within fourteen (14) days following such action, the landowner shall submit a restoration plan that demonstrates compliance with the provisions of this Part.
- iii. Forest Health. Measures to control a fire or halt the spread of disease or damaging insects, provided that the removed vegetation shall be replaced pursuant to a restoration plan meeting the requirements of LUC 20.25H.210.
 - iv. Fire Safety. Where required pursuant to the International Fire Code, Section 304.1.2, as adopted and amended by the City of Bellevue, vegetation may be removed from the critical area or critical area buffer, provided that the removed vegetation shall be replaced pursuant to a restoration plan meeting the requirements of LUC 20.25H.210.
 - v. Vegetation Management Plan -- Maintenance for utility, transportation, parks and public facility projects. Vegetation may be periodically removed from the critical area or critical area buffer as part of an on-going routine maintenance plan for utility, transportation, park and other public facility projects allowed pursuant to LUC 20.25H.055.B. Such removal shall be pursuant to a Vegetation Management Plan meeting the requirements of this subsection.
 - (A) The Vegetation Management Plan shall be prepared by a qualified professional.
 - (B) The Vegetation Management Plan shall include:
 - (1) A description of existing site conditions, including existing critical area functions and values;

- (2) A site history;
 - (3) A discussion of the Plan objectives;
 - (4) A description of all sensitive features;
 - (5) Identification of soils, existing vegetation, and habitat associated with species of local importance present on the site;
 - (6) Allowed work windows;
 - (7) A clear delineation of the area within which clearing and other vegetation management practices are allowed under the plan; and
 - (8) Short and long term management prescriptions, including restoration and revegetation requirements. Cleared areas shall be restored and revegetated with native species to the extent such vegetation does not interfere with the function of the allowed structure, trail, facility or system.
- vi. Vegetation Management Plan – other uses. The director may approve proposals for vegetation replacement in a critical area buffer, or within a geologic hazard critical area, pursuant to a Vegetation Management Plan. The Vegetation Management Plan may also include a description of proposed vegetation pruning, including pruning techniques and timing and extent of proposed pruning, provided that proposals to prune vegetation within geologic hazard areas and geologic hazard area buffers may be undertaken without a critical areas land use permit or a Vegetation Management Plan in accordance with subsection vii below. The Vegetation Management Plan shall satisfy the requirements of subsection v.B above, except that the following replaces subsection (8):
- (8) Short and long term management prescriptions, including characterization of trees and vegetation to be removed, and restoration and revegetation plans with native species, including native species with a lower growth habit. Such restoration and revegetation plans shall demonstrate that the proposed Vegetation Management Plan will not significantly diminish the functions and values of the critical area or alter the forest and habitat characteristics of the site over time.

Trees and vegetation may not be removed pursuant to this subsection if removal would result in a significant impact to habitat associated with species of local importance, unless the impacted function can be replaced elsewhere within the management area subject to the plan. In no event may a tree or vegetation which is an active nest site for a species of local importance be removed pursuant to this subsection.

In determining whether the vegetation management plan should be approved, the Director shall take into consideration any applicable neighborhood restrictive covenants that address view preservation or vegetation management if so requested in writing. The existence of and

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provisions of neighborhood restrictive covenants shall not be entitled to any more or less weight than other reports and materials in the record.

- vii. Select vegetation pruning. Pruning of existing trees and vegetation within a geologic hazard critical area or geologic hazard critical area buffer, with hand labor and hand-operated equipment in accordance with this subsection is allowed without requiring a critical areas land use permit or a Vegetation Management Plan, so long as the area is not included within an Native Growth Protection Area (NGPA) or Native Growth Protection Area Easement (NGPE). A clearing and grading permit, BCC Ch. 23.76, and SEPA review may still be required. The pruning allowed by this subsection shall be performed in accordance with guidelines established by the director for each of the following pruning techniques: canopy reduction; canopy cleaning; canopy thinning, canopy raising or lifting; structural pruning; and canopy restoration. Where vegetation has been consistently managed by topping or other pruning methods, nothing in this ordinance shall preclude the continuation of such practices. Pruning shall be performed in a manner that ensures continued survival of the vegetation.

In no event may a tree or vegetation which is an active nest site for a species of local importance be pruned pursuant to this subsection.

- j. Habitat Improvement Projects. Disturbance, clearing and grading is allowed in the critical area or critical area buffer for habitat improvement projects demonstrating an improvement to functions and values of a critical area or critical area buffer. Habitat improvement projects shall be:
 - i. sponsored or co-sponsored by a public agency or federally-recognized tribe and whose primary function is habitat restoration; or
 - ii. Approved by the director pursuant to LUC 20.25H.230.
- k. Forest Practices. Forest practices may be allowed without requiring a critical areas land use permit, where such practice is regulated and conducted in accordance with the provisions of Chapter 76.09 RCW, now or as hereafter amended, and forest practices regulations, Title 222 WAC, now or as hereafter amended, and those that are exempt from the City's jurisdiction, provided that forest practice conversions are not exempt. The applicant shall demonstrate that all required federal and state permits have been obtained prior to undertaking any work.
- l. Aquaculture.
 - a. Aquaculture development must be conducted in a way which does not adversely affect the aesthetic or environmental quality of the wetland and interrelated stream habitat; and
 - b. Aquaculture must to the extent feasible use underwater structures for fish rearing facilities.
- m. Stabilization Measures. See LUC 20.25E.080.E for standards regulating shoreline stabilization measures. Proposed stabilization measures within a

critical area or critical area buffer to protect against streambank erosion or steep slopes or landslide hazards may be approved in accordance with this subsection.

- i. When Allowed. New or enlarged stabilization measures shall be allowed only to protect existing primary structures and infrastructure, or in connection with uses and development allowed pursuant to LUC 20.25H.055.B. Stabilization measures shall be allowed only where avoidance measures are not technically feasible.
- ii. Type of Stabilization Measure Used. Where a stabilization measure is allowed, soft stabilization measures shall be used, unless the applicant demonstrates that soft stabilization measures are not technically feasible. An applicant asserting that soft stabilization measures are not technically feasible shall provide the information relating to each of the factors set forth in subsection (D) below for a determination of technical feasibility by the director. Only after a determination that soft stabilization measures are not technically feasible shall hard stabilization measures be permitted.
- iii. Definitions.
 - (A) Hard Stabilization Measures. As used in this Part, hard stabilization measures include: rock revetments, gabions, concrete groins, retaining walls, bulkheads and similar measures which present a vertical or nearly vertical interface with the water.
 - (B) Soft Stabilization Measures. As used in this Part, soft stabilization measures include: biotechnical measures, bank enhancement, anchor trees, gravel placement, stepped back rockeries, vegetative plantings and similar measures that use natural materials engineered to provide stabilization while mimicking or preserving the functions and values of the critical area.
 - (C) Avoidance Measures. As used in this Part, avoidance measures refer to techniques used to minimize or prevent erosion or slope collapse that do not involve modification of the bank or slope. Avoidance measures include vegetation enhancement, upland drainage control, and protective walls or embankments placed outside of the critical area and critical area buffer.
 - (D) Technically feasible. The determination of whether a technique or stabilization measure is technically feasible shall be made by the director as part of the decision on the underlying permit after consideration of a report prepared by a qualified professional addressing the following factors:
 - (1) site conditions, including topography and the location of the primary structure in relation to the critical area;
 - (2) the location of existing infrastructure necessary to support the proposed measure or technique;
 - (3) the level of risk to the primary structure or infrastructure presented by erosion or slope failure and ability of the proposed measure to mitigate that risk;



Boatlift canopies

Moorage covers

Commenter	Identifier	Subject	Sub-Topic	Summary of Comment	Follow-up/ Response	Context
Citizen/NGO (SPOCA) ¹	3.3	Shoreline Redevelopment/ Restoration	Shoreline Stabilization	The Shoreline Master Plan's restoration component should include criteria regarding the installation of shoreline bulkheads, as well as the net-benefits of removing bulkheads.	Emphasis that the City was not attempting to return Lake Washington to predevelopment conditions, but rather limit the negative impacts of future development on Lake Washington.	Correspondence (5-17 November 2007)
Citizen/NGO (SPOCA)	3.3	Species/Habitat	Invasive Species	Urged the city to continue its current emphasis on removing and controlling invasive species		Correspondence (5-17 November 2007)
Citizen/NGO (SPOCA)	3.3	Shoreline Regulation	Storm Water	Advocated expanding the Shoreline Master Plan study area to include additional sources of non-point pollution for Lake Washington.	Regarding the issue of run-off, the City was engaged in on-going efforts, including education and incentives, to help shoreline property owners address these concerns.	Correspondence (5-17 November 2007)
Citizen/NGO (SPOCA)	3.3	Shoreline Regulation	Boating practices	Expressed concern over Appendix F of the Shoreline Master Plan Draft Inventory, stating that it misrepresented the negative impacts of marina and recreational boats on the shoreline, since the causes of these impacts were already illegal.		Correspondence (5-17 November 2007)
Local Employee	4.6	Shoreline Research	Best Available Science	Requesting careful consideration be placed on changes made to local SMP. Science being used to drive changes are inconclusive and do not provide a clear determination of impacts on water quality of fish life.		Correspondence (2-28-2008)
Citizen/NGO (SPOCA)	2.6; 2.8; 3.3	Shoreline Regulation	Boating practices	Power/pump-out stations could be offered boaters to encourage them from dumping raw sewage (such as Marina Park).	Comment forwarded to Parks and Community Services Dept.	Report on the Tour of Innovative Shoreline Design (30 September 2006) ; Correspondence (5-17 November 2007)
Citizen/NGO (SPOCA)	3.3	Shoreline Regulation	Storm Water	Referred the City to a recent study concerning efforts by the Denny Park Neighborhood Assoc. to address storm water run-off.	These suggestions and references are being considered.	Correspondence (5-17 November 2007)
Citizen/Local Employee	4.6, 3.6	Shoreline Regulation	Storm Water	City needs to consider impact of surface runoff from upland development on water quality and fish life.		Official Correspondence and Houghton Community Council Meeting
Citizens/ Property Owners	4.8	Shoreline Master Program Process		Appreciated the City of Kirkland's recent shoreline presentation, and stated that they will attempt to involve other homeowners in future meetings.		Correspondence (25 September 2007)
Citizens/ Property Owners	4.8	Shoreline Master Program Process	Growth	Expressed concern that Kirkland was changing "rapidly".		Correspondence (25 September 2007)
Citizens/ Property Owners	4.8	Shoreline Redevelopment/ Restoration	Storm Water	Encouraged use of sand filters (e.g., treat run-off).		Kirkland Public Forum: Updating Shoreline Master Program (September 2006)
Local Employee	4.6	Shoreline Regulation	Piers and Docks	Warned of the dangers inherent in incorporating the Army Corps' of Engineers design standards into a critical area ordinance (which could cause a backlash from affected property owners).	The respondent's suggestions would be forwarded to the City of Kirkland Deputy Director of Planning and Community Dev.	Official Correspondence (7-10 September 2007)
Local Employee	4.6	Shoreline Regulation		Lauded the efforts of the Senior Planner within whom he was communicating, stating that the Planner was effective in listening to the concerns of private property owners, and was not unduly burdening them with federal and state shoreline and ecological requirements.	Although the WA State Dept. of Ecology's guidelines for local Shoreline Master Plan updates are ambiguous, they do provide considerable flexibility for how local governments respond	Official Correspondence (7-10 September 2007)

1 - NGO = Nongovernmental Organization
SPOCA = Shoreline Property Owners and Contractor's Association

Local Gov. (Kirkland)	4.5	Shoreline Regulation		Person commented on specific language in Sections 4.2.1 and 4.2.2 regarding land uses and the presence of condominium piers. Also suggested changes to Figure 8.	The specific comments and suggestions had been implemented.	Public Comments provided on the <i>Draft Shoreline Master Program Inventory and Characterization for the City of Kirkland's Lake Washington Shoreline</i> (August 2006)
Citizen	2.6; 4.4	Shoreline Redevelopment/ Restoration	Shoreline Vegetation	Expressed concern over the removal of trees from Heritage Park.	Referred to <i>City of Kirkland Natural Resource Management Plan</i> . Document identifies criteria for retaining trees.	Report on the Tour of Innovative Shoreline Design (30 September 2006); Public Comments provided on the <i>Draft Shoreline Master Program Inventory and Characterization for the City of Kirkland's Lake Washington Shoreline</i> (August 2006)
Citizen	4.4, 5.0	Shoreline Redevelopment/ Restoration	Storm Water	Alarmed about recent street flooding that had resulted from breakdowns within the municipal water pipe system. Concern about water quality.		Public Comments provided on the <i>Draft Shoreline Master Program Inventory and Characterization for the City of Kirkland's Lake Washington Shoreline</i> (August 2006); Planning Commission Meeting (March 13, 2008)
Citizen	2.4; 3.1; 3.3; 3.6; 4.4;	Shoreline Redevelopment/ Restoration	Storm Water	Concerned over the amount of storm water run-off that empties into Lake Washington from non-point pollution sources.	Storm water being addressed in Section 3.3.2 (<i>Storm water Utilities</i>) and the <i>Surface Water Master Plan</i> .	Report on the Tour of Innovative Shoreline Design (30 September 2006); Public Comments provided on the <i>Draft Shoreline Master Program Inventory and Characterization for the City of Kirkland's Lake Washington Shoreline</i> (August 2006)
Citizen	4.4	Shoreline Redevelopment/ Restoration		Dismayed that on a recent public tour of de-armored shoreline homes, no examples from Kirkland were used, and was doubtful whether the examples that were used were applicable to Kirkland shoreline property owners.	Either completely removing or softening the portion of Kirkland's shoreline located along private property is unlikely to be accomplished on a grand scale. As a result, the Shoreline Master Plan is designed to be site-specific.	Public Comments provided on the <i>Draft Shoreline Master Program Inventory and Characterization for the City of Kirkland's Lake Washington Shoreline</i> (August 2006)
Citizen	3.3; 4.4	Shoreline Regulation	Public access	How is public access being addressed in Shoreline Master Plan? Also, will city require public access through waterfront single-family properties?	City has no intention of requiring or promoting access through single-family neighborhoods. For more information of existing possible future public access sites, refer to Juanita Beach Park Master Plan.	Public Comments provided on the <i>Draft Shoreline Master Program Inventory and Characterization for the City of Kirkland's Lake Washington Shoreline</i> (August 2006)

Citizen	4.4	Shoreline Regulation	Boating practices	What are the established speed limits within Lake Washington?	King County only limits boating speeds within 100 yards of shoreline. Otherwise, a boat operator allowed to exercise judgment, but must be able to bring a "watercraft to a stop within the assured clear distance ahead."	Public Comments provided on the <i>Draft Shoreline Master Program Inventory and Characterization for the City of Kirkland's Lake Washington Shoreline</i> (August 2006)
Citizen	4.4	Shoreline Regulation	Piers and Docks	What new regulations may be developed concerning docks?	City considering requiring consistency with state/federal regulations. Also, would likely allow some flexibility in enforcement.	Public Comments provided on the <i>Draft Shoreline Master Program Inventory and Characterization for the City of Kirkland's Lake Washington Shoreline</i> (August 2006)
Citizen	3.6	Shoreline Redevelopment/Restoration		Asked whether Lake Washington's historic pre-development condition was considered in the recent Draft Shoreline Master Program Inventory?	Although historic conditions were considered, the present conditions constituted the baseline from which all potential impacts are assessed.	Public Comments provided on the <i>Draft Shoreline Master Program Inventory and Characterization for the City of Kirkland's Lake Washington Shoreline</i> (August 2006)
Citizen	3.3; 3.6	Shoreline Master Program Process		How do the shoreline inventories specifically related to shoreline habitat restoration and specie health, and what measures were being used to address this issue?	Inventories would serve as indicators for addressing habitat restoration and specie health, particularly as a result of piers, bulkheads, and storm water discharges. City departments will coordinate to address these issues.	Public Comments provided on the <i>Draft Shoreline Master Program Inventory and Characterization for the City of Kirkland's Lake Washington Shoreline</i> (August 2006)
Citizen	3.6	Shoreline Master Program Process	Best Available Science	Questioned the accuracy and best available science regarding statements in the report.	Some statements based on conjecture removed from the report. Other speculative statements remain since they are supported by best available science.	Public Comments provided on the <i>Draft Shoreline Master Program Inventory and Characterization for the City of Kirkland's Lake Washington Shoreline</i> (August 2006)
Citizen	3.3; 3.6	Shoreline Master Program Process		What positive changes had occurred since the adoption of the original Shoreline Master Plan? What about future improvements to shoreline ecological conditions?	Text has been added to the document that addresses past positive shoreline changes. Specifically, refer to sections 2.1 and 3.3.1. Future improvements will be addressed in the future Restoration Plan.	Public Comments provided on the <i>Draft Shoreline Master Program Inventory and Characterization for the City of Kirkland's Lake Washington Shoreline</i> (August 2006)
Local Gov. (Kirkland)	4.5	Shoreline Regulation		Commented on specific language in Sections 4.2.1 and 4.2.2 regarding land uses and the presence of condominium piers. Also suggested changes to Figure 8.	The specific comments and suggestions had been implemented.	Public Comments provided on the <i>Draft Shoreline Master Program Inventory and Characterization for the City of Kirkland's Lake Washington Shoreline</i> (August 2006)
Citizen/NGO (SPOCA)	3.3	Shoreline Redevelopment/Restoration	Sedimentation	How is the Shoreline Master Plan addressing sediment flow into Juanita Creek and Juanita Bay?	City has added a section to the Shoreline Master Plan that addresses Juanita Creek: Section 4.2.4.	Public Comments provided on the <i>Draft Shoreline Master Program Inventory and Characterization for the City of Kirkland's Lake Washington Shoreline</i> (August 2006)

Citizen/NGO (SPOCA)	3.3	Shoreline Redevelopment/ Restoration		What specific opportunities exist for improving the shoreline's ecological functions?	Potential for replacing solid decking with grating on boardwalk over Forbes Creek; in Denny Creek, Also, further discussion of ecological improvements on residential properties. Refer to sections 3.11; 4.3.4; and 4.4.4.	Public Comments provided on the <i>Draft Shoreline Master Program Inventory and Characterization for the City of Kirkland's Lake Washington Shoreline</i> (August 2006)
Citizen	4.2	Species/Habitat		Expressed concern over maintaining wildlife habitat (especially for birds) in Juanita Bay.	Shoreline wildlife habitat was being addressed in the <i>Final Shoreline Analysis Report</i>	Public Comments provided on the <i>Draft Shoreline Master Program Inventory and Characterization for the City of Kirkland's Lake Washington Shoreline</i> (August 2006)
Citizen	4.1	Shoreline Regulation	Piers and Docks	Asked that inhabitants of Lake Washington (e.g. their dwelling is a boat) be allowed to temporarily use boat moorage covers.		<i>Correspondence (8 February 1999)</i>
Citizen	4.3	Shoreline Regulation		Referenced 'Figure 7a' concerning boatlifts	Two additional boatlifts were included in Figure 7a.	Public Comments provided on the <i>Draft Shoreline Master Program Inventory and Characterization for the City of Kirkland's Lake Washington Shoreline</i> (August 2006)
Citizen	3.2; 3.3; 4.3	Species/Habitat	Invasive Species	Inquired about invasive species along the shoreline. For example, how severe are invasive species?	Referred to the Final Shoreline Analysis Report section 3.10.3 and 4.2.5, where the subject of invasive species is discussed in-depthly. Invasive species include water lily and milfoil. However, unsure as to the full extent to which invasive species impact shoreline 9but will be addressed in future reports).	Kirkland Public Forum: Updating Kirkland's Shoreline Master Plan (18 September, 2006); Public Comments provided on the <i>Draft Shoreline Master Program Inventory and Characterization for the City of Kirkland's Lake Washington Shoreline</i> (August 2006)
Local Gov. (Kirkland)	3.8	Shoreline Master Program Process	Public participation	How do we communicate this process to more people, in order to get them involved?		<i>Kirkland Public Forum: Updating Kirkland's Shoreline Master Plan (18 September, 2006)</i>
Citizen	3.6	Shoreline Master Program Process		Since Port Townsend's Shoreline Master Plan close to completion, has it been analyzed as a comparison?	State Dept. of Ecology official answered: Not yet, but it may inform Kirkland's future process.	<i>Kirkland Public Forum: Updating Kirkland's Shoreline Master Plan (18 September, 2006)</i>
Citizen	3.7	Shoreline Master Program Process	Public participation	Will the city use advisory committees to help inform the Shoreline Master Program process?	City of Kirkland Senior Planner responded: Because of the restrictive timeline, advisory committees are not feasible. Instead, public meetings will be used as substitutes.	<i>Kirkland Public Forum: Updating Kirkland's Shoreline Master Plan (18 September, 2006)</i>
Citizen	3.1	Shoreline Permitting		Although most property owners would be open to changes that improve Lake Washington, felt that the permitting process needs to be more conducive toward accommodating residents/property owners.		<i>Kirkland Public Forum: Updating Kirkland's Shoreline Master Plan (18 September, 2006)</i>

Citizen	3.6	Shoreline Research	Storm Water	Are there any studies on storm water runoff (within the Watershed Co. report)?	A representative from the Watershed Co. answered: Storm water runoff is addressed in their report, and will continue to be addressed. However, most storm water-related issues are outside of the Shoreline Master Program's jurisdiction.	<i>Kirkland Public Forum: Updating Kirkland's Shoreline Master Plan (18 September, 2006)</i>
Citizen	3.1	Shoreline Redevelopment/Restoration/Regulation	Shoreline Stabilization	Property owners should be able to push shoreline portion of their property farther into the Lake as an incentive to remove bulkheads.		<i>Kirkland Public Forum: Updating Kirkland's Shoreline Master Plan (18 September, 2006)</i>
Citizen/NGO (SPOCA)	3.3	Shoreline Regulation	Shoreline Stabilization	Felt that the city had made many improvements to the shoreline as a result of the Shoreline Management Act. These included a low number of bulkheads (relative to its urban setting) and a high amount of access.		<i>Kirkland Public Forum: Updating Kirkland's Shoreline Master Plan (18 September, 2006)</i>
Citizen	3.2; 4.6	Species/Habitat		In favor of improving environment for both wildlife and humans. However, emphasis may vary (i.e. favor human activities if sustainable; encourage environmental stewardship).		<i>Kirkland Public Forum: Updating Kirkland's Shoreline Master Plan (18 September, 2006)</i>
NGO	3.4	Shoreline Master Program Process		Stated that central goal of the tour was for neighbors to learn from each other.		<i>Kirkland Public Forum: Updating Kirkland's Shoreline Master Plan (18 September, 2006)</i>
Citizen	3.5	Shoreline Regulation	Incentives	Inquired whether any incentive existed for restoring commercial/mixed uses along the shoreline.	City of Kirkland Senior Planner responded: No incentives currently exist, but the idea is being explored.	<i>Kirkland Public Forum: Updating Kirkland's Shoreline Master Plan (18 September, 2006)</i>
Citizen	3.1	Shoreline Redevelopment/Restoration	Incentives	City could streamline/mitigate permitting process for private property owners by creating local improvement districts and partnering with private owners to Redevelopment large swath of shoreline at once.		<i>Kirkland Public Forum: Updating Kirkland's Shoreline Master Plan (18 September, 2006)</i>
Citizen	2.3; 3.1	Shoreline Pollution/Trash		Concerned over garbage dumped into the Lake by boaters.	Unfortunately, because boaters may come from outside Kirkland, it is a regional issue. However, an effort is needed to educate boaters on this issue.	<i>Report on the Tour of Innovative Shoreline Design (30 September 2006) ; Kirkland Public Forum: Updating Kirkland's Shoreline Master Plan (18 September, 2006)</i>
Citizen	3.1	Shoreline Pollution/Trash		Raccoons using nearby storm water water pipe		<i>Kirkland Public Forum: Updating Kirkland's Shoreline Master Plan (18 September, 2006)</i>
Citizen/NGO (SPOCA)	3.3	Shoreline Recreation		Valued the water quality of and access to Lake Washington. Also felt that the City offered particularly good shoreline access.		<i>Kirkland Public Forum: Updating Kirkland's Shoreline Master Plan (18 September, 2006)</i>
Citizen	3.1	Shoreline Regulation		What constitutes the near shore zone?	Generally, the near shore comprises the first 30' of shoreline at a depth of 9'. However, recent research may change these benchmarks.	<i>Kirkland Public Forum: Updating Kirkland's Shoreline Master Plan (18 September, 2006)</i>
Citizen	2.13	Shoreline Master Program Process	Public participation	The city should engage the press, in order to highlight positive changes that have occurred with Kirkland's shoreline.		<i>Report on the Tour of Innovative Shoreline Design (30 September 2006)</i>

Citizen	2.14	Shoreline Master Program Process		(Regarding the tour component) will the bus tour be videotaped?	City of Kirkland Senior Planner responded: The bus tour will be videotaped, and made available to the public.	<i>Report on the Tour of Innovative Shoreline Design (30 September 2006)</i>
Citizen	2.15	Shoreline Master Program Process		How can one give further input after the meeting?	Any additional comments should be made by e-mail, mail, or writing.	<i>Report on the Tour of Innovative Shoreline Design (30 September 2006)</i>
Citizen	2.11; 2.12	Shoreline Redevelopment/Restoration		City should be as site-specific as possible when addressing shoreline conditions on private property.		<i>Report on the Tour of Innovative Shoreline Design (30 September 2006)</i>
Local Gov. (Kirkland)	2.9	Shoreline Regulation		How can the permit process be streamlined for applicants that use the correct approach?	Opportunities exist, but it requires coordination.	<i>Report on the Tour of Innovative Shoreline Design (30 September 2006)</i>
Citizen	2.10	Shoreline Regulation	Consistency	Do all Lake Washington cities require the same criteria for permits?	Jurisdictions do have the same permit criteria, and there is an effort to bring these criteria more closely in-line.	<i>Report on the Tour of Innovative Shoreline Design (30 September 2006)</i>
Citizen/ Property Owner	1.1	Shoreline Redevelopment/Restoration	Shoreline Stabilization	How much did it cost to Redevelopment and de-armor a double lot located along the shoreline?	The cost was \$ 200,000-250,000. Meeting attendees felt that this was "a very good deal."	<i>Report on the Tour of Innovative Shoreline Design (30 September 2006)</i>
Citizen	1.2	Shoreline Redevelopment/Restoration	Shoreline Stabilization	How well did a double-lot along the shoreline that had recently been de-armored survive storm/erosion damage?	Property owner responded: So far no evidence of any weather-related damage.	<i>Report on the Tour of Innovative Shoreline Design (30 September 2006)</i>
Citizen/Property Owner	1.3	Shoreline Redevelopment/Restoration	Shoreline Stabilization	Regarding a recently de-armored shoreline property, would the owners have done anything differently (concerning the de-armoring process)?	Only change would have been to orient the fireplace differently	<i>Report on the Tour of Innovative Shoreline Design (30 September 2006)</i>
Federal Gov. (NOAA)	1.4	Shoreline Redevelopment/Restoration	Shoreline Stabilization	Would the owners of a recently de-armored shoreline property have preferred a contiguous beach (than what was built)?	Initially the owners would have preferred a contiguous beach, but this would have required sacrificing trees.	<i>Report on the Tour of Innovative Shoreline Design (30 September 2006)</i>
Citizen/NGO (SPOCA)	1.5	Shoreline Redevelopment/Restoration	Shoreline Stabilization	Regarding a recently de-armored shoreline property, how are the environmental benefits of de-armoring a shoreline property quantified?	Tour coordinators answered: The benefits are realized through the increase or restoration of endangered species habitat.	<i>Report on the Tour of Innovative Shoreline Design (30 September 2006)</i>
Citizen	1.6	Shoreline Redevelopment/Restoration	Shoreline Stabilization	How does one go about planning for shoreline design?	One must decide upfront what the needs and priorities are, and clearly articulate goals.	<i>Report on the Tour of Innovative Shoreline Design (30 September 2006)</i>
Citizen	1.6	Shoreline Master Program Process	Piers and Docks	How does one avoid being overwhelmed by the extant of decisions required for planning Kirkland's shoreline?	One must decide upfront what the needs and priorities are, and clearly articulate goals.	<i>Report on the Tour of Innovative Shoreline Design (30 September 2006)</i>
Citizen	1.7	Shoreline Redevelopment/Restoration	Piers and Docks	Should docks be constructed of aluminum (in order to minimize impact)?	Not per se. Rather how the material will impact species habitat should be main concern.	<i>Report on the Tour of Innovative Shoreline Design (30 September 2006)</i>
Citizen	1.7	Shoreline Redevelopment/Restoration		When importing new soils (as part of shoreline restoration), do the supporting geotextile fabrics prevent sinkholes? Are they muskrat proof?	Usually fabrics are, but they may require an additional metal mesh	<i>Report on the Tour of Innovative Shoreline Design (30 September 2006)</i>
Citizen	1.8	Shoreline Redevelopment/Restoration		Does a property owner need permits for property redevelopments below the ordinary high water mark?	Yes, an owner would need to obtain a permit.	<i>Report on the Tour of Innovative Shoreline Design (30 September 2006)</i>

Citizen	1.9	Shoreline Redevelopment/Restoration	Shoreline Stabilization	Should property owners' use large boulders/stones when redeveloping shoreline property? If so, do they need to obtain a permit for this?	Property owners should always consult with the city first (as some boulder/stones may not be beneficial). Permits would be required.	<i>Report on the Tour of Innovative Shoreline Design (30 September 2006)</i>
Citizen/NGO (SPOCA)	1.10	Shoreline Redevelopment/Restoration		(Referring to the tour's overall comments) Why is there so much emphasis on salmon, rather than other species?	The salmon are officially listed as threatened; as such, governments are required to protect them.	<i>Report on the Tour of Innovative Shoreline Design (30 September 2006)</i>
Citizen	1.11	Species/Habitat	Invasive Species	Do invasive predators (e.g. bass) prefer non-native plant species?	Yes, non-native predators do associate with non-native plants.	<i>Report on the Tour of Innovative Shoreline Design (30 September 2006)</i>
Citizen	2.1	Shoreline Research		Regarding shoreline restoration efforts, how much study had gone into offshore areas (of Lake Washington), and its topography, and water depth (as well as the best available science to account for these factors)?	Restoration will likely be constrained by what can be done, and will be informed by other local efforts.	<i>Report on the Tour of Innovative Shoreline Design (30 September 2006)</i>
Citizen	2.2	Shoreline Master Program Process		Asked to have the Shoreline Master Program's timeline clarified?	The City is farther along in the process than other Lake Washington jurisdictions.	<i>Report on the Tour of Innovative Shoreline Design (30 September 2006)</i>
Citizens	2.3; 2.4	Species/Habitat	Invasive Species	Milfoil is an issue--there was too much of it and it smelled foul.	Best way to remove it is by pulling it from the roots. Moreover, milfoil removal is addressed in a recent Dept. of Fish and Wildlife publication.	<i>Report on the Tour of Innovative Shoreline Design (30 September 2006)</i>
Citizen	2.5	Species/Habitat		A comment was made about the balance between salmon (a native species) and bass and sculpin (non-native)		<i>Report on the Tour of Innovative Shoreline Design (30 September 2006)</i>
Citizen	2.6	Shoreline Regulation	Incentives	Reduce street setbacks for new homes, so as to keep homes farther away from the shoreline.		<i>Report on the Tour of Innovative Shoreline Design (30 September 2006)</i>
Citizen	2.6	Shoreline Regulation	Boating practices	Could moorage rates be increased?		<i>Report on the Tour of Innovative Shoreline Design (30 September 2006)</i>
Citizen	2.6	Shoreline Redevelopment/Restoration	Shoreline Vegetation	Could native trees be planted that support eagles and osprey?		<i>Report on the Tour of Innovative Shoreline Design (30 September 2006)</i>
Citizen	2.7	Shoreline Recreation	Boating practices	Could boaters could be directed toward the free pump station (at Yarrow Bay)?		<i>Report on the Tour of Innovative Shoreline Design (30 September 2006)</i>
Citizen	2.8	Shoreline Redevelopment/Restoration	Shoreline Stabilization	How can the shoreline be softened (i.e. remove bulkheads)--particularly since most of the shoreline is privately owned?	Cost-effective opportunities exist, such as through official certification courses, which in turn can be used for community outreach/education.	<i>Report on the Tour of Innovative Shoreline Design (30 September 2006)</i>
Local Employee	4.6	Shoreline Permitting		There are regulations in place to address impacts through both the state and federal processes. It is important that local governments are careful not to impose overly rigid restrictions that force property owners to pursue Shoreline Variances or Conditional Use Permits.		<i>Official corespondence and Houghton Community Council Meeting (February 25, 2008)</i>
Citizen/Local Employee	4.6, 5.1	Shoreline Permitting		Need to ensure that SMP regulations for overwater structures are flexible, practical and reasonable to enable property owners to meet their needs while excersing responsible stewardship toward the valuable resources of our region.		<i>Official corespondence and Houghton Community Council Meeting (February 25, 2008)</i>

Local Employee	4.6	Shoreline Regulation	Shoreline Stabilization	Carefully consider regulations addressing bulkheads. Restoring natural shorelines will not work in all locations and in many cases depending on the water depth at the face of the existing bulkhead a property owner will need to shift their shoreline landward quite a bit, which can impact setback and the amount of impervious area.		Official corespondence and Houghton Community Council Meeting (February 25, 2008)
Citizen/NGO (SPOCA)	3.6, 5.1	Shoreline Master Program Process	Public participation	Need for public participation. Make property owners understand implications of changes early on in process.		Houghton Community Council Meeting (February 25, 2008)
Citizen	3.6	Shoreline Regulation		Kirkland, as largest property owner along shoreline, has biggest impact and needs to consider how regulations would impact their activities as well as those of private property owners.		Houghton Community Council Meeting (February 25, 2008)
Citizen/NGO (SPOCA)	3.6, 5.1	Shoreline Regulation		Need for clarity and consistency in shoreline regulations.		Houghton Community Council Meeting (February 25, 2008)
Citizen	4.9	Shoreline Recreation		Would like to see more big toys, and other recreational facilities available (e.g waterslides, diving boards, big inflatables)	Comment forwarded to Parks and Community Services Dept.	Web comment (March 14, 2008)
Local Employee	4.6	Shoreline Regulation	Piers and Docks	Kirkland needs to revise regulations to allow for greater height above Ordinary High Water in order to be consistent with state and federal requirements for pier height above the water		Planning Commission Meeting (March 13, 2008)
Citizen	5	Shoreline Goals and Policies		Include language protecting rights of private property owners.	See Goal SMP-5	Planning Commission Meeting (March 13, 2008)
Citizen	5	Shoreline Regulation	Public access	Concerned about public access and pathways along the shoreline. Want to ensure that these are not required for single family lots.		Planning Commission Meeting (March 13, 2008)
Citizen	5	Shoreline Regulation	Piers and Docks	Concerned that minimum width for docks as required by RGP-3 is too narrow		Planning Commission Meeting (March 13, 2008)
Citizen	5	Shoreline Regulation	Shoreline Stabilization	Concerned that removal of existing bulkheads may adversely impact neighboring properties.		Planning Commission Meeting (March 13, 2008)
Citizen	5	Shoreline Regulation	Shoreline Stabilization	Concerned that removal of existing bulkheads will affect lot area.		Planning Commission Meeting (March 13, 2008)
Citizen	3.3	Shoreline Goals and Policies	Storm Water	Linking the SMP to the implementation of the City's Surface Water Master Plan provides an opportunity for a systematic comprehensive approach to deal with the pollution impacts of storm water on Lake Washington.		Letter (March 24, 2008)
Citizen	3.3	Shoreline Goals and Policies	Shoreline Vegetation	Getting to a position depicted in the shoreline vegetation goal - stumps, root wads, overhanging vegetation, benches - is not going to happen. A realistic and implementable approach is one that should be identified in this goal.		Letter (March 24, 2008)
Citizen	3.3	Shoreline Goals and Policies	Invasive Species	Change policies to reflect the reality of safe and effective use of herbicides to control invasive weeds.		Letter (March 24, 2008)
Citizen	3.3	Shoreline Goals and Policies	Shoreline Stabilization	Have not experienced scouring of shoreline area as a result of bulkhead. Policies for retrofitting should incorporate several factors: 1) reasons for their installation, unintended consequences, cost benefit analysis. Need to address practicality of bulkhead retrofitting. Bulkhead removal when meeting specific and well-founded criteria could best be attained when redevelopment occurs with property consolidation and structure knockdowns.		Letter (March 24, 2008)
Citizen	3.3	Shoreline Goals and Policies	Shoreline Stabilization	Appears to be conflict between desire to eliminate bulkheads and provide overhanging vegetation, which is most effectively planted on a bulkhead.		Letter (March 24, 2008)

Citizen	3.3	Shoreline Goals and Policies	Boating practices	Many of the impacts depicted in this policy are either illegal or prohibited.		<i>Letter (March 24, 2008)</i>
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