Shoreline Stabilization

The following is an overview of the permitting agencies and permit requirements that are involved with construction of a new or replacement bulkhead. The permit complexity varies with the project; both state and federal agencies provide a streamlined permitting process for shoreline stabilization techniques that rely upon soft structural shoreline alternatives.

Responsible Agency	Permit	Purpose	Trigger Activity	Costs	Timeframe	Internal Review Process	Permit Dependency	Special Notes
City of Kirkland	Letter of Exemption	Generally, if developments meet precise terms of at least one exemption listed in WAC 173-27-040, they may be granted exemption from substantial development permit requirements.	Examples of exempt activities: normal maintenance or repair of existing structures, construction of normal protective bulkhead common to a single family home. (WAC has complete list).	None.	Highly dependant on proposal; average timeframe ranges four to six weeks	If federal permits are required, local govt prepares a letter of exemption, addressed to the applicant and Ecology indicating specific exemption provision.	If federal permits are required (especially Corps 404 and Section 10), applicant may need to provide proof of compliance with state laws (see internal process column).	WAC 173-27-040 provides specific exemptions for: • Construction of a normal protective bulkhead to protect a single-family residence. A normal protective bulkhead is not exempt if constructed for the purpose of creating dry land. • Normal maintenance or repair of existing structures or developments An exemption from the substantial development process is not an exemption from compliance with act or the local master program, nor any other regulatory requirements.
	Shoreline Substantial Development Permit	To provide public involvement in the permit process and to foster appropriate uses and protection of the shorelines of the state.	Interfering with normal public use of water/shorelines of the state, or developing or conducting an activity valued at $2500 (adjusted annually for inflation) or more on the water or shoreline area.	$4,212.00	Highly dependent on proposal; average timeframe ranges from three to four months.	Application submitted to local government; upon final decision by local government, permit is filed with Department of Ecology.	SEPA compliance must be met prior to local permit decisions.	

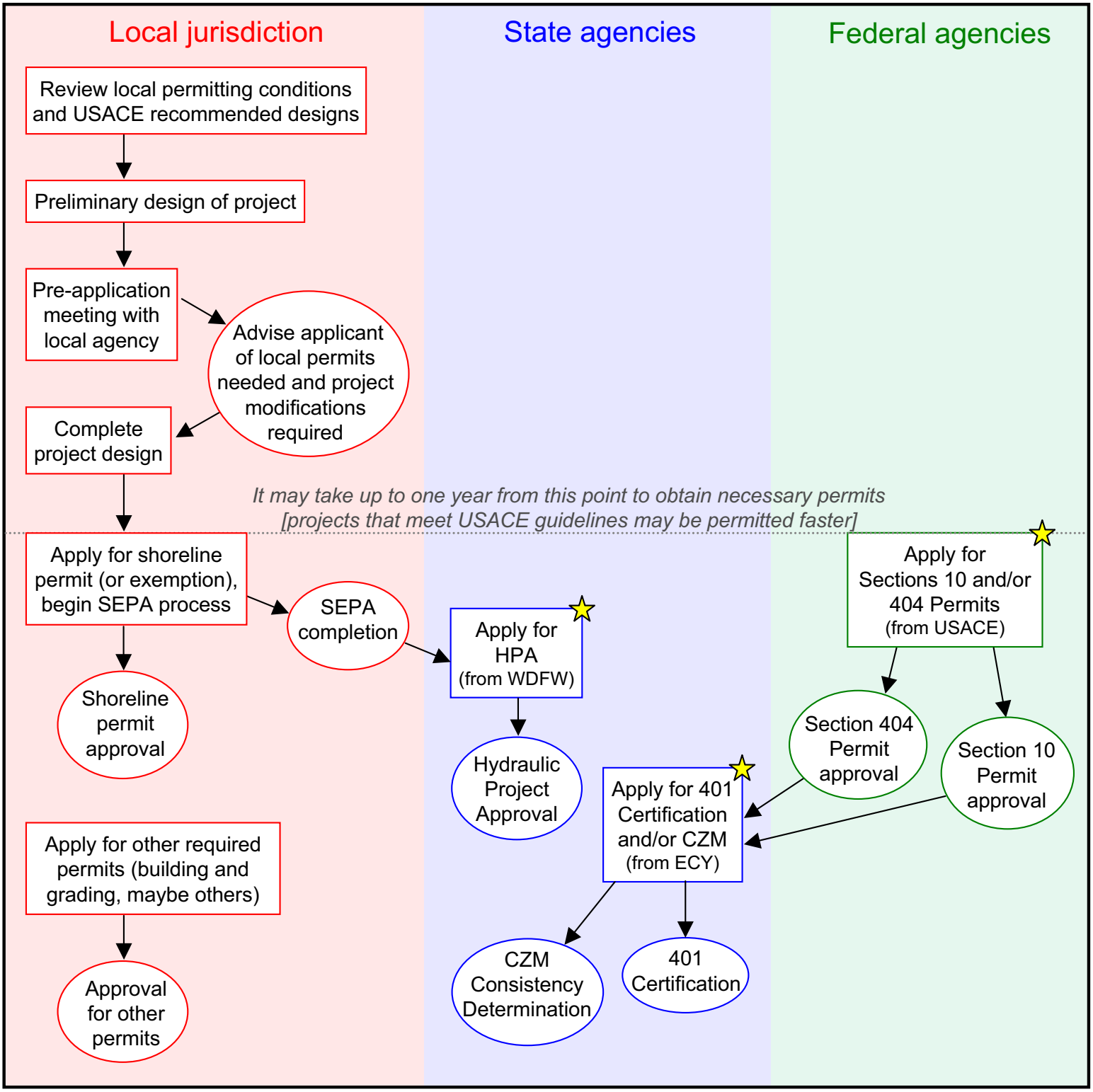
Responsible Agency	Permit	Purpose	Trigger Activity	Costs	Timeframe	Internal Review Process	Permit Dependency	Special Notes
	Shoreline Conditional Use Permit or Variance Review Process	To provide a system within the Master Program which allows flexibility in the application of use regulations.	Projects requiring a Shoreline Permit. Projects meeting specific criteria identified in the Master Program or unclassified uses need a Conditional Use Permit; a Variance is an exception or waiver of specific size standards.	$6,877.00	Highly dependent on proposal; average timeframe ranges from four to six months. After receipt of Local Government permit decision, the Department of Ecology may take up to 30 days to approve, condition, or deny the permit.	After local govt approves conditional use or variance permit, they submit it to Ecology for review. Ecology notifies local govt of its decision and does an official filing.	SEPA requirements must be completed prior to local permit decisions.	Applicants burden of proof is very important in variance applications. Variance criteria are very closely scrutinized and must all be fulfilled for the permit to be approved at the state level.
	State Environmental Policy Act (SEPA) Determination	SEPA requires that state and local agencies review proposals to identify environmental impacts.	Projects located within lands covered by water.	$520.00	Highly dependent on proposal; average timeframe ranges four to six weeks	Application submitted to local government; upon final decision by local government, permit is filed with Department of Ecology.	SEPA process is one of the first steps in permitting. All applicable agency review is under one SEPA process.	
Washington State Department of Fish and Wildlife	Hydraulic Project Approval (HPA)	To provide protection for fish, shellfish, and their habitats.	Work that uses, diverts, obstructs, or changes the natural flow or bed of state waters.	No charges for HPA.	For a standard HPA, max.of 45 calendar days after receipt of a complete app. and SEPA compliance; max of 15 days for an expedited HPA; immediately for emergency HPA.	Applications are sent and logged in at Headquarters and then reviewed and acted on by biologists in the regional offices.	SEPA compliance must be complete prior to issuance of the HPA.	Streamlined HPAs are available for qualifying fish habitat enhancement projects.

Responsible Agency	Permit	Purpose	Trigger Activity	Costs	Timeframe	Internal Review Process	Permit Dependency	Special Notes
U.S. Army Corps of Engineers, Seattle District Regulatory Branch	U.S. Army Corps of Engineers 404 & Section 10 Nationwide Permits (NAP) (Programmatic Consultation)	Provides authorization on a nationwide level for activities with minimal environmental impacts which do not require individual permits as long as they comply with the NWP conditions. Programmatic Consultation is a process where the required Section 7 (Endangered Species Act) consultation is conducted by the Corps of Engineers for certain types of work activities. Through the programmatic process, the Section 7 consultation is done "ahead of time" so that when an application for a programmatic work activity is received, the consultation part of the Nationwide Permit evaluation process has already been completed, thus streamlining the permit process.	Section 404: discharges of dredged or fill material into waters of the U.S., including special aquatic sites such as wetlands. Section 10: any work in, over or under navigable waters of the U.S., or which affects the course, location, condition or capacity of such waters. Includes construction and maintenance of piers, pilings, wharfs, and bulkheads in Lake Washington.	No charges for Corps permit.	Some Nationwide permits must be issued by the Corps within 30 to 45 days of the Corps' receipt of a complete application. This timeline does not apply for those projects that must go through ESA consultation.	Varies depending on which NWPs, RGPs or Programmatics are used.	Water Quality Certification (401) and Coastal Zone Management (CZM) are often pre-approved. It is necessary to check each Nationwide Permit or RGP for the requirements.	Three potential scenarios for bulkhead replacement are covered under a Programmatic Consultation: • Cut Beach, Place Gravel Fill and Re-vegetate • Gravel Fill Beach and Re-vegetate • Re-vegetated Armored Banks (only for bulkheads within 25 feet of residence) If bulkhead replacement projects do not meet this guidance then a project specificl ESA consultation with the Corps of Engineers and the Services will be necessary. A project specific ESA consultation requires the project proponent to submit some form of documentation to the Corps. This information is reviewed by the Corps and formally submitted to the U.S. Fish and Wildlife Service and/or National Marine Fisheries Service (Services) for their review and concurrence. The document submitted under an individual ESA consultation is call a Biological Evaluation (BE). Proposed projects will be evaluated based on a combination of site-specific conditions, the effects of the project, and measures proposed to reduce impacts and improve habitat. For a given project, measures should be chosen to reduce the potential impacts of shoreline pier and bulkhead structures and to provide a diverse shallow water and riparian environment to benefit aquatic species. For most proposed shoreline stabilization and overwater structures, both structural and

Responsible Agency	Permit	Purpose	Trigger Activity	Costs	Timeframe	Internal Review Process	Permit Dependency	Special Notes
Department of Ecology	Coastal Zone Management Certification (CZM)	To ensure compliance with state and federal Clean Water Act, Clean Air Act, Wa. State Env. Policy Act, Shoreline Management Act & Energy Facility Site Evaluation Criteria.	Conducting projects authorized by the federal agencies and/or applying for certain federal permits or funding.	None	CZM decision must be made within six months of Corps of Engineers public notice.	Ecology Headquarters, Shorelines and Environmental Assistance Program.	Water Quality Certification, SEPA compliance, Shoreline permit, Air permits & compliance with Energy Facility Site Evaluation Criteria if applicable.	
	Water Quality Certification (401)	Verifies project will comply with state water quality standards and other aquatic resource protection. Reviews both project construction and operation activities.	Application for federal license or permit that could affect water quality. Under the Clean Water Act, states have authority to approve, deny, or condition any project in wetlands or other state waters.		Typically 3 months but for complex projects, up to 1 year.		SEPA. State review occurs after receipt of federal notification.	

Schematic of the Permitting Process for Residential Shoreline Projects on Lake Washington

Attachment 5
HCC 2/23/09



= Applicant's responsibility

= Permitting agency's responsibility

★ = use JARPA as application form

CZM – Coastal Zone Management
ECY – WA Department of Ecology
HPA – Hydraulic Project Approval
JARPA – Joint Aquatic Resources Permit Application
SEPA – WA State Environmental Policy Act
WDFW – WA Department of Fish & Wildlife
USACE – U.S. Army Corps of Engineers

For assistance or answers to questions about permitting, visit the Washington State Office of Regulatory Assistance (ORA) website: www.ora.wa.gov

Seth Ballhorn, Lindsay Chang, Kelly Stumbaugh, and Martin Valeri. *Lake Washington Shoreline Permitting Process Study*. University of Washington Environmental Management Certificate Program Keystone Project Final Report. May 2008.
http://courses.washington.edu/emksp07/NOAA_AltTradShorelines

Lake Washington Shoreline Permitting Process Schematic

Schematic Design:

This schematic provides a broad overview of the permitting process for construction and restoration work for private residences along Lake Washington shorelines. The permitting process for shoreline work is project dependent and can be complex. It is often difficult to determine what information and permits are required. As a result, homeowners tend to hire consultants or contractors to manage permitting for them. The involvement of professionals is helpful, especially in providing the required plans and evaluations. However, it is important for property owners to understand the overall process and be involved in the permitting of their shoreline projects. Improved understanding and communication between property owners and permitting agencies often facilitates a faster, smoother permitting process, which will save time and money.

Permitting Process:

The shoreline permitting process involves federal, state, and local agencies. Since there are many local jurisdictions around Lake Washington, the local permitting process varies depending on the location of the residence. Some of the state and federal permits require prior approval of other permits or certifications. In addition, the projects proposed by property owners and/or their contractors or consultants will vary. For these reasons, it is difficult to identify a single, step-by-step process of obtaining the required permits for a shoreline project.

Agencies at all levels of government are required to issue permits based on existing laws. For instance, the U.S. Army Corps of Engineers (USACE) must consider how a proposed project will affect habitat for juvenile Chinook salmon in Lake Washington because they are protected under the Endangered Species Act (ESA). Local jurisdictions look to their Shoreline Master Plans, which establish regulations to protect the health and usability of water bodies. Since each agency is responsible to carry out related but different regulations, is it important for applicants to work with agencies to develop a shoreline project design that meets the needs of the property owner and can be permitted by the agencies.

Agencies are generally able to approve more eco-friendly shoreline projects faster and with fewer revisions than more traditional projects. Nevertheless, the process can be slow; to avoid hassle and expense, the applicant should start the permitting process early to help ensure that the necessary permits and approvals are obtained in time for work to occur within the approved work window. Shoreline work is allowed during work windows that are set to minimize disturbance to wildlife. Generally work is done during the summer, but the dates of work windows can vary by the type of work being done. The USACE permits often take the longest amount of time to be approved (up to one year), but this time can be significantly shortened by proposing a shoreline design that fits USACE guidelines. The project design phase, which should include a pre-application meeting with the local jurisdiction planning office, provides the best opportunity for applicants to increase the speed and ease of the overall permitting process. Discussions with the local permitting agency can help applicants understand the shoreline design principles that are encouraged by all of the agencies.

Directions for Using the Schematic:

While the schematic does not walk applicants through every permutation of the permitting process, it provides a general overview of the major permits needed, the agencies issuing the permits, and the time required. Property owners can use the schematic as a guide because it directs them to the appropriate agencies and informs them what the agencies expect and require. The schematic does not include every single form, evaluation, and permit that is required for a specific project. It provides enough guidance to ensure that the appropriate agencies will be contacted. Discussions between the applicant and the agencies should fill in the details.

To use the schematic as a guide to the permitting process, first review it as a whole, using the key to understand the significance of the symbols and acronyms. Rectangles show tasks for which applicants are responsible, while ovals show what the agencies will do. Arrows point from an activity that must be completed before another activity can begin; note that some of these chains involve information passing back and forth between applicants and agencies. Along the way, agencies will inform the applicant if additional information is needed and which permits are required for the specific project proposed. Keeping the lines of communication open between the applicant and the agencies will help avoid delays.

PROGRAMMATIC BIOLOGICAL EVALUATION FOR SHORELINE PROTECTION ALTERNATIVES IN LAKE WASHINGTON

A. Introduction

The shoreline protection alternatives guidance (SPAG) is designed to streamline the federal permit process to replace existing rip rap and concrete bulkhead projects in Lake Washington. The SPAG also provides for a more environmentally appropriate erosion control method and enables direct beach and water access for land owners. In many situations the erosion control methods described in the SPAG may be more cost effective than traditional rip rap bulkhead replacements.

The applicant will fulfill the United States Army Corps of Engineers (COE) permit requirements under the Clean Water Act (CWA) and the Rivers and Harbors Act (RHA) for bulkhead replacement or repair by meeting the design elements in this SPAG. Issuance of a federal permit in Lake Washington includes consultation with the National Marine Fisheries Service (NMFS) and United States Fish and Wildlife Service (USFWS) under the Endangered Species Act (ESA) for Puget Sound Chinook (*Oncorhynchus tshawytscha*) and its critical habitat, Puget Sound Steelhead (*O. mykiss*), and Bull Trout (*Salvelinus confluentus*) and its critical habitat. Proposed actions that comply with SPAG and only involve bulkhead replacement will not require additional minimization measures for aquatic species under the ESA, Magnuson Stevens Act (MSA), RHA or CWA.

The three alternative methods for bulkhead replacement described below in this document will fulfill the federal permit process including consultation with NMFS and United States Fish and Wildlife Service (USFWS). All projects that meet the elements of this programmatic will receive a letter and a Nationwide Permit (s) from the COE. If bulkhead replacement projects do not meet this guidance then individual ESA consultation with the COE and the services will be necessary. For projects that involve both pier and bulkhead replacement or remodels, the use of both the SPAG and Regional General Permit (RGP) #3 is encouraged for expedited permitting and for more environmentally functional projects.

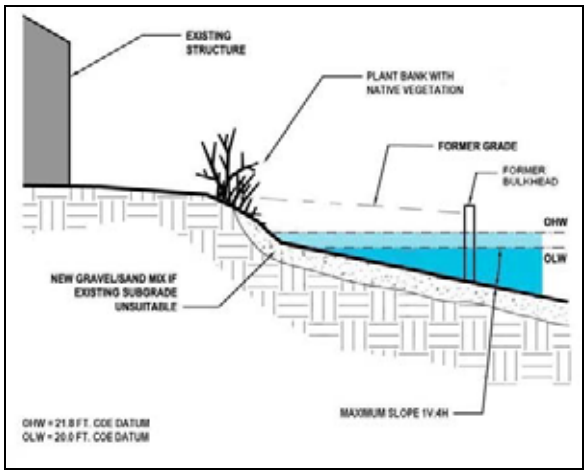
Erosion control methods that use ecological principles and techniques to achieve stabilization of the shoreline while enhancing habitat, improving aesthetics and reducing costs should be considered first before any other bank protection method. Where appropriate, rounded gravel, vegetation, wood and other natural materials should be used to protect shorelines and maintain shallow water and shallow gradients to re-establish the integrity of the shoreline. The range of gravel gradation is determined based on site specific conditions such as exposure, wave fetch and slope. Larger gravel is more resistant to higher wave action and will remain more stable on a steeper slope than smaller sized gravel. Because the functional effectiveness of gravel fill increases (and the cost of gravel decreases) as the extent of coverage increases, multiple lot projects are encouraged.

Gravel fill acts like other shore protection structures to prevent erosion of the backshore. At the same time gravel fill provides a shallow slope and substrate that is better for native juvenile salmonids by creating shallow water conditions. A shallow gravel beach is also a safe way for humans to access the water. Depending on site conditions, coarse sand may be retained on the beach, too. We recommend adding gravel fill to attain the shallowest grade possible at the site. We also recommend the addition of beach wood and native plants along the shoreline.

The City of Seattle Park Department has added gravel fill to the shorelines of two public beaches in Lake Washington, Seward Park and Magnuson Park, to improve habitat conditions along the shoreline, to protect the shoreline from erosion, and for the greater enjoyment of the public.

Seward Park Beach (north facing beach) Magnuson Park Beach (southeast facing beach)

Cut Beach, Place Gravel Fill and Re-vegetate



Remove existing rip rap or concrete bulkhead and cut into the existing bank across the maximum width of the property to attain a shallow shoreline grade and further reduce the effects of scouring wave action. Plant native riparian vegetation ten feet deep across at least 50% of the width of the shoreline. Plant emergents in areas where wave action is suitable for growth. Place gravel beach fill grading slope to range of 1Vertical (V):4 Horizontal (H) or less steep. The design target for the slope is 1V:7H. More than 2 cubic yards of gravel fill per lineal foot at or below the 21.85 foot elevation will need additional review and consent by COE. Typically, gravel size should range from 1/8 inch to 2 inches. Add emergent plants in areas where wave action is suitable for growth. For higher energy areas shoreline logs may be partially buried within the new substrate at the water's edge. The area behind the logs will be planted with willows and/or emergent vegetation. Section F gives the COE web site for work windows at various locations around the lake. Best management practices including installation of silt fences for water quality control must be used. This method may be most appropriate for shallow-sloped shorelines with lawns. Site specific engineering may be needed depending on location and scale of project.

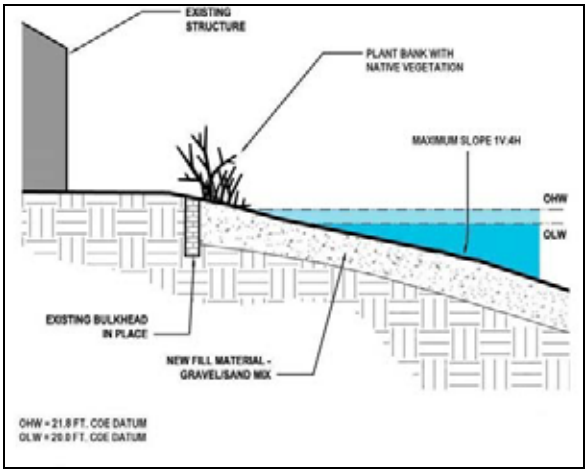
Below is an example of a residential shoreline on Lake Washington that formerly had a bulkhead at the water line across the front of the property. The owners removed the bulkhead, cut back the grass and built a gradual-sloped beach with small sized substrate placed several feet above the 21.85 foot elevation (ordinary high water (OHW)) to absorb wave action. The beach extends across the width of the property and includes emergent and riparian shoreline vegetation.

Shallow-sloped upland site on Lake Washington

Below is an example of a residential shoreline on Lake Washington that formerly had a bulkhead lower than 21.85 feet elevation (OHW) across the front of the property. The owners removed the bulkhead, cut back the grass and built a gradual-sloped beach with small sized substrate that extends above the 21.85 foot elevation (OHW) several feet to absorb wave action. The beach extends across the width of the property. The rockery functions as a retaining wall to allow a shallow- sloped beach at a steep-sloped site.

Steeper-sloped upland site on Lake Washington

Gravel Fill Beach and Re-vegetate



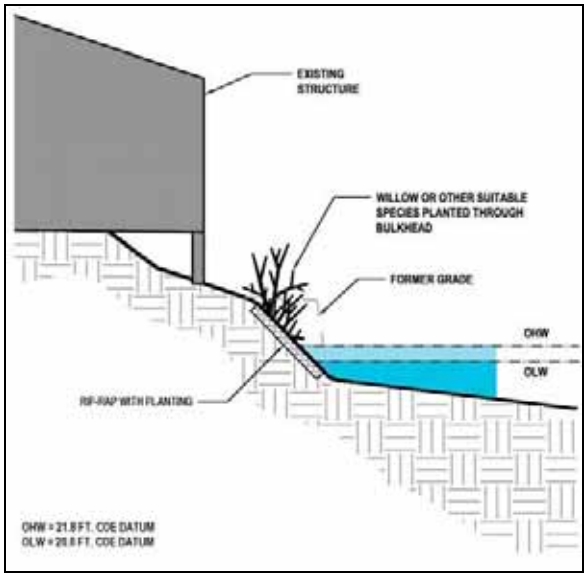
Where option #1 cannot be done, because of site conditions, place gravel beach fill in front of existing bulkhead (covering the rip rap) or remove rip rap across the maximum width of the property and replace with gravel beach fill. Plant native riparian vegetation ten feet deep across more than 50% of the width of the shoreline. Place gravel beach fill grading slope to range of 1V:4H or flatter. Design target for the slope is 1V:7H. Typically gravel size should range from 1/8 inch to 2 inches. More than 2 cubic yards of gravel fill per lineal foot at or below the 21.85 foot elevation will need additional review by COE. Add emergent plants in areas where wave action is suitable for growth. For higher energy areas shoreline logs may be partially buried within the new substrate at the water's edge. The area behind the logs will be planted with willows and/or emergent vegetation. Section F gives the COE web site for work windows at various locations around the lake. Best management practices including installation of silt fences for water quality control must be used. This method may be suited for those properties with a structure close to the shoreline and/or on a steep-sloped shoreline. Site specific engineering may be needed depending on location and scale of project.

A site where this technique has been used is the former seawall at Lincoln Park in west Seattle. Gravel fill was placed seaward of the wall to form a beach and protect a sewer main during the 1980s. Minimal gravel replenishment has been necessary over the past twenty years. See Appendix 1 for more details.

Photo courtesy of COE
Lincoln Park before construction

Photo courtesy of COE
Lincoln Park after construction

Re-vegetated Armored Banks (only for bulkheads within 25 feet of residence)



Where existing rip rap cannot be removed because of very close proximity to an existing residential or commercial structure (25 feet or less from 21.85 foot elevation), vegetation can be added to restore some functions. Willow stakes must be planted into replacement rip rap (or other material) with soil amendment or provide design with similar functional vegetation benefit in front of bulkhead. Gravel beach fill may be added in front of the bulkhead to provide some shallow water. More than 2 cubic yards of gravel fill per lineal foot at or below the 21.85 foot elevation will need additional review by COE. Section F gives the COE web site for work windows at various locations around the lake. Overhanging riparian plantings must be added along the entire length of the rip rap bulkhead. Best management practices including installation of silt fences for water quality control must be used. Limited use of this shoreline treatment may only be allowed by COE depending on site specific constraints making alternatives #1 or #2 impossible.

Lake Washington/Sammamish SMP Guidance: Fall 2008

To: Lake Washington/Sammamish Local Government; staff, planning commissions, citizen advisory committee and elected officials working on updating Shoreline Master Programs

From: Washington State Department of Ecology – Shorelands & Environmental Assistance Program

Subject: On-going guidance on Shoreline Master Program updates

Ecology is aware of recent letters and emails raising questions related to updates of local Shoreline Master Programs (SMP) within Lake Washington and Lake Sammamish. In an effort to offset any miscommunication and ensure broad understanding of the SMP Guidelines (WAC 173-26), Ecology has attempted to synthesize many of the comments voiced and provide some guidance to these questions for your consideration.

SMP QUESTIONS SENT TO LOCAL GOVERNMENTS:

What is the definition of "No Net Loss of Ecological Functions"? Is "no net loss" applied state-wide, by jurisdiction or on a project-by-project basis?

What is No Net Loss of Ecological Functions? Simply stated, the no net loss standard is designed to halt the introduction of new impacts to shoreline ecological functions resulting from planned for and permitted new development. This means that through implementation of the updated SMP, the existing condition of shoreline ecological functions should remain the same or be improved over time. The Shoreline Master Program Guidelines (Guidelines) set forth the obligation to assure that no net loss of ecological functions will be achieved within the SMP's planning horizon by implementing updated SMP policies and regulations. No net loss of ecological function is a jurisdiction specific determination that is based on anticipated future uses and associated ecological risks from allowed uses within shoreline areas. SMA policy and the Guidelines recognize the need to balance both *use* and *protection* of shoreline resources. Thus, SMPs must provide for preferred shoreline uses set forth in the SMA (RCW 90.58.020). These include water-dependent uses like port development, public access facilities, and owner occupied single-family residences. Impacts resulting from these preferred shoreline uses, when they cannot be avoided, must be reduced by other SMP environment designations and regulations which follow the required mitigation sequence. Achieving no net loss of ecological function relies on consistent application of mitigation sequencing. Mitigation sequencing sets a priority to first avoid, then minimize, rectify, reduce or compensate for impacts

The no net loss analysis is intended to inform the SMP planning process by describing both the presence and potential risks to existing shoreline ecological functions. The analysis should evaluate the intensity of future uses that are appropriate for segments of shorelines to ensure no overall or net loss of ecological functions. A no net loss of ecological functions determination will need to be justified by local governments through a Cumulative Impact Analysis, which essentially anticipates build-out of shoreline areas pursuant to the intensity of development allowed through the updated SMP. This determination must conclude that build-out of the local shoreline will not further threaten existing shoreline ecological functions. In sum, the no net loss

standard applies to each local jurisdiction as it updates its SMP. Consistent with the no net loss standard, the required mitigation sequence is also applied as the SMP is implemented over time and individual shoreline projects are reviewed and approved by local government. Mitigation sequencing and/or alternative project specific monitoring for no net loss, should provide clear linkage to jurisdiction-wide not net loss goals.

The Department of Ecology (DOE) is overstepping its authority. DOE has an agenda. DOE is over regulating Piers/Docks and Bulkheads without conclusive evidence of their affect on shoreline resources (i.e. overlapping regulations unwarranted changes)

By way of example, recent studies focusing on the affects of shoreline alterations to salmon migration in the littoral environment of lakes (Tabor et al, 2002)[1] (Kahler et al, 2000)[2] have raised concern pertaining to both the physical barrier of a dock/pier as well as affects to aquatic habitat for both migrating and rearing salmon species. In addition to environmental concerns, increased pier/dock density along shorelines can also negatively affect "normal public use" of the shoreline for recreation and navigation uses upon waters of the state. The state legislature, in RCW 90.58.020 policy, lists Environmental Protection and Public Access as fundamental policy goals/preferred uses within the Shoreline Management Act. In order to provide environmental protection to shorelines, local jurisdictions are required to document existing ecological functions within a shoreline Inventory/Characterization (WAC 173-26-201). The Guidelines (WAC 173-26, Part III) require local governments to address cumulative impacts by considering commonly occurring shoreline development and foreseeable impacts caused or avoided by proposed SMP policies and regulations. Ultimately, SMP policy and regulations must ensure no net loss of ecological functions with reference to the baseline shoreline conditions described within the locally prepared Inventory/Characterization.

In preparing shoreline regulations, local governments are also required to implement a precautionary principle. At WAC 173-26-201(3)(g) the guidelines state "*As a general rule, the less known about existing resources, the more protective shoreline master program provisions should be to avoid unanticipated impacts to shoreline resources*". If there is a question about the extent or condition of an existing ecological resource, then the master program provisions shall be sufficient to reasonably assure that the resource is protected in a manner consistent with the policies of these guidelines.

Local governments are required to regulate Piers/Docks through the following sections of the SMP Guidelines (WAC 173-27-211):

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[1] Tabor, R.A., and R.M Piaskowski, 2002. Nearshore habitat use by juvenile Chinook salmon to lentic systems of the Lake Washington Basin. Annual Report, 2001. U.S. Fish and Wildlife Service, Lacey, WA.

[2] Kahler, T.,M. Grassley and David Beauchamp. 2000. A summary of the effects of bulkheads, pier and other artificial structures and Shorezone development on ESA-listed salmonids in lakes. City of Bellevue

- WAC 173-26-211(5)(c)(ii)(D) states: *"All developments and uses on navigable waters or their beds should be located and designed to minimize interference with surface navigation … and to allow for the safe, unobstructed passage of fish and wildlife, particularly those species dependent on migration."*

- WAC 173-26-231(b) *"Piers and docks, including those accessory to single-family residences, shall be designed and constructed to avoid or, if that is not possible, to minimize and mitigate the impacts to ecological functions…"*

- WAC 173-26-221 (2)(c)(iii) and (iv). *"Master programs should require that structures be made of materials that have been approved by applicable state agencies."*

Flexibility versus specific standards for Piers/Docks? Redevelopment standards versus new Piers/Docks standards?

In order to meet the no net loss requirement, jurisdictions updating their SMP's must consider the cumulative impacts of future allowed shoreline uses. Specific to Piers/Docks, jurisdictions will need to refer to specific development standards as a basis for evaluating the build-out potential allowed through future implementation of the updated SMP. This analysis of cumulative impacts must consider the potential risks to shoreline ecological functions if the shoreline were to be fully developed to the maximum intensity allowed through the updated SMP. Therefore, specific to new Piers/Docks, dimensional standards must be proposed as part of the updated SMP. Without specific standards, there would be no certainty in local projections of future (planned) shoreline uses and their impacts and hence no justification that the no net loss standard will be achieved.

The Army Corps of Engineers Regional General Permit (RGP) #3 consist of regionally specific, science based Pier/Dock development standards. These standards reflect completed consultation for Endangered Species Act (ESA) Section 7 and essential fish habitat (EFH) review from federal resource agencies. Pursuant to the SMP Guidelines, updated SMP's are required to be based on objective use of relevant scientific information, for which the RGP standards provide an opportunity for local jurisdictions to incorporate existing minimizing Pier/Dock standards. Local jurisdictions have the option to come up with different standards, but they will need to supply sufficient science based analysis illustrating potential risks to shoreline ecologic functions. Regardless, if jurisdictions decide to utilize the RGP standards or create their own Pier/Dock standards consideration of cumulative impacts as well as a determination of no net loss (risk) of shoreline ecological functions must be concluded.

Existing Pier/Dock redevelopment strategies will need to be jurisdiction specific. These standards should be based on the jurisdictions SMP Inventory/Characterization, with appropriate sideboards identified to ensure that expanded or reconstructed Piers/Docks will not result in net loss of ecological functions. For example, a shoreline with a high density of existing Piers/Docks, may be able to define redevelopment standards that allow some flexibility in the size or orientation of the redeveloped overwater footprint or structures, while also incorporating some degree of restoration. This management strategy must acknowledge existing shoreline resources and maintain or restore shoreline ecological functions through

redevelopment. Restoration of impaired ecological functions should be included in the evaluation of no net loss to help offset impacts introduced from new planned shoreline development allowed in the updated SMP. Alternatively, with less developed shorelines, Ecology suggests that local governments clearly distinguish between new and re-development standards to ensure adequate protection of existing ecological functions.

Streamlined permitting process at what cost to property rights?

It is anticipated that any identified streamlined process would not be the only option available to shoreline property owners. For certain uses, local governments do have an opportunity through updating of their SMP to pre-analyze impacts of certain minimal impact activities and provide a streamlined review process for those limited uses. In general, the scope of projects fitting within a streamlined permitting process must be more specific and potentially restrictive to ensure certainty and broad consistency with SMP goals and policies. For example, Pier/Dock proposals consistent with federally established guidelines could be streamlined through a local shoreline permit process for some shoreline areas where shoreline ecological functions can be shown to not be negatively impacted.

Restrictive Pier/Dock standards are thwarting of shoreline property owner's property rights.

Under Washington State law a private dock is not a shoreline property right associated with ownership of shorelines of the state. Construction of a dock or pier is a privilege that may be allowed under certain circumstances when consistent with Shoreline Management Act policy (RCW 90.58.020), the local government Shoreline Master Program and the Public Trust Doctrine.

The Public Trust Doctrine is a legal principle derived from English Common Law. The essence of the doctrine is that the waters of the state are a public resource owned by and available to all citizens equally for the purposes of navigation, conducting commerce, fishing, recreation and similar uses and that this trust is not invalidated by private ownership of the underlying land. The doctrine limits public and private use of tidelands and other shorelands to protect the public's right to use the waters of the state. (See State Supreme Court case *Caminiti v. Boyle*, 107 Wn. 2d 662, 732 P.2d 1989). The Public Trust Doctrine does not allow the public to trespass over privately owned uplands to access the tidelands. It does, however, protect public use of navigable water bodies below the ordinary high water mark. Protection of the trust is a duty of the State, and the Shoreline Management Act is one of the primary means by which that duty is carried out. The doctrine requires a careful evaluation of the public interest served by any action proposed. This requirement is fulfilled, in major part, by the planning and permitting requirements of the Shoreline Management Act and locally approved SMPs.

In any case, local governments do have the authority to regulate the size and require mitigation for potential impacts associated with docks to protect the public interest.

QUESTIONS DIRECTED TO ECOLOGY:

What baseline is used for each individual property based on the SMP Guideline no net loss of ecological function requirement?

The baseline for SMP updates is derived from the individual shoreline Inventory and Characterization prepared for each jurisdiction during the initial stages of their shoreline program update. This analysis is intended to inform the SMP planning process through description of both the presence and potential risks to existing shoreline ecological functions as described within WAC 173-26-201(3)(c) and (d). The Inventory/Characterization is not necessarily intended to evaluate individual properties. Rather, the analysis should describe what intensity of future shoreline uses and activities should be planned and anticipated for each segment of shoreline to ensure that the end result is no overall or net loss of ecological functions. In other words, it is understood (and should be evaluated) that some projects will have minimal negative impacts and some projects will improve ecologic conditions, as long as a jurisdiction can illustrate overall maintenance or improvement to ecological conditions, then they are meeting the no net loss requirement. The no net loss determination will need to be justified through a Cumulative Impacts Analysis, which essentially anticipates build-out of shoreline areas pursuant to the intensity of development allowed through the updated SMP. With this information, the impacts to existing shoreline ecological functions resulting from future development can be anticipated and where appropriate avoided. It is important to understand that this analysis will vary by jurisdiction and is fundamentally based upon the characteristics of each individual jurisdiction's shoreline.

Specific to implementation of an updated SMP, individual project review should consider no net loss as a governing principal (WAC 173-26-186), So, in summary, the baseline for each individual property is the ecological conditions that existed at the time a local SMP is comprehensively updated per SMP Guidelines requirements.

Will new piers or bulkheads replacing existing structures be evaluated against existing site conditions?

Yes, existing site conditions are one consideration, but also the specific planning policies and regulations contained in the SMP that apply to new piers and bulkhead replacements and the particular shoreline site will need to be considered as well. SMP updates are two-dimensional, requiring jurisdiction-wide planning for future uses as well as implementation over time of the SMP on an individual project-by-project basis. From a jurisdiction-wide planning perspective, the shoreline Inventory and Characterization documents shoreline modifications that may or may not impair existing shoreline ecological functions. Regardless of the degree of existing modifications, the bottom line is that updated SMP's need to adequately protect existing shoreline ecological functions. For example, within heavily developed shorelines, redevelopment strategies that account for improvements to existing site conditions might be an appropriate approach. Whereas, within unaltered (natural) shorelines, emphasis should be placed on protection measures for which existing structures should be phased out overtime as existing non-conforming uses.

Example Question: How is DOE suggesting local governments view a scenario where an applicant is pulling a full length bulkhead and replacing with transitional bulkheads at either end and a cove beach in the middle?

Ecology would be in support of partial restoration of shorelines as described within the scenario above, because it represents an improvement in existing conditions when compared to the existing full length bulkhead. For jurisdictions with highly developed shorelines, Ecology would suggest that local governments clearly describe redevelopment perimeters to encourage partial shoreline restoration.

What is DOE doing to encourage local governments to have a process acknowledging individual improvements associated with shoreline redevelopment?

As previously stated, redevelopment strategies should be jurisdiction specific with appropriate sideboards to ensure no net loss. Also, as part of the comprehensive SMP update, jurisdictions are creating individually customized shoreline restoration plans, where non-regulatory shoreline improvements would be prioritized and encouraged for each stretch of shoreline. In implementing a local restoration plan, all jurisdictions should be encouraged to maintain a list of *"individual improvements associated with shoreline redevelopment"*, so that in the future progress can be identified and evaluated.

Does DOE have a responsibility to protect local governments from vulnerability to thwarting private property rights of shoreline property owners?

Both local governments and the department have the responsibility to ensure private property rights in shoreline areas are not thwarted. There are multiple references both in the SMA itself (starting at RCW 90.58.020) and again in the SMP Guidelines (starting at WAC 173-26-176(3)(h) ensuring private property rights are protected.

Local governments are directed to consider private property rights in the preparation of all local SMPs as is Ecology and the Attorney General's Office (AGO) when approving the SMPs. Specifically, the AGO is directed by state law to advise state agencies and local governments in an orderly, consistent process to evaluate proposed regulatory or administrative actions to assure that these actions do not result in unconstitutional takings of private property. The AGO does in fact review SMP submittals to ensure private property rights are protected before the SMPs are approved by Ecology. Following is a link to this guidance posted on our shorelines management web site:

http://www.atg.wa.gov/uploadedFiles/Home/About_the_Office/Takings/2006%20AGO%20Takings%20Guidance(1).pdf

How is DOE addressing the apparent conflict with biological consulting firms assisting local governments in their SMP update in fairly evaluating and applying SMP standards in a reasonable and practical manner?

Biological consulting firms when involved in SMP updates are only one source of available information. Local governments are required to use all available technical and scientific information in the development of their SMP. This includes contacting all *"relevant state agencies, universities, affected Indian tribes, port districts and private parties for available information…. The requirement to use scientific and technical information in these guidelines does not limit a local jurisdiction's authority to solicit and incorporate information, experience, and anecdotal evidence provided by interested parties as part of the master program amendment process. Such information should be solicited through the public participation process…"* (WAC 173-26-201(2)(a).

It is not clear how any conflict exists if there is no limitation on sources of available information. Ultimately, local government elected officials must consider all of the information put before them, including opposing views and opinions, judge their credibility and decide what standards best achieve SMP guidelines requirements, given local circumstances.

Public Comments on Shoreline Stabilization. There has been significant public comment received addressing shoreline stabilization regulations and staff would encourage you to review comments attached to this packet as well as your November 24th packet. The following provides a summary of some of the key themes from the public comments relating to shoreline stabilization, together with a brief response from staff on the status of the regulations with respect to the issue noted:

Public Comment	Staff Response
Sweeping changes to local SMP's are **not necessary**; improvements to salmon habitat are already realized under state and federal regulatory review and additional local regulations are not needed.	While staff would concur that the state and federal agencies undertaking review of shoreline stabilization are working to ensure that projects do not have an adverse affect on Chinook salmon or other listed species under ESA, the **City must still ensure that the standards it adopts comply with State Guidelines established for updated SMPs**, which are referenced above. Current standards for shoreline stabilization do not address many of the newly required standards established in WAC 173-26-231(3) (e.g. requirements for geotechnical reports, standards addressing when measures are permitted, impact minimization provisions, and mitigation requirements, among some provision) and, as a result, modifications are needed.
More **flexible standards**, especially for redevelopment of piers and bulkheads, will provide greater opportunity for "no net loss', "net gain" and restoration".	Staff is attempting to include flexibility where possible.
Allow replacement of existing bulkheads or other structures with similar structures that will result in less impacts and "no net loss" compared to existing conditions. Each project where a hard shoreline stabilization structure is proposed to replace an existing one, the result is always an improvement over existing conditions and will meet the "no net loss" requirement. For instance, current designs of shoreline stabilization structures classified as hard reflect a softer shoreline than existing vertical bulkheads. Rock bulkheads are installed at a 3:1 batter to provide a softer design and very few vertical concrete bulkheads are installed along fresh water lake shorelines. Existing bulkheads replaced in the same location or slightly, often with beaches or pocket coves result in a "no net loss" over existing conditions. If existing conditions on an individual site are considered "impaired" a more environmentally friendly designed bulkhead, even if it consists of rock, would contribute to an overall improvement.	The proposed regulations may **allow replacement** of an existing hard shoreline stabilization structure, provided that there is a **demonstrated need** for the structure. This requirement is based on the provisions contained in WAC 173-26-231(3)(a)(iii)(E), which state: "An existing structure may be replaced with a similar structure if there is a demonstrated need to protect principle uses or structures from erosion caused by currents, tidal action, or waves." If replacement is authorized, then the impact minimization measures noted (e.g. battering back the bulkhead, etc.) would be evaluated as part of the proposal. Staff concurs that these types of impact minimization measures would result in improvements to existing conditions.

Concern about requirements for **geotechnical reports**. A geotechnical report is a costly expense for a property owner. Question why Ecology has not been requiring this since the Guidelines were adopted in 2003.	Draft regulations have responded to this comment where possible by **eliminating the requirements for geotechnical reports for replacement stabilization structures** (which would instead be required to submit a written justification establishing the need for the stabilization structure), stabilization structures on properties where the residence is located within 10 feet of the OHWM, or where a hard stabilization structure is proposed to be replaced with a soft stabilization measure. However, it is important to note that the City is still required under the State Guidelines to **require a geotechnical report in most cases where a new or enlarged shoreline stabilization structure is proposed** under the provisions of WAC 173-26-231(3)(a)(iii)(B), which require submittal of "conclusive evidence, documented by a **geotechnical analysis**, that the [existing primary structure] is in danger from shoreline erosion caused by tidal action, currents or waves." Note that the Guidelines are intended to be used for development of local master programs, rather than for administration of any permits that Ecology reviews and, as a result, this may be a new requirement as local SMPs are adopted under the State Guideline provisions.
Erosion from tidal action, current or waves is typically evident and does not require a geotechnical report to verify. It is recommended that local governments have staff trained to address such issues in order to save property owner expense. Should the property owner disagree with the opinion of the staff they should hire a geotechnical engineer to prepare a geotechnical report. On the other hand, should DOE disagree with city staff, they should be required to hire a geotechnical engineer at department expense to prepare a geotechnical report. This procedure engages the city as an active part of the process and places the onus on the party who disagrees rather than solely on the property owner.	Please see notes above.
Requirements for **geotechnical analysis places a professional geotechnical engineer, local government, and the state in a legally vulnerable position** because it requires someone to estimate erosion rates based on unsubstantiated data. A single or unusual storm event could negate the professional opinion and result in damage or more extensive repairs than what would have been required if it was originally approved. Once again, the protection is	Please see notes above. Further, please note that the standards contained in WAC 173-26-231(3)(a)(iii) establish when structural shoreline stabilization measures may be conditionally permitted (to protect existing primary structures, in support of new non-water development (including single family residences), in support of water-dependent development, and to protect projects for the restoration of ecological

directed toward a primary structure and does not consider the protection of the property itself which the WAC does appear to allow.	functions). The provisions in Section 83.300.2 respond to these provisions.
Questioned the accuracy of **scientific study**.	See discussion section under Public Comments in Section VI below. Local governments are **required to use all available technical and scientific information in the development of their SMP** and, as a result, the City has consulted scientific literature that addresses these topics, including research from academic institutions and federal and state agencies. Staff is also interested in incorporating information, experience, and anecdotal evidence provided by interested parties as part of this process. Also of note, DOE has noted that in preparing shoreline regulations, local governments are also required to implement a **precautionary principle**. At WAC 173-26-201(3)(g) the guidelines state "As a general rule, the less known about existing resources, the more protective shoreline master program provisions should be to avoid unanticipated impacts to shoreline resources". Under these provisions, DOE has indicated that if there is a question about the extent or condition of an existing ecological resource, then the master program provisions shall be sufficient to reasonably assure that the resource is protected in a manner consistent with the policies of these guidelines.
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.	Staff concurs that softer approaches **may not be feasible to undertake on all properties**. Responding to the requirements established in WAC 173-26-231(3)(a)(iii)(B), which requires that the applicant demonstrate that nonstructural measures are not feasible or not sufficient, the proposed standards contain provisions requiring that the feasibility of using soft shoreline stabilization measures be pursued. If these provisions are not feasible, then hard stabilization structures would be permitted with design requirements to minimize impacts (e.g. limiting the size, shifting or sloping the structure landward, etc.).
Concerned that removal of existing bulkheads may **adversely impact neighboring properties**.	The proposed regulations **allow bulkheads to tie into exising bulkheads on other side to minimize impacts** (see 83.300.7).
Concerned that removal of existing bulkheads will **affect lot area.**	The proposed regulations permit the applicant to identify the previous location of ordinary high water mark and **use the pre-restoration location for purposes of calculating lot**

	coverage and setbacks (see 83.300.5.l).
Should include provisions for property owners to protect their properties from storm damage and/or erosion, as ruled by federal courts. **Property owners should be allowed to reduce the wave action in order to protect their property.** Draft regulations would be expensive, an intrusion on property rights, more than what is necessary to comply with the law and will not achieve the goal of "no net loss."	The proposed regulations **would permit property owners to protect primary structures with a showing of need**, either through a geotechnical report (for new or enlarged) or narrative (for replacement). In preparing the proposed regulations, staff has attempted to balance a number of potentially competing objectives, including protecting property while protecting and ecological function and complying with new state guidelines.
Shoreline vegetation standards from the perspective of piers and bulkheads are already a major part of project approval. If planting plan is required for a project, **plan approved by state and federal agencies should be accepted by local government.**	This c**oncept has been included in the provisions**, under 83.300.5.d.2).
Concern that **spawning gravels placed at site were washed away in storm.**	Placement of gravel/cobble beach fill material waterward of the ordinary high water mark is a mitigation measure that is often incorporated by federal agencies into bulkhead repair or replacement projects and is included as part of the draft regulations as mitigation for new and enlarged shoreline stabilization structures. This type of measure is **not a form of soft shoreline stabilization**, which would include other structural components (e.g. logs, boulders, etc.) to stabilize the shoreline against wave action. Staff has proposed language to be included in the SMP addressing **standards for material placement and sizing** to address this type of circumstance (see 83.300.5.d.2)).

Public Comments on Piers. There have been a number of public comments received addressing piers and staff would encourage you to review the comments included in this packet as well as those included your November 24th packet. The following contains a **summary of some of the key themes** from the public comments relating to piers, together with a brief response from staff on the proposed conceptual approaches.

Public Comment	Staff Response
Sweeping changes to local SMP's are **not necessary**; improvements to salmon habitat are already realized under state and federal regulatory review and additional local regulations are not needed	Staff anticipates some changes may be needed. For instance, the existing SMP does not contain dimensional standards for piers, yet DOE has advised cities that dimensional standards will be required. (From the Fall 2008 Guidance Memo: "Specific to Piers/Docks, jurisdictions will need to refer to specific development standards as a basis for

	evaluating the build-out potential allowed through future implementation of the updated SMP. This analysis of cumulative impacts must consider the potential risks to shoreline ecological functions if the shoreline were to be fully developed to the maximum intensity allowed through the updated SMP. Therefore, specific to new Piers/Docks, dimensional standards must be proposed as part of the updated SMP".
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.**	For new piers, the proposed approach is to use the standards of RGP-3 in order to minimize impacts. For replacement piers, the proposed approach would provide more flexibility for property owners to propose an alternative that, if approved by state and federal agencies which evaluate issues for anticipated impacts to listed species such as Chinook salmon, could be approved by the City without a variance application. Staff recognizes this need for flexibility in order to maximize opportunities for piers to be replaced, which will be built with lesser impacts than the current structures.
More **flexible standards**, especially for redevelopment of piers and bulkheads, will provide greater opportunity for "no net loss', "net gain" and restoration".	The proposed approach for replacement piers does offer an option besides use of the RGP-3 standard.
Questioned the accuracy of best available **science**.	See discussion section under Public Comments in Section VI below.
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	Staff recognizes this inconsistency and will ensure that new standards are consistent with state and federal requirements for pier height above the water.
Concerned that **minimum width for docks** as required by RGP-3 is **too narrow**	Pier width is an important component to overwater coverage impacts and, as such, should be limited where possible.
Advocates that the City **not adopt the Regional General Permit 3** guidelines into our regulations for piers and docks. Advocates for a **separate process for redevelopment of existing structures** to be adopted which allows property owners making improvements without complying with the RGP-3 guidelines. Include a process to evaluate the properties that have existing structures being replaced or modified differently than those who have undeveloped shorelines. Encouraging property owners to decrease the size or modify the configuration of their current structure by proposing a more environmentally pier or bulkhead, even if it does not align with newly proposed structures, will benefit everyone and the environment. Having a single standard	The concepts proposed do envision a separate review process for redevelopment of existing structures.

and process for everyone will deter many property owners from even considering changes if there are no incentives to respect and recognize their good faith efforts.	
The city should **inventory the existing overwater coverage of all private and commercial piers to adequately assess existing conditions**.	The City has completed an overall inventory (see Table 8 in the Final Shoreline Inventory), and have looked back at past permitting history to see what has been approved since the RGP-3 was adopted.
The replacement of existing piers with the same or smaller sized piers, grated surfaces, elevated higher above the water surface, using glu-lam beams for longer spans between piles, smaller diameter and less piles, along with approved wood preservative treatments should all be considered when evaluating a redevelopment project.	These provisions would be included in the provisions for replacement piers.
Concerned about limitations use of **treated wood**, which is required by building codes.	Draft concepts allow for approved wood treated materials.
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.**	Staff concurs and has consulted with Parks staff about concepts being considered.

Response to Other Specific Issues. Staff would like to provide a response or clarification to several questions that are included in the comments that we have received.

1. **Presence of Salmonids in Lake Washington and along Kirkland shorelines.** There has been concern expressed that the **presence of salmon, which has been used as a basis for restoring the shoreline, has not been thoroughly established along Kirkland's shoreline**. Below is information concerning the status of Chinook and other salmon in Lake Washington, including along the shores of Kirkland.

   As stated in the City shoreline's inventory dated December 1, 2006, adult Chinook salmon migrate from Puget Sound through the Chittenden Locks and into Lake Washington between July and September, continuing on to various tributary streams where they spawn in October and November. Chinook salmon have been specifically documented in Juanita Creek and in Juanita Bay; sockeye salmon are documented in Juanita and Forbes Creeks; coho salmon are documented in Juanita, Forbes and Yarrow Creeks; and kokanee salmon are documented in Juanita Creek. Chinook fry emerge from their redds between January and February, and either rear in the natal stream or emigrate to Lake Washington for a rearing period extending from three to five months.

   Other anadromous salmonids spawning and/or rearing in the Lake Washington watershed include sockeye salmon, coho salmon, steelhead trout, and possibly bull trout. Sockeye salmon spawning has also been documented in several locations along Kirkland's shoreline (note: these exact locations may no longer be mapped correctly, but suitable sockeye salmon spawning habitat is available along Kirkland's shorelines – this species' use of Kirkland's shoreline is very secondary in our development of

regulations). Information sources for these citations include King County Department of Natural Resources and Washington Department of Fish and Wildlife.

The following are links to a few of the available **maps**:

- http://www.govlink.org/watersheds/8/reports/fish-maps/chinook/pdf/Chinook.pdf (note: the map for chinook salmon shows salmon throughout Lake Washington)
- http://www.govlink.org/watersheds/8/reports/fish-maps/coho/pdf/Coho.pdf
- http://www.govlink.org/watersheds/8/reports/fish-maps/sockeye/pdf/Sockeye.pdf
- http://www.govlink.org/watersheds/8/planning/chinook-plan/volumeI/06_Chapter_4_Conservation_Strategy.pdf (see last page of document, illustrates chinook migratory/rearing corridors - yellow highlight)
- WDFW's SalmonScape website also shows documented fish use of Kirkland streams: http://wdfw.wa.gov/mapping/salmonscape/

Roger Tabor of the U.S. Fish and Wildlife Service provided the following information when asked recently (November 18, 2008) about juvenile chinook salmon usage of Kirkland shorelines:

> "I looked back at some old beach seining data (unpublished) from WDFW and they had a site at **Juanita Beach** and they did collect some juvenile Chinook salmon at this site and probably every site they sampled. This data is from Kurt Fresh's project who now works for NOAA Fisheries.
>
> Also, I doubt if there is any shoreline area in Lake Washington or in Lake Sammamish that Chinook smolts don't use; albeit, the abundance between sites may be extremely different. I based this on a few things.
>
> 1) About 2 million chinook are released from Issaquah Hatchery.
> 2) These hatchery fish have been observed in the Cedar River and other locations in the south end of Lake Washington.
> 3) Our tracking results indicate they are primarily shoreline oriented.
> 4) Tracking and visual observations indicate they are schooled and most are moving in one direction but often schools are moving in the opposite direction.
>
> It seems logical that **Chinook are all over the lake**. The only way chinook could entirely miss Kirkland is if all the hatchery and naturally-produced fish from the eastside decided to only use the west shoreline of Lake Washington, which is highly unlikely."

Kurt Fresh of the National Marine Fisheries Service (formerly with Washington Department of Fish and Wildlife) provided the following information when asked recently (November 20, 2008) about juvenile chinook salmon usage of Kirkland shorelines:

> "…As Roger, suggests, until mid to late May, the **ONLY place we have ever found juvenile Chinook salmon is along the shorelines**."

Mr. Fresh noted that beach seine surveys of three Kirkland waterfronts (Waverly Park, Houghton Park, and Juanita Bay Park) all netted juvenile Chinook salmon.

2. **Scientific Studies.** There has also been concern expressed that the science that staff is consulting is inconclusive and self-contradicting and it has been recommended that in light of this lack of information, jurisdictions on Lake Washington as well as Department of Ecology should conduct comprehensive studies to answer these questions before completing the SMP update processes.

   Under WAC 173-26-201(2)(a), local governments are directed to **identify, compile, and base master program provisions on the most current, accurate, and complete scientific and technical information available** that is applicable to the issues of concern. The **City has and continues to compile information as it becomes available,** including scientific literature or summaries of scientific literature, including research from academic institutions, federal and state agencies, and other material from reliable sources of science. Links to a number of relevant scientific studies can be found at http://www.ci.kirkland.wa.us/depart/Planning/Code_Updates/Shoreline_Master_Program_Update.htm under "Scientific Studies."

   It is important to note that **scientific information continues to be developed**, specifically addressing piers and bulkheads. For instance, the letters from Futurewise and from Mr. Sandaas both make mention of a literature review of different scientific studies completed as part of the City of Bellevue's Critical Area Ordinance update process, which addressed bulkheads and piers along Lake Washington. This report, entitled *Final Report: A summary of the Effects of Bulkheads, Piers, and Other Artificial Structures and Shorezone Development on ESA-listed Salmonids in Lakes*, is now a nine-year old document.

   The Washington Department of Fish and Wildlife, National Marine Fisheries Service, and the U.S. Fish and Wildlife Service have all conducted studies since that time, which continue to support the conclusions drawn in 2000.

   It is recognized that scientists may not have had a statistically valid answer to every possible question about piers, bulkheads and salmon in 2000. However, the **studies referenced are the best information available and are the culmination of decades of research** into salmon and other fish ecology, behavior, predator-prey relationships, habitat use, diet, physiology, etc. Staff believes these are important and relevant tools to evaluate potential impacts of shoreline developments and believes that this is necessary to comply with requirements established in the State Guidelines.

   Also of note, Ecology has noted that in preparing shoreline regulations, local governments are also required to implement a **precautionary principle**. At WAC 173-26-201(3)(g) the guidelines state "As a general rule, the less known about existing resources, the more protective shoreline master program provisions should be to avoid unanticipated impacts to shoreline resources". Under these provisions, Ecology has indicated that if there is a question about the extent or condition of an existing ecological resource, then the master program provisions shall be sufficient to

reasonably assure that the resource is protected in a manner consistent with the policies of these guidelines.

3. **Shoreline enhancement.** The Planning Commission has heard public comments from one shoreline property owner who recently installed gravel in front of a bulkhead as part of a repair activity, only to have the material wash away in the first wind storm.

   While staff understands the concern that this would cause, the small gravel required by state and/or federal agencies as an impact minimization measure for bulkhead repair projects may not always be designed to remain in place in the long term. Much of their long-term stability depends upon the gravel size composition, distribution and nearshore site-specific conditions. The appropriate size of material that could be placed in front of a vertical bulkhead and expect to remain stable would vary depending on lakebed slope, water depth at face of the bulkhead, orientation of the bulkhead, and other factors. Lakeshores are dynamic systems, and substrate material routinely moves laterally up and downlake, as well as from shallower to deeper waters, and back, generally on a seasonal basis.

   The information presented in this letter is helpful to staff's development of shoreline stabilization regulations; **draft regulations now include provisions noting that materials placed in the lake as part of impact minimization or mitigation be sized appropriately in order to remain stable and accommodate alteration from wind and boat-driven waves.**

4. **List of key areas where the existing SMP does not meet current State Guidelines**. Please refer to this handout which detailed some of the key new requirements found in the Guidelines.

5. **Native plantings and deferring review to state and federal agencies**. Staff is proposing to incorporate vegetation standards as one of several mitigation measures for new bulkheads. The standards anticipated would be similar to those required under State and federal permitting and provisions could be included to allow for acceptance of alternate plans with equivalent function that have been approved by federal or state permitting agencies.

6. **No net loss**. Under the State Guidelines, the City is obligated to anticipate future shoreline uses including any associated impacts, which **may require more stringent development standards, jurisdiction-wide restoration provisions, or a combination of these approaches** to maintain no net loss. Restoration of impaired ecological functions will likely need to be included in the evaluation of no net loss to help offset impacts introduced from new planned shoreline development allowed in the updated SMP.

7. **Federal and state permitting**. The overview of state and federal permitting has been provided in the Planning Commission October 9, 2008 memo and in this memo to the Houghton Community Council in order to provide additional background information and context for the public and policymakers. It is important, however, to distinguish that the **federal permitting standards for review are different than those contemplated in the State Guidelines and do not eliminate the need for the City's SMP to contain specific provisions** addressing shoreline uses and shoreline

modifications. The State Guidelines are focused on evaluating, minimizing, and ensuring no net loss of shoreline ecological functions, which is a different standard than used by the federal agencies as part of ESA consultation. Further, the City's SMP needs to contain specific standards to ensure no net loss and cannot defer to other review processes and standards implemented by other regulatory agencies.

DOE has advised cities that without specific standards, there would be no certainty in local projections of future (planned) shoreline uses and their impacts and hence no justification that the no net loss standard will be achieved. Thus, while the City is interested in better coordinating with other permitting processes and ensuring better consistency in standards, the City must still include regulations in the new SMP that adequately respond to the no net loss provisions, any additional specific provisions provided in the WAC Guidelines, as well as special local issues of importance to the Kirkland community.

8. **Replacement of hard structural shoreline stabilization structures.** Replacement of hard structural shoreline stabilization structures located directly behind existing bulkheads, as described in a comment letter, do not avoid or minimize the long-term impacts associated with hard structural shoreline features and are proposed by staff to be handled as replacement structures. The approach described in a comment letter would differ from setting back a bulkhead from the ordinary high water mark, coupled with beach enhancement, which is an approach that can be used to minimize impacts. Besides avoiding some state and federal permitting, the primary benefit of replacing an existing bulkhead behind the existing bulkhead and then removing that existing bulkhead is to minimize short-term construction-related impacts.

9. **Management of City property**. The City is using the new fish friendly design standards as part of its shoreline park maintenance and park development activities. These include, but are not limited to:

- **Acquisition and protection of high quality resource areas.** The City has been acquiring property in natural resource areas such as Yarrow Bay wetlands in order to protect these lands and the important shoreline ecological functions they provide.
- **Restoration of important habitat areas.** As part of the implementation of the Juanita Beach Master Plan, the City is completing significant stream improvements to Juanita Creek.
- **Reduction in shoreline armoring.** As part of planned renovation of waterfront parks, the City will be pursuing opportunities to conduct shoreline restoration. For instance, as part of the Waverly Park renovation project funded under CIP#PK 0087 000, the City is planning shoreline restoration work.
- **Enhancement of shoreline vegetation**. 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 shoreline parks, which are currently provided with irrigation water from the City's potable water system. In conjunction with this project, the Parks Department plans to install vegetation along the shoreline edge.

- **Reduction in overwater coverage**. The City is replacing portions of existing dock decking material with new fish friendly surfacing materials as part of CIP#PK 0125 000. This work will occur within Marina Park, Marsh Park and David E. Brink Parks. In addition, the City has obtained a Hydraulic Project Approval from the Washington Department of Fish and Wildlife to cover maintenance activities on City piers 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.
- **Use of Integrated Pest Management (IPM) principles**. 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 and reduces or eliminates use of chemical methods that may impact water quality.
- **Control of invasive vegetation.** 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.
- **Application of regulations to public properties.** Please note that all new SMP standards will apply equally to the City, as an owner of property along the shoreline. City-owned properties will be subject to the same standards for shoreline stabilization and piers and docks as private property owners.

10. **Restoration opportunities.** As part of the Restoration Plan that will be prepared as a component of the SMP, the City will be researching opportunities and priorities for restoration planning along Kirkland's shoreline. The Restoration Plan will include mechanisms and strategies for achieving restoration goals that the City establishes. This is different from the mitigation standards that may be necessary within the regulations in order to meet no net loss.

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(b) **Piers and docks.** New piers and docks shall be allowed only for water-dependent uses or public access. As used here, a associated with a single-family residence is a water-dependent use provided that it is designed and intended as a facility for watercraft and otherwise complies with the provisions of this section. Pier and dock construction shall be restricted to the mir necessary to meet the needs of the proposed water-dependent use. Water-related and water-enjoyment uses may be allowe mixed-use development on over-water structures where they are clearly auxiliary to and in support of water-dependent uses minimum size requirement needed to meet the water-dependent use is not violated.

New pier or dock construction, excluding docks accessory to single-family residences, should be permitted only when the demonstrated that a specific need exists to support the intended water-dependent uses. If a port district or other public or co involving water-dependent uses has performed a needs analysis or comprehensive master plan projecting the future needs f space, and if the plan or analysis is approved by the local government and consistent with these guidelines, it may serve as justification for pier design, size, and construction. The intent of this provision is to allow ports and other entities the flexibility provide for existing and future water-dependent uses.

Where new piers or docks are allowed, master programs should contain provisions to require new residential developmer dwellings to provide joint use or community dock facilities, when feasible, rather than allow individual docks for each residen

Piers and docks, including those accessory to single-family residences, shall be designed and constructed to avoid or, if t possible, to minimize and mitigate the impacts to ecological functions, critical areas resources such as eelgrass beds and fis processes such as currents and littoral drift. See WAC 173-26-221 (2)(c)(iii) and (iv). Master programs should require that st made of materials that have been approved by applicable state agencies.

(c) **Boating facilities.** For the purposes of this chapter, "boating facilities" excludes docks serving four or fewer single-family
Shoreline master programs shall contain provisions to assure no net loss of ecological functions as a result of development
facilities while providing the boating public recreational opportunities on waters of the state.

Where applicable, shoreline master programs should, at a minimum, contain:

(i) Provisions to ensure that boating facilities are located only at sites with suitable environmental conditions, shoreline co
access, and neighboring uses.

(ii) Provisions that assure that facilities meet health, safety, and welfare requirements. Master programs may reference ot
to accomplish this requirement.

(iii) Regulations to avoid, or if that is not possible, to mitigate aesthetic impacts.

(iv) Provisions for public access in new marinas, particularly where water-enjoyment uses are associated with the marina
with WAC 173-26-221(4).

(v) Regulations to limit the impacts to shoreline resources from boaters living in their vessels (live-aboard).

(vi) Regulations that assure that the development of boating facilities, and associated and accessory uses, will not result
shoreline ecological functions or other significant adverse impacts.

(vii) Regulations to protect the rights of navigation.

(viii) Regulations restricting vessels from extended mooring on waters of the state except as allowed by applicable state r
unless a lease or permission is obtained from the state and impacts to navigation and public access are mitigated.

Attachment 10

	Shoreline Permit Case Number								
	SHR04-00002	SHR04-00004	SHR05-00002	SHR05-00004	SHR06-00002	SHR06-00003	SHR06-00004	SHR07-00003	SHR07-00006
New Dock or Dock Extension?	New	New (Replacement)	New	Extension	Extension	New (Replacement)	New (Replacement)	New (Replacement)	New
Joint Use Dock?	No	No	No	No	No	No	No	Yes	No
Length of dock	110'	84'	130'	Existing- 89'4" Extension- 35' Total- 124'4"	Existing- 86'8" Extensions- 45' Total-131'8"	150'	142'	85' 10.5"	130'
Width of dock	1st 50'- 4' last 60'- 5'	6'	4' Ell- 6'	Existing- 6' 1.5" Extension- 6'	Existing- 6' 1.5" Ell- 8' Extensions- 3'10.75"	6' 3" 1st 30'- 4' 0"	1st 70'- 4' last 72'- 5' finger- 6'	1st 30'- 3' 10.5" middle 48'- 4' 10.5" ell- 7' 10.5"	3' 10.5" ell- 5' 10.5"
Surface coverage of dock (ft²)	~500 ft²	Existing- 150 ft² Proposed- 517 ft²	~645 ft²	Existing- 748 ft² Extension- 210 ft² Total- 924'	Existing- 772 ft² Extension- 360 ft² Total- 1024 ft²	870 ft²	Existing- 565 ft² Proposed- 772 ft²	Existing- 513 ft² Proposed- 539 ft²	622 ft²
Grating?	Yes	Yes	Yes	Extensions and mitigat	Yes	Yes	Yes	Yes	Yes
Type of grating	1st 50'- steel-grated last 60"- Trex decking	1st 42'- 4'10" ipe wood grating last 42' and ell- 3' ipe wood grating	thru-flow plastic grating	Existing- non-grated wood Extensions and mitigation- molded plastic grating	Existing- non-grated wood Extensions and mitigation- molded plastic grating	1st 30'- fully-grated aluminum gangway middle 65'- thru-flow grated decking last 55'- synthetic decking	molded-plastic grating	molded-plastic grating	thru-flow plastic grating
Height of dock above water level	2' to top	2' to top 2'- 3'2" to top for first 42' 1' to bottom 1'- 2'2" to bottom for first 42'	±2' to top 2'-3' to top for first 30' 1' to bottom 1'-2' to bottom for first 30'	Existing- 2' 6" to top 1' 6" to bottom Extension- 2' 2" to top 1' 2" to bottom	2' to top 1' to bottom	1'10" to top	2' 2" to top 1' 2" to bottom	Existing- 1'10" to top 1'1" to bottom Proposed- 2'2" to top 1'2" to bottom	2' 3" to top 1' 3" to bottom
Spacing of pilings	15'	20'	20'	11'-12'	Existing- ~10'-12' Extensions- 21'6"	18'	~20'-25'	Existing- ~12' Proposed- 22' 6"	21'
Distance of piling closest to shoreline from the shore	20'	18'	30'	11'	~9'-11'	30'	~20'-25'	Existing- ~14' Proposed- 25'	on shore
Depth of water at end of dock	11'	8' 2"	8'	Existing- 5' Extension- 6' 5"	Existing- 6' Extensions- ±8'	15'	7' 6"	8'	9'
Elevated nearshore walkway?	No	No	No	No	No	No	Yes	No	No
# of lifts on dock	1 boatlift 2 jetski lifts	1 Proposed	0	2 (to be removed)	1 Existing 1 Proposed		1 boatlift 0 (to be relocated)	1 jet-ski lift 1 boatlift	1
Ell configuration?	No	Yes 8' x 6'	Yes 20' x 6'	corners to be removed and proposal to extend from existing 16'3" x 8'4" ell	proposed finger piers extend from existing 8' x 24' ell	No	No	Yes Existing- 17' x 13' Proposed- 24' x 7'10.5"	Yes 5'10.5" x 20'
Size of boats to be moored at dock	60'	24'	24'	34'	45'	85' & smaller boat	60'	40'	22-30' & 40'
Shoreline plantings proposed?	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
Placement of gravel substrate proposed?	No	Yes- 45 yds³	No	Yes- 40 yds³	Yes- 50 yds³	Yes- 15 yds³	No	Yes- 30 yds³	No
(Dock Extensions)- Existing portions of docks removed as mitigation?	N/A	removal of existing 30'10" x 4'10" (150 ft²) pier, 8 timber piles, 7 timber mooring piles	N/A	removal of two jetski lifts; removal of ell corners (65 ft²)	removal of existing 6' x 18' watercraft pier and 5 timber pilings	removal of existing 94'6" x 7'9" pier, 8 wood piles, and 10 soldier piles	removal of existing 6' x 81'6" (565 ft²) pier, 250 ft² moorage canopy, and 17 timber piles	removal of existing 6' x 81'6" (565 ft²) pier, 14 timber support piles	N/A

(Dock Extensions)- existing portions of docks grated as mitigation?	N/A	N/A	N/A	4' wide center grading proposed for existing pier; existing crossover to be replaced with fully-grated crossover	4' wide center grating of first 30' from shore on existing portion	N/A	N/A	N/A	N/A
Floats?	No	No	No	No	No	No	No	No	No
Other proposed mitigations?	removal of 8 existing pilings	No	No	No	No	demolition of carports, shed, and boathouse located along shoreline	No	No	No

5.2 EFFECTS OF SHORELINE MODIFICATIONS ON AQUATIC ORGANISMS AND THEIR HABITATS

Shoreline modifications and nearshore structures around Lake Washington have dramatically altered the lake's aquatic ecosystem. Although some changes in the Lake environment are not completely understood, the effects of physical modifications to shoreline habitats on some aquatic species, particularly chinook salmon, have been very well studied. Because of their sensitivity to changes in the aquatic ecosystem, anadromous salmonids are commonly used as a biological indicator species for the aquatic health of Lake Washington. There are many indigenous aquatic species inhabiting Lake Washington, but salmonids are one of the most sensitive. Due to their "threatened" status under the ESA, funding and other resources have been made available for the study of chinook salmon utilizing Lake Washington, which are an important part of the Puget Sound Chinook Salmon Evolutionary Significant Unit (ESU). The life history pattern and habitat requirements of the chinook salmon reflects the needs of other salmonid and non-salmonid aquatic species indigenous to Lake Washington, and information concerning the chinook salmon serves as a good proxy for other species in the Lake. Similarly, habitat restoration efforts designed to benefit chinook or other salmonids will also be beneficial for other native species inhabiting Lake Washington.

An important part of the City, the Kirkland waterfront has been extensively modified with bulkheads, piers, and other overwater structures (Toft 2001). Common modifications to nearshore aquatic habitats around much of Lake Washington include 1) the construction of bulkheads, which result in the structural simplification of shoreline habitats, and 2) the construction of piers, which block sunlight and create large areas of overhead cover within the littoral zone. 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 (Kahler et al. 2000; Kerwin 2001; Tabor et al. 2006). Adult salmonids tend to utilize deepwater habitats in Lake Washington and structural changes to nearshore habitats typically have a lesser affect on adults than they do on juvenile salmonids. Lake Washington serves as an important rearing area and migration corridor for juvenile salmonids, however, and due to their affinity to nearshore, shallow-water habitats, juvenile salmonids are greatly affected by physical changes at the shoreline.

5.2.1 Anadromous Fish in the Lake Washington Watershed

Adult chinook salmon migrate from Puget Sound through the Chittenden Locks and into Lake Washington between July and September, continuing on to various tributary streams where they spawn in October and November. Although most chinook salmon production in the Lake Washington watershed occurs in the Cedar River, the North Lake Washington tributary streams (feeding into the Sammamish River), or at the Issaquah Fish Hatchery, chinook salmon (as well as coho and sockeye) also use many other, smaller Lake Washington tributary streams. A few of the tributary streams in or near the Kirkland area that are used by chinook salmon or other anadromous salmonids include Juanita Creek, Yarrow Creek, Forbes Creek, and Kelsey Creek. Chinook fry emerge from their redds between January and March, and either rear in their natal stream or emigrate to Lake Washington for a rearing period extending from three to five months. Emigrating through the Chittenden Locks and into Puget Sound between May and August,

juvenile chinook salmon leave the Lake Washington system during their first year (Kerwin 2001; Tabor and Piaskowski 2002). Other anadromous salmonids spawning and/or rearing in the Lake Washington watershed include sockeye salmon, coho salmon, steelhead trout, and possibly bull trout.

After emerging from the gravel, chinook fry from Lake Washington tributaries either emigrate directly to the Lake, or rear to the fingerling stage in their natal stream before entering the Lake (Seiler et al. 2005). This process occurs between February and June. After they enter Lake Washington, juvenile chinook often congregate near the mouths of tributary streams, and prefer low gradient, shallow-water habitats with small substrates (Tabor and Piaskowski 2002; Tabor et al. 2004b; Tabor et al. 2006). Chinook fry entering Lake Washington early in the emigration period (February and March) are still relatively small, typically do not disperse far from the mouth of their natal stream, and are largely dependant upon shallow-water habitats in the littoral zone with overhanging vegetation and complex cover (Tabor and Piaskowski 2002; Tabor et al 2004b). The mouths of creeks entering Lake Washington (whether they support salmon spawning or not), as well as undeveloped lakeshore riparian habitats associated with these confluence areas, attract juvenile chinook salmon and provide important rearing habitat during this critical life stage (Tabor et al. 2004b; Tabor et al. 2006). Later in the emigration period (May and June), most chinook juveniles have grown to fingerling size and begin utilizing limnetic areas of the Lake more heavily. As the juvenile chinook salmon mature to fingerlings and move offshore, their distribution extends throughout Lake Washington. Although early emigrating chinook fry from the Cedar River and North Lake Washington tributaries (primary production areas) initially do not disperse to shoreline areas in Kirkland, any salmon fry from smaller tributaries such as Juanita, Forbes, or Yarrow Creeks would depend on nearshore habitats of the Kirkland waterfront. Later in the spring (May and June), however, juvenile chinook are known to be well distributed throughout both limnetic and littoral areas of Lake Washington, and certainly utilize shoreline habitats in Kirkland.

5.2.2 The Effects of Overwater Shading and Shoreline Armoring

Piers and other overwater structures shade the lake bottom and inhibit the growth of aquatic vegetation. Overwater structures affect the size, density, and species composition of aquatic macrophytes living directly beneath them (Fresh and Lucchetti 2000). The magnitude of this effect on aquatic macrophytes varies with the size (square footage) of the structure and the amount of sunlight it blocks. Changes in the physical structure of the aquatic plant community affect juvenile salmonids, as well as other indigenous fishes that use this vegetation in the nearshore environment. Spatial heterogeneity in aquatic vegetation increases the amount of edge habitat, improving the quality of foraging habitat available to ambush predators like the bass (Bryan and Scarnecchia 1992; Weaver et al 1997; Kahler et al. 2000). The combined effect of an overwater structure and a dramatic change in aquatic vegetation results in a behavior modification in juvenile salmonids moving through both littoral and limnetic habitats. Juvenile salmonids migrating parallel to the shoreline will often change course to circumvent large piers or other overwater structures rather than swimming beneath them (Tabor and Piaskowski 2002; Tabor et al. 2004b; Tabor et al. 2006). 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 will benefit salmon fry rearing in the littoral zone as well as older salmon fingerlings utilizing the limnetic zone. 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 (Gayaldo and Nelson 2006).

Bulkheads or other types of shoreline armoring affect juvenile salmonids by eliminating shallow-water refuge habitat, or indirectly, by the elimination of shoreline vegetation and in-water woody debris that generally accompanies bulkhead construction. Placing bulkheads waterward of OHWM creates an abrupt, deep-water drop-off at the shoreline while eliminating shallow water habitat in the nearshore. Lange (1999) found that bank stabilization (i.e., various forms of erosion control structures that we refer to as "bulkheads") was negatively correlated to fish abundance and species richness at all spatial scales investigated. Juvenile chinook salmon and other small fishes rely on shallow-water habitats in the littoral zone for foraging, refuge, and migration (Collins et al. 1995; Tabor and Piaskowski 2002). Shoreline armoring and bulkheads are also known to result in local reductions to the species diversity and abundance of both the fish community as well as the macroinvertebrate population inhabiting the littoral zone (Schmude et al. 1998; Lange 1999; Jennings et al. 1999).

5.2.3 Predator-prey Interactions in Lake Washington

Indigenous Lake Washington fish species that prey on juvenile salmonids include cutthroat trout, rainbow trout, coho salmon, northern pikeminnow, five species of sculpin, and lamprey. Non-native predators currently present in the Lake include smallmouth bass, largemouth bass, and yellow perch. Native cutthroat trout populations (adfluvial and anadromous) are strong in Lake Washington, and this species is currently considered the primary predator of juvenile chinook, sockeye, and coho salmon. Smaller-sized cutthroat trout prey on juvenile salmonid fry inhabiting the littoral zone early in the spring, while larger individuals feed on salmonid fingerlings migrating and rearing in the limnetic zone later in the season (Nowak et al. 2004; Tabor et al 2004a). A small proportion of northern pikeminnow, yellow perch, and smallmouth bass reside in nearshore regions during winter, but the majority moves offshore in the spring as temperatures in nearshore areas warm (Bartoo 1972; Olney 1975; Coutant 1975). The distributions of these fishes overlap primarily with the peak out-migration of chinook through the littoral zone, whereas the overlap of cutthroat and chinook distributions is continuous. Sculpins are present in the littoral zone year-round and are also known to eat juvenile chinook salmon (Tabor et al. 1998; Tabor et al 2004a). In mid-summer, temperatures in the littoral zone become undesirable for juvenile chinook and coho salmon, and the majority leave the lake or seek cooler temperatures away from the littoral zone, thus segregating themselves from littoral predators, but remaining vulnerable to cutthroat trout and potentially prickly sculpin.

Shoreline development could potentially increase the rate of predation on juvenile salmonids by several principal means: 1) reducing the amount of refuge habitat available to prey species like juvenile salmonids by modifying the structure of the shoreline; 2) providing concealment structures for ambush predators such as bass and sculpin; 3) providing artificial lighting that allows for around-the-clock foraging by predators; and 4) altering migration routes for smolts and rearing fry. Although many predators that feed on juvenile salmonids are active, cruising hunters (i.e., other salmonids, piscivorous birds, northern pikeminnow), smallmouth and largemouth bass generally utilize ambush or habituation foraging strategies (Hobson 1979). Fayram and Sibley (2000) determined that smallmouth bass in Lake Washington occupied

littoral home ranges that radiated 100 to 200 meters from the focal point and generally did not extend below 8-meter depths. Because of their propensity for ambush foraging and shoreline orientation, bass in Lake Washington benefit from artificial structures placed in the littoral zone, whereas yellow perch are more likely to utilize "non-structural" areas (Paxton and Stevenson 1979). Increased useage of complex cover (e.g., aquatic vegetation, woody debris, substrate interstices, and undercut banks) by prey fishes in the presence of predators, and reduced foraging efficiency of predators due to habitat complexity has been well documented (Wood and Hand 1985; Werner and Hall 1988; Bugert and Bjornn 1991; Tabor and Wurtsbaugh 1991; Persson and Eklov 1995). Juvenile salmonids, like many other prey species, modify their behavior in the presence of predators by seeking or orienting to complex refuge (Gregory and Levings 1996; Reinhardt and Healey 1997), emigrating from areas with predators (Bugert and Bjornn 1991), aggregating (Tabor and Wurtsbaugh 1991), and adopting diel vertical migrations (Eggers et al. 1978). Complex habitat features that exclude predators, physically or through risk-aversion can function as prey refuge. Examples of effective prey refuge include complex substrate, aquatic and emergent vegetation, overhanging terrestrial vegetation, undercut banks, and submerged pieces of large wood. Shallow water also functions as a refuge from predation for small fish, especially in the absence of complex habitat features such as woody debris or submerged vegetation. Historically, Lake Washington's riparian and littoral zones were well vegetated, and interspersed with an abundance of large wood that had fallen along the shoreline (Evermann and Meek 1897; Stein 1970). The lowering of the Lake Washington water level and substantial shoreline development eliminated much of the vegetation and structural complexity historically available to juvenile salmonids rearing and migrating in the nearshore. Management plans seeking to encourage healthy assemblages of native fish should avoid the simplification of shoreline habitat, and the reduction of refuge-habitat for prey species.

Although the magnitude of avian predation in Lake Washington is unknown, piscivorous birds are present and this source of predation must be considered among potential threats to most fish, including juvenile salmonids. Common mergansers are abundant in the spring. Double-crested cormorants are common in Lake Washington, typically perching on the log booms at Union Bay and May Creek rather than on docks and bulkheads. Cormorants also commonly perch on individual piles. Western grebes inhabit enclosed bays (and some marinas), and forage throughout the lakes on calm days. Gulls are common, perching on log booms and on low docks, and are also known to feed on juvenile salmonids (Ruggerone 1986). In-water structures provide perching platforms for avian predators, from which they can launch feeding forays or dry plumage (Kahler et al. 2000). Incorporating anti-perching devices and grating in the design of overwater piers or related structures would work to minimize any advantage these structures convey to piscivorous birds.

5.2.4 Non-native Predators in the Nearshore Environment

The habitat requirements and behavior patterns of bass species have been studied extensively throughout their range, including Lakes Washington and Sammamish. A growing body of bass-related research has collectively demonstrated that bass species have an affinity for structural elements, and that bass prey on juvenile salmonids in Lake Washington. Smallmouth bass are more abundant in Lake Washington than largemouth bass, but both species are present in the system.

Although smallmouth and largemouth bass are known to prefer natural cover types like brush, logs, aquatic vegetation, or boulders (Stein 1970), these adaptive species readily utilize floating docks and the support piles of piers in the absence of natural cover types. Artificial structures and cover types that promote shade or darkness are frequently favored by yearling bass species (Haines and Butler 1969; Bassett 1994). Bass species are known to select low-gradient, shallow-water (0.6-1.5 meters), silty to gravelly habitats near structural features for spawning (Pflug 1981; Heidinger 1975; Allan and Romero 1975), and prefer similar habitat types near cover while foraging or resting (Vogele and Rainwater 1975). Although the habitat preferences of largemouth and smallmouth bass are generally similar, smallmouth bass generally select drop-offs or outcroppings, cover in the form of logs or rocks, and hard substrates without aquatic vegetation (Pflug 1981; Pflug and Pauley 1984), whereas largemouth bass generally prefer softer-bottom substrates and aquatic macrophytes (Coble 1975). These aspects of bass ecology are consistent with observations of bass behavior from across their geographic range (Bryan and Scarnecchia 1992; Kraai et al. 1991; Bassett 1994).

Logs, brush, or other pieces of large wood are rare along developed sections of the shoreline within the City of Kirkland. Piers provide alternative sources of shade, overhead cover, and in-water structure (piles and boatlifts) that attract bass (Fresh et al. 2003). Piers and piles differ from natural cover/structure elements, such as brush piles, primarily in their lack of structural complexity. This difference is critical for prey fish, which rely on structural complexity for avoidance cover in the presence of predators. In developed lakes, piers become the dominant structural features, at the expense of natural complex structures such as woody debris and emergent vegetation (Bryan and Scarnecchia 1992; Poe et al. 1986; Lange 1999). In areas of Lake Washington where smallmouth bass are present, they preferentially select habitats beneath piers and near in-water support pilings (Fresh et al. 2003). Lake Washington smallmouth concentrations tend to be highest around large docks extending over deeper water, equipped with skirting and numerous support piles. Management plans designed to minimize any advantage non-native predators hold over juvenile salmonids in the littoral zone of Lake Washington should also seek to minimize the amount of overwater cover and support structure associated with pier or dock projects along the shoreline.

5.3 CITY OF KIRKLAND SHORELINE JURISDICTION

5.3.1 Summary of City's Analysis

The segment-specific discussion in Section 4 adequately summarizes existing conditions for most of Kirkland's shoreline jurisdiction, including the PAA. Section 5.1 presents lake-wide conditions and function/process performance, with the latter organized per NOAA Fisheries' draft *Lake Matrix of Pathways and Indicators* established for chinook salmon (see Table 17). The latter discussion is focused on the aquatic lake environment, not the associated upland shoreline areas. The following discussion ties together Sections 4 and 5.1 consistent with the lake function delineation as presented in WAC 173-26-201(3)(d)(i)(C) and the processes outlined in WAC 173-26-201(3)(d)(i)(D). Table 18 summarizes the performance of ecological functions of Segments A, C and D. Segment B (Juanita Bay and Yarrow Bay Wetlands) is a notable exception, and is summarized in Table 19.

Comparison of RGP 3 Standards to Current Standards and Recent Permits

The following is a summary of the RGP 3 standards that are discussed as part of the pier provisions.

It is important to note that **compliance with RGP 3 is not required by federal agencies**. Applicants can continue to pursue projects that do not conform to RGP 3 provisions, provided that they can demonstrate that the project will meet a standard of "may affect, not likely to adversely affect" under the Endangered Species Act. There are differences between this standard under the Endangered Species Act and Shoreline Management Act standard of "no net loss of ecological functions", which can roughly be summarized as followed:

Parameter	ESA	SMA
"Geographic" scope	A specific listed fish or wildlife species (one animal)	Local jurisdiction only (City of Kirkland)
Evaluated parameter	Whether a project will have an adverse affect on a species or its habitat	All ecological functions

As noted, the following is a summary of RGP 3 standards, compared with existing SMP and Zoning Standards and a summary of permits issued for piers in Kirkland since implementation of the RGP 3.

Pier Parameter	RGP 3 Requirements	Current SMP or Zoning Standards	Post RGP 3 Permit History in Kirkland[3]
Area	• One lot: 480 ft^2 • Joint-Use Two lots: 700 ft^2 • Joint-Use Three+ lots: 1,000 ft^2	Moorage structures may not be larger than is necessary to provide safe and reasonable moorage for the boats to be moored. The city will specifically review the size and configuration of each proposed moorage structure to help ensure that: (1) The moorage structure does not extend waterward beyond the point necessary to provide reasonable draft for the boats to be moored, but not beyond the outer harbor line; (2) The moorage structure is not larger than is necessary to moor the specified number of boats; and (3) The moorage structure will	• One lot: 727 ft^2 • Joint use: 539 ft^2 • Extensions: 974 ft^2 (post extension)

Pier Parameter	RGP 3 Requirements	Current SMP or Zoning Standards	Post RGP 3 Permit History in Kirkland[3]
		not interfere with the public use and enjoyment of the water or create a hazard to navigation; and (4) The moorage structure will not adversely affect nearby uses; and (5) The moorage structure will not have a significant long-term adverse effect on aquatic habitats. (SMP)	
Length	• Walkway: limited by area and width requirements, special assessment of piers longer than adjacent piers for navigation purposes • Ell[1]: 20' with 2' strip of grating down center or 26' if fully grated • Finger[2]: 20' • Float: 20'	• 150' (Zoning Code)	• 130' total length (new and replacement piers) • 128' total length (post extension) • 21' average for new and replacement piers with ells
Width	• Walkway: 4' • Ramp: 3' • Ell: 6' • Finger: 2' • Float: 6'	May not be wider than is reasonably necessary to provide safe access to the boats, but not more than eight feet in width (Zoning Code).	• Walkway: ~4.3' (new and replacement) • Walkway extensions: ~5' • Ell: ~6.8'
Pile Size and Spacing	• First pair – 4" steel, 18' waterward of OHW • Subsequent pairs – 18' minimum spacing, no larger than 12" diameter	• Not specifically addressed.	• ~27' to first pile set • ~19.6' spacing overall
Water Depth or Location	• No structures other than walkway in nearshore 30 feet • No ells or fingers shallower than 9 feet • No floats shallower than 10 feet	• Not specifically addressed.	• No data to compare • Depth at end of new/replacement piers and extension is ~8.9'
Moorage Piles	2 piles for single-family pier, and 4 piles for joint-use. Installed waterward of 30 feet from shore, no farther than 12 feet from the pier, and no farther waterward than the terminal end of the pier.	• Not specifically addressed.	• No data to compare

Pier Parameter	RGP 3 Requirements	Current SMP or Zoning Standards	Post RGP 3 Permit History in Kirkland[3]
Height above Water Surface	Bottom of all structures (except floats) 1.5 feet above OHW	• Waterward of the high waterline, pier and dock decks may not exceed a height of twenty-four feet above mean sea level. (Note: This is less than 1.5 feet above OHW).	• ~1.3'
Materials	No treatment with pentachlorophenol, creosote, CCA or comparably toxic compounds. ACZA treatment must be per BMPs	No part of moorage structures or other components that may come into contact with the lake may be treated with or consist of creosote, oil base, toxic or other substances that would be harmful to the aquatic environment. (SMP). May not treat moorage structure with creosote, oil base or toxic substances (Zoning Code).	• No data to compare
Mitigation and other Requirements	• Overwater structures within nearshore 30 feet other than the proposed pier must be removed • Planting emergent vegetation waterward of OHW (if site appropriate) and a zone of riparian vegetation a minimum of 10-feet wide along the entire length of the shoreline immediately landward of OHW. Joint use piers will require a planting plan covering all properties sharing the pier. A path 6 feet wide or less is allowed through the zone of riparian vegetation for access to the pier. Chemical fertilizers, herbicides and pesticides shall not be applied to the riparian zone • Existing habitat features (e.g., large and small woody debris, substrate material, etc.) shall not be removed from the	• Not specifically addressed.	• 6 of 7 included shoreline plantings (1 had house at OHW – no room for plantings) • 4 proposed shoreline gravel • some removal of lifts or existing piers/pier components • 1 proposed demolition of carports, shed, and boathouse located along shoreline

Pier Parameter	RGP 3 Requirements	Current SMP or Zoning Standards	Post RGP 3 Permit History in Kirkland[3]
	riparian or aquatic environment. If invasive weeds (e.g., milfoil) are present and applicant wishes to remove them, removal shall occur by nonchemical means only with authorization from the Washington State Department of Fish and Wildlife. At least two native trees and three willow plants shall be included in the planting plan. • Other impact reduction measures may be proposed by the applicant, particularly if riparian plantings are not feasible, due to lack of space. These will be reviewed and approved by the Corps, the U.S. Fish and Wildlife Service and NOAA's National Marine Fisheries Service on a case-by-case basis		

[1] Ell is a terminal pier section oriented perpendicular to the walkway

[2] Finger is a pier section typically oriented perpendicular to walkway, located landward of the ell – often forms the nearshore side of a boatslip

[3] Data based on 2 new piers, 3 replacement piers (1 joint-use), and two pier extensions

24.05.165 Use regulations—Moorage structures and facilities.

(a) General. This section contains regulations pertinent to the development and use of moorage structures and facilities. These regulations are founded on the goals and policies established in Part II of this chapter. Please see the chart contained in Section 24.05.110 of this chapter to determine in which shoreline environments moorage structures and facilities are permitted.

(b) Permitted Use.

(1) The principal use permitted in this section is moorage of private pleasure watercraft.

(2) In the suburban residential shoreline environment, accessory uses, structures and facilities are not permitted as part of this use.

(3) In shoreline environments where this use is permitted, other than as specified above, the following accessory uses, developments and facilities are permitted as part of this use:

(A) Boat and motor sales and leasing;

(B) Boat and motor repair and service, if:

(i) This activity is conducted on dry land and either totally within a building or totally sight-screened from adjoining property and the right-of-way; and

(ii) All dry land motor testing is conducted within a building.

(C) Pumping facilities to remove effluent from boat holding tanks.

(D) Dry land boat storage; provided, however, that stacked storage is not permitted.

(E) Meeting and special event rooms.

(F) Gas and oil sales for boats, if:

(i) All storage tanks are underground and on dry land; and

(ii) The use has facilities to contain and clean up gas and oil spills.

This accessory use (gas and oil sales) may be conducted within an over water shed that is not more than fifty square feet in area and ten feet high as measured from the deck.

(G) Boat launch ramps that meet the following requirements:

(i) The ramp is paved with concrete.

(ii) There is sufficient room on the subject property for maneuvering and parking so that traffic impact on the frontage road will not be significant.

(iii) Access to the ramp is not directly from the frontage road.

(iv) The design of the site is specifically approved by the city.

(4) Other sections in this chapter contain regulations on bulkheads and other shoreline protective structures and other uses, developments and activities which may be conducted accessory to the principal use.

(c) Minimum Lot Size. There is no minimum lot size for this use; provided, however, that the subject property must be large enough and be of sufficient dimensions to comply with the site design and other requirements of this chapter.

(d) Limitation on Uses in the Suburban Residential Shoreline Environment.

(1) In the suburban residential shoreline environment, moorage structures and facilities may only be developed and used accessory to detached dwelling units on waterfront lots. Use of moorage structures and facilities in the suburban residential shoreline environment is limited to the residents and guests of the waterfront lots to which the moorage is accessory. Moorage space may not be leased, rented, sold or otherwise made available to other than the residents and guests of the waterfront lots to which the moorage is accessory.

(2) In the suburban residential shoreline environment, moorage structures and facilities may not provide moorage for more than two boats; provided, however, that waterfront lots in this environment are encouraged to develop joint or shared moorage facilities. If this occurs, the joint or shared moorage facility may contain up to two moorages for each waterfront lot participating in the joint or shared moorage facility.

(e) Size of Moorage Structures. Moorage structures may not be larger than is

necessary to provide safe and reasonable moorage for the boats to be moored. The city will specifically review the size and configuration of each proposed moorage structure to help ensure that:

(1) The moorage structure does not extend waterward beyond the point necessary to provide reasonable draft for the boats to be moored, but not beyond the outer harbor line;

(2) The moorage structure is not larger than is necessary to moor the specified number of boats; and

(3) The moorage structure will not interfere with the public use and enjoyment of the water or create a hazard to navigation; and

(4) The moorage structure will not adversely affect nearby uses; and

(5) The moorage structure will not have a significant long-term adverse effect on aquatic habitats.

(f) Over Water Structures — Required Yards.

(1) No structures regulated under this section, other than moorage structures and sheds associated with gas and oil sales for boats, may be located waterward of the high waterline. Other sections of this chapter contain regulations on bulkheads and other shoreline protective structures and breakwaters which may be accessory to this use and located waterward of the high waterline.

(2) The required yards for structures landward of the high waterline are as established in the various shoreline environments by Section 24.05.150 regarding attached and stacked dwelling units.

(3) Waterward of the high waterline, the required setbacks in the suburban residential shoreline environment are as follows:

(A) No moorage structure on private property may be within twenty-five feet of a public park.

(B) No moorage structure may be within twenty-five feet of another moorage structure not on the subject property.

(C) The side property line setback is ten feet.

(4) Waterward of the high waterline, the required setbacks in the Urban Mixed Use 1 Shoreline Environment are as follows:

(A) If the subject property provides moorage for not more than two boats, the following setbacks apply:

(i) No moorage structure may be within twenty-five feet of another moorage structure not on the subject property.

(ii) The side property line setback is ten feet.

(B) If the subject property provides moorage for more than two boats, the following setbacks apply:

(i) No moorage structure on private property may be within one hundred feet of a public park.

(ii) No moorage structure may be within fifty feet of an abutting lot that contains a detached dwelling unit.

(iii) No moorage structure may be within twenty-five feet of another moorage structure not on the subject property.

(5) The side property line setback is ten feet.

(6) Waterward of the high waterline, the required setbacks in shoreline environments other than as listed above, wherein this use is permitted, are as follows:

(A) If the subject property provides moorage for not more than two boats, the following setbacks apply:

(i) No moorage structure on private property may be within twenty-five feet of a public park.

(ii) No moorage structure may be within twenty-five feet of another moorage structure not on the subject property.

(iii) The side property line setback is ten feet.

(B) If the subject property provides moorage for more than two boats, the

following setbacks apply:

(i) No moorage structure on private property may be within one hundred feet of a public park.

(ii) No moorage structure on private property may be closer to a public park than a line that starts where the high waterline of the park intersects with the side property line of the park closest to the moorage structure and runs waterward toward the moorage structure at a forty-five-degree angle from that side property line. This setback applies whether or not the subject property abuts the park, but does not extend beyond any intervening over-water structures.

(iii) No moorage structure on private property may be closer to a lot containing a detached dwelling unit than a line that starts where the high waterline of the lot intersects with the side property line of that lot closest to the moorage structure and runs waterward towards the moorage structure at a thirty-degree angle from that side property line. This setback applies whether or not the subject property abuts the lot containing the detached dwelling unit, but does not extend beyond any intervening over-water structures.

(iv) No moorage structure may be within twenty-five feet of another moorage structure not on the subject property.

(v) The side property line setback is ten feet.

(g) Height of Structures.

(1) Landward of the high waterline, the maximum permitted height of structures is as follows:

(A) In the Suburban Residential Shoreline Environment, the maximum height of structures landward of the high waterline is as established for detached dwelling units in that shoreline environment. See Section 24.05.145 of this chapter.

(B) In all other shoreline environments where this use is permitted, the maximum height of structures landward of the high waterline is as established in each of those shoreline environments for stacked and attached dwelling units. See Section 24.05.150 of this chapter.

(2) Waterward of the high waterline, pier and dock decks may not exceed a height of twenty-four feet above mean sea level.

(h) Moorage Structures Waterward of the Inner Harbor Line. If the moorage structure will extend waterward of the inner harbor line, the applicant must obtain a lease from the Department of Natural Resources prior to proposing this use.

(i) Certain Substances Prohibited. No part of moorage structures or other components that may come into contact with the lake may be treated with or consist of creosote, oil base, toxic or other substances that would be harmful to the aquatic environment.

(j) Certain Moorages Prohibited. Covered moorage is prohibited. Aircraft moorage is prohibited. (Ord. 3153 § 1 (part), 1989: Ord. 2938 § 1 (part), 1986)

Summary of RGP 1 provisions

The following is a summary of another Regional General Permit (RGP 1) that provides standards for watercraft lifts (and associated canopies) in Washington State. [move to attachment]

Watercraft Lift Action	**RGP 1 Mitigation Requirements**[1]
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	• None required
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	• None required
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)	• 2 or 4 pts for each additional floating or suspended watercraft lift, depending on depth (< or > 9') • 4 or 6 pts for each additional ground-based watercraft lift depending on depth depending on depth (< or > 9')
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).	• 2 or 4 pts for each additional floating or suspended watercraft lift, depending on depth (< or > 9') • 4 or 6 pts for each additional ground-based watercraft lift depending on depth depending on depth (< or > 9')
Category E: Installation or retention of a translucent canopy on a new or existing watercraft lift. Lift should be located waterward of the 9-foot depth elevation. Lowest edge of the canopy must be at least 8 feet above OHW. Only 1 canopy can be installed per single or joint use residential overwater structure. Lift with canopy must be oriented with the length in the north-south direction to the maximum extent practicable	• one required if placed on lift > 9' deep • 2 pts required if placed on lift < 9' deep
Category F: Replacement, repair or maintenance of existing watercraft lifts. This includes parts which are located above or below ordinary high water (OHW) 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.	• one required

[1] See table below for mitigation points system.

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 treated wood material 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. 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. 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 divided by 9 = 10.7 times 3 equals 32 mitigation points.

Mitigation Measure Option #	Number of Mitigation Points	Project Impact Reduction and Mitigation Measure Description
11	Varies	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. 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. For example: The marine railway to be removed is 14 feet long. 14 divided by 2 = 7 mitigation points.
12	Varies	Install grating on an existing overwater structure with a solid deck surface. Three mitigation point = 9 square feet of installed grating 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 divided by 9 sq. ft. equals 2 times 3 → 6 mitigation points.

WATERFRONT

November 17, 2008

From: David Douglas, Waterfront Construction, Inc.
To: Stacy Clauson, City of Kirkland
Teresa Swan, City of Kirkland
Paul Stewart, City of Kirkland

Dear City of Kirkland SMP Update Staff,

I have reviewed the latest packet of documents for the SMP Update and provide the following comments and questions.

1) Page 1 of 11 (bottom)
Following review of the new State Guidelines the City has determined that the current SMP is not consistent with many key requirements of the new guidelines.
Please list each of these key requirements you have identified in detail and why the current Kirkland SMP does not meet the new guidelines.

2) Page 3 of 11 (top)
Please explain why the replacement of existing shoreline stabilization measures are treated as new and what statute in the state guidelines is being used to require a geotechnical report to justify a new or replacement bulkhead even when it is built in a way that will result in "no net loss of shoreline ecological functions"?

3) Page 3 of 11 (middle)
State and federal regulatory agencies already require extensive native planting plans for shoreline projects and their reviewers are habitat biologists who specialize in the marine environment and the protection of listed species and critical habitat.

Why does this need to be addressed by local government simply to meet a state guideline and why doesn't the state defer to more experienced regulatory agency biological staff rather than promoting redundancy? Can the City accept native planting plans approved by WDFW and/or the Corps of Engineers for projects where such is required? This can be verified during the building permit application when projects are back routed to the Planning Department for verification of Shoreline and SEPA compliance.

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205 NE Northlake Way, Suite 230, Seattle, WA 98105
P: (206) 548-9800 F: (206) 548-1022

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4) Page 3 of 11 (middle)
Why do specific dimensional standards need to be implemented for piers and docks when existing local, state and federal regulatory reviews, which are required for all projects, are currently effective? The City of Kirkland has a more effective and thorough shoreline review than most other jurisdictions and a fair evaluation of new projects approved by the City will show that the tri-level (local, state and federal) process has worked to control size and environmentally friendly design. DOE has recognized that an alternative process can be used for redevelopment of both piers and bulkheads by using proposed versus existing site conditions. Nearly every redevelopment project completed over the last 5+ years would render a "no net loss" determination and in most cases they would fall under the classifications of "net gain" or "restoration". **This being the case, why is the City considering implementing specific dimensional standards on piers and docks? It is requested the City stand firm against this requirement and reject use of the Corp RGP-3 Guidelines for docks and piers.** The RGP-3 is a very flexible document that can be used as a Reference Biological Evaluation when a pier exceeds the guidelines and **less than 5% of projects approved by the Corps since March 2005 when the RGP-3 was implemented have met the dimensional guidelines.** If made a part of the SMP it could push most projects into a more expensive, drawn out, labor intensive, and rarely approved Shoreline Variance process where DOE will decide a property owner's future.

5) Page 3 of 11 (middle)
As explained above, nearly all redevelopment projects under current review, whether bulkhead or pier replacement, easily meet the "no net loss". The City should increase its inventory of the shoreline to include waterfront properties where native vegetation currently exists. **Nearly every new project built over the last 5+ years has included native vegetation and the City may not be aware of this fact. The City should consider inventorying the overwater coverage from existing public and private piers, both total coverage and that 30' closest to the shoreline to serve as a baseline.** By doing so and comparing it to any historical data the City may have from 10 or 20 years ago, it will discover that each redevelopment project results in a substantial decrease of overwater coverage in the most critical nearshore area and may also show a decrease in total overwater coverage. I am hesitant to declare a decrease in total overwater coverage since longer piers are desired by agencies so aquatic activity, boatlifts and moorage covers are further from the most critical nearshore area where migration and most spawning takes place. Wider pier sections in deeper water have less impact so allowing a wider section of pier in deeper water can serve as an incentive to removing existing platforms currently close to the shoreline. **If the City or state has failed to collect historical documented or photo data for comparison then overly restrictive standards should not be placed on property owners as a result. Environmentally friendly pier and bulkhead design did not come about because of the SMP Updates but have evolved over the past several years through a combination of factors including state and federal guidelines and voluntary design and construction changes initiated by marine contractors and property owners. The SMP Updates are taking place in the midst of these changes and are trying to fix something that isn't broken at the cost of property owners.** State and local governments, along with the biological consultants they have hired, have refused up to this point to recognize and factor in this natural progression of positive changes along the state's shorelines, especially for Lake Washington and Lake Sammamish. These

improvements must be recognized if the update process is to be considered transparent, equitable and fairly represent recent trends and existing conditions.

6) Page 3 of 11 (bottom)
It appears the City may require private and/or public restoration to compensate for the impacts to shoreline ecological functions resulting from new development that is presumed to cause impacts. **Please explain if it is the intent of the City to tie totally unrelated private or public projects to new developments in other areas and require not only "no net loss" but a "restoration" element. If this is not the intent of the City please explain this section under the "no net loss" section.**

7) Page 4 of 11 (bottom)
The letter from DOE clears up a lot of issues and essentially supports many of the concerns voiced by Kirkland and other community waterfront property owners. **Is the City carefully reviewing and weighing contents of this letter and does the City intend to incorporate the DOE clarification in the City's SMP**?

8) Page 4 of 11 (bottom)
The Corps document is a Programmatic Biological Evaluation (PBE) and not a Regional General Permit (RGP) as listed. Similar to other related activities covered under PBE's this simply allows the type of work to be done without submitting an Individual Biological Evaluation and needing to receive concurrence from the federal services (NOAA and USFWS). It is not the only way to have a bulkhead permitted and like the RGP, there are other permit processes that can be used. **Just like the RGP-3 for docks, this supports why a federal process designed to arrive at a different determination ("Not Likely to Adversely Affect Listed Species or Critical Habitat" vs "No Net Loss of Shoreline Ecological Functions") should not be used as a basis for standards contained within a SMP where they become inflexible laws. This is most crucial in the case of redevelopment of existing structures.**

9) Page 5 of 11(middle)
The statement that "the City, in many cases, is not imposing new requirements that would not otherwise need to be met or require significant additional cost and permitting time for property owners to identify alternatives" is simply untrue. WDFW and the Corps of Engineers have limited authority that begins at or below the Ordinary High Water Line in fresh water lakes while the City and DOE have authority extending from the shoreline 200 feet landward. In many cases a project can be built immediately behind an existing bulkhead and it is out of Corps authority. **WDFW and the Army Corps do not request geotechnical reports or studies and have rarely denied a bulkhead replacement where the result is an improvement over existing conditions.** We have built several new and replaced dozens of existing bulkheads on Lake Washington over the past several years, 3 of which are currently being constructed within a couple miles of Kirkland, and no additional reports were required except for a Biological Evaluation (BE) to address impacts to listed species and critical habitat which the Corps is mandated for consultation with the federal services under Section 7 of the Endangered Species Act. This once again supports the strict but responsible and flexible standards carried out by state and federal regulatory agencies. If a set of rigid and overly restrictive standards are included in a local SMP it will have far reaching impacts that City staff may not understand based on this statement. **For many property owners it will**

mean allowing existing bulkheads to fail and fall into the water rather than applying for repair or replacement. This will have a much greater impact on habitat than the assumed impacts from the bulkhead itself and will deter the installation of more habitat friendly bulkheads.

10) Page 6 of 11 (top middle)
The City has a responsibility first and foremost to its citizens and not WRIA-8. WRIA-8 is a respectable agency but they are primarily an environmental group that has targeted bulkheads and piers and do not typically provide a balanced approach. I have attended WRIA-8 meetings and shared many of our pier and shoreline designs and ideas and they were well received. I also provided a perspective from the property owner and industry side, the inconclusive science used to arrive at their position and that many properties are not candidate for what they would like to see. We also contributed much time and professional opinion to the City of Seattle "Living Shorelines" Handbook soon to be released.

If the City is going to promote WRIA-8 recommendations please provide data on how many City owned bulkheads have been removed as a result of these same principles. How many City owned docks, overwater and nearshore walkways have been removed, reduced in size, had treated piling replaced with steel piles using longer spans, or replaced a solid surface with a fully grated surface? If the City is making private property owners bear nearly the full burden of the SMP Update, as unfair as that is in and of itself, then it should set an example so the entire public shares the load. This could mean reducing the public access that is synonymous with Kirkland and already accommodated by many gracious private property owners. Nobody wants to see this happen but it is equivalent to the burden being placed on Kirkland's waterfront property owners if the SMP Update moves in its current direction.

10) I would also like to note that while the public and waterfront property owners have given public testimony and the City staff and Planning Commission have expressed a genuine interest in assuring their concerns are taken into consideration, that it appears the City is directing the SMP Update primarily at private development as evidenced by an e-mail response from Terese Swan to Mr. Dick Sandaas, a part of which is attached below.

Subject: RE: SMP update mailing
Date: Wed, 5 Nov 2008 09:47:30 -0800
From: TSwan@ci.kirkland.wa.us
To: eride@msn.com

Hi Dick

Most of the new shoreline regulations will be addressing private development (as does the Zoning Code). It is important to highlight that private properties along Kirkland's shoreline are highly armored which is impacting the biological function of the lake.
The No Net Loss standard and mitigation elements in the DOE guidelines look at individual properties and only somewhat of the entire system. These existing bulkheads will be one of the key focuses of the SMP update.

Does this make sense now?

Teresa Swan
Senior Planner
(425) 587-3258 Fax (425) 587-3232
tswan@ci.kirkland.wa.us
City of Kirkland
123-5th Ave
Kirkland, WA 98033

Please review the Lake Washington/Sammamish SMP Guidance Fall 2008 recently distributed by DOE and explain where the above positions are supported. Please also provide the WAC, SMA Update, or Washington State Legislative references that specifically target private development since it is my understanding that protecting the rights of private property owners are one of the primary concerns of our legislature.

It is my understanding in speaking with DOE and local planners and reviewing the guidelines that the SMP Update's main concern is the "entire system" which is in direct conflict with what is being stated in the e-mail. Our position with DOE and local governments enveloping an overly aggressive approach from the beginning has been that an existing bulkhead and/or pier can be repaired or replaced in such a manner that the "no net loss" goal as defined can be met and in most cases result in a "net gain". While private development consisting mainly of residential waterfront properties are not the focal point in the SMP guidelines over any other private or commercial development along the shoreline, we believe that individual projects on each privately owned property can render a "no net loss of shoreline ecological functions" and contribute to the overall "no net loss" goal of the "entire system". This does not require the total removal of a bulkhead and replacement with a natural shoreline but can be accomplished by a total bulkhead replacement in a more fish friendly design including cobble and gravel to provide toe protection for erosion and shallow nearshore fish habitat. Additionally, it does not require an existing pier to be replaced with a pier that conforms to the guidelines of the Corps RGP-3 since a new pier can be built in a variety of sizes and designs and still yield a "no net loss" or "net gain". It cannot be overstressed that less than 5% of piers approved in Lake Washington and Lake Sammamish have complied with the RGP-3 guidelines.

Each of these privately owned structures, whether a bulkhead, pier or residence, was at one time approved by local, state and/or federal regulatory agencies. To make changes that will essentially declare one or more element (house, pier bulkhead, or other accessory structure) on each private property as legally non-conforming triggering an entirely new set of review criteria, or to push many more projects into the Shoreline Variance or Conditional Use processes must be given very careful consideration. Has anyone at the City researched how many properties will have at least one non-conforming structure following the adoption of the new SMP? If an existing bulkhead or pier cannot be rebuilt in the same configuration due to new regulations in the SMP are they not for all intents and purposes "non-conforming"? If so, how does the City plan on handling this property rights issue and the legal challenges that could result? This is totally different from periodic changes made to a building code since DOE has allowed over 35 years to pass without periodic SMP updates which would have addressed much of the issues local governments are trying to make through sweeping and overly aggressive changes. It appears the onus of responsibility is now placed on the individual property owner to amend for this long-term neglect.

Thank you for the opportunity to provide public comment which I believe the City of Kirkland takes seriously. I appreciate the transparent process the City is using during this update and trust that the approved SMP will be a document the City can proudly claim has evaluated and protected the property rights of all citizens living within its borders, especially those residents directly impacted by such regulations.

Sincerely,

David Douglas
Permit Coordinator
Waterfront Construction, Inc.

Teresa Swan

From: RLSTYLE [rlstyle@aol.com]
Sent: Tuesday, November 18, 2008 12:34 PM
To: KirklandCouncil
Cc: nelsonmb@gte.net; eride@msn.com; jrogers407@comcast.net; Teresa Swan; Eric Shields
Subject: Shoreline Master Program

Honorable Councilmembers:

At the Moss Bay neighborhood meeting last night (11/17/08), Teresa Swan presented information on the SMP. About 15 people were there.

She insisted that bulkhead removal or modification was necessary to improve the environment for Chinook although she could not produce a map, chart, or information showing their migratory routes or where they are. I contend that rules are being unjustly proposed and have no basis of fact.

Are there Chinook in Kirkland? I don't think so. They certainly do not spawn here. Do they migrate close to Kirkland's shoreline going under docks and marinas? I haven't seen any documentation that proves it one way or another.

I asked Ms. Swan to contact the DOE, the state agency that's pushing the new rules, for information that justifies their position on Chinook. I believe my request landed on deaf ears.

On a personal note, Waterfront Construction repaired my bulkhead last week according to the new design standards even before the new requirements are adopted. In essence, it was their way or no way if I wanted my bulkhead repaired. Bulkhead "Softening" was required. The city, Corps, fisheries, and DOE all had their way. So I had to add sloping size gravel on top of which was spawning gravel for fish that don't spawn here. Some 5 months and $15,000 later, I now have a city, state, and federally approved bulkhead. Why are we upgrading the SMP?

Ms. Swan and Mr. Stewart of the Planning Department need some of the "guidance" the council is famous for.

Robert L. Style
6735 Lake Washington Blvd, NE
Kirkland, WA 98033
425-827-0216

Teresa Swan

From: Daved [Daved@waterfrontconstruction.com]
Sent: Monday, November 24, 2008 2:19 PM
To: Paul Stewart; Stacy Clauson; Teresa Swan
Cc: jrogers407@comcast.net; Mark Nelson
Subject: KIRKLAND PC MEETING AND SMP UPDATE CONCERNS

Hi Paul, Stacy and Teresa,

After attending the Planning Commission Meeting last evening I am very concerned at some of the discussion and questions asked by the Commissioners considering how far along the City is in the SMP Update process. I understand shoreline issues can be pretty complex and when mingled with state and federal regulatory guidelines no one can be expected to know everything, but with some of the elementary and basic questions that were asked and the responses being provided by city, state and biological consulting staff it was difficult to keep things internalized. I realize the Commissioners are doing their best to serve their community but they are in a position to make recommendations that will impact many citizens but seem untrained as to how the system works. This is not totally their doing because they obviously have day jobs but I do think it is City staff responsibility to provide them with the best and most well rounded education possible. As it is set up right now, not only in Kirkland but other waterfront communities, these trusted leaders are being spoon fed from a one-sided source with a one–sided agenda. If they understood the entire process they might ask DOE the same questions the frustrated, angry and scared property owners who place their trust in you are asking.

Property owners who have been through the process probably have a better understanding than the Planning Commission, City Council, and maybe even some planners, but they no authority or influence as average citizens. Commission and Council members have a thankless job at times but clearly enjoy the authority and responsibility of their positions. This is a much more enjoyable place from which to operate than the everyday citizen who in this case are waterfront property owners directly impacted by a seemingly futile process. They are heard and acknowledged out of routine but are rendered powerless by a so called “democratic” process.

No Commissioners live on the water so they don’t have a vested physical or financial interest per se and it is unknown if they have ever seen a set of plans for a bulkhead or pier replacement or shoreline restoration project. **Has the City taken the initiative to invite anyone in to review the entire permit process from beginning to end with your Planning Commission or City Council from an applicant’s perspective? If it has not but are willing, I would open to review one or two of my more complex projects with both of these leadership bodies and bring a slide show presentation of completed projects we run at the Seattle Boat Show. One of the projects can be a recent Kirkland project approved thorough a non-conforming RGP3. It will give them a good idea on the processes a project goes through at the local, state and federal levels to provide a better understanding of what waterfront property owners are doing to either improve conditions at their site or mitigate for the assumed impacts. They will also be able to see that Kirkland for the most part has excellent control of their shorelines even under the existing SMP.** The only qualification I have over others who do permitting for a living is a willingness to get involved and a passion to help local governments see the entire picture and for property owners to be treated fairly, respectfully and honestly. If my experience can help I certainly want to do my part.

The only reason SMP’s need updated is to fulfill a legislative mandate and the main reason I see that DOE needs separate guidelines from more highly qualified agencies such as WDFW, Army Corps of Engineers, U. S. Fish and Wildlife and NOAA-Fisheries is to sustain the agency. Each of the aforementioned agencies (WDFW and Federal) employs biology staffers directly involved in the permitting process and take seriously their responsibility to protect listed species and critical habitat under the state and federal ESA. DOE staff directing local governments through the SMP Updates are not biologists, ecologists, or any other type of biological professional for the most part, but are ambassadors promoting a program. They are viewed as a trusted authority simply through their position with the agency and no hard questions are asked by staff, commissions or councils, often because they do not know what to ask. Information exchanges at public forums are too formal to be real and accomplish anything. This places the entire update process in a highly vulnerable position. If the legislature understood the process for shoreline projects currently in place one must wonder if the SMP updates would even be required. If they do understand the process then one must ask why they still choose to have an overlapping of responsibilities.

Along with most people, I am not opposed to voluntary shoreline restoration projects and we have done quite a few in the right locations. They look beautiful, provide a beach, improve access to the lake, are fun, and can provide some environmental benefits. Like most people however, I am opposed to government taking over private property for any

reason, especially by using inconclusive science when there are no measurable standards being provided. Guesswork and arbitrary requirements erring on the side of regulatory and opposing private property rights is a recipe for controversy and legal challenges. In meeting with DOE a couple months ago and seeing the guidance letter they distributed it appeared there was an understanding that bulkheads can be replaced with “no net loss of ecological functions” in each and every case, whether partial or full replacement. Partial or full restoration of the shoreline is the desired outcome by the state but that is not always possible and the state has admitted that partial removal with a cove is viewed favorably. Was this part of the letter from DOE skipped over?

How will you process a project which has a wide and deep enough property to remove a full length bulkhead and install a partial bulkhead at each end and a cove in the middle similar to the picture shown from the Seattle Handbook (which we contributed to and provided feedback)? It is considered an improvement and will clearly meet “no net loss” (depending on what definition is being used on a given day) but part of it will still be hard stabilization. **Will you require a geotechnical analysis for someone making such an improvement? Will it qualify for an exemption or will you make it go through a more stringent process? Where will you draw a threshold to view a project as a partial or full shoreline restoration versus just a bulkhead replacement?**

This is important because people are more willing to do a partial restoration when they can. This will always be more suitable at a site where the water depth at the bulkhead is minimal and the bottom contour is gradual rather than several feet deep with a steep contour because one of the design considerations is matching the restored shoreline to the existing grade and bottom contour to prevent accelerated erosion. On a recent project in Seattle we were approved to replace an entire bulkhead in the same footprint because restoring a natural shoreline based on the geotechnical analysis and based on wind, wave and soil conditions at the site and on the adjacent properties would have required a 30 to 40 foot cut into the upland and removing several hundred cubic yards of dirt to match the 3 feet of water depth and the bottom contour. In addition, shifting the bulkhead upland or relocating the Ordinary High Water Mark landward would have caused the house to be a non-conforming structure because of impervious surface thresholds and also impact future additions or modifications. The big picture involves more than what takes place at the water’s edge and it is important for Commissioner and Council Members to be made aware.

There is too much at stake to get this wrong. If you would like to accept my offer please let me know. Although I do not have a formal presentation established I can put something together to present before such a distinguished group. I feel so strongly about what is going and how it is being done and am familiar enough with the multi-level permitting process that I think I could handle it. The goal would be simply to provide an advanced understanding of the permitting process as seen through the perspective of an experienced agent and how it all comes together to result in the construction of a shoreline pier, bulkhead, or shoreline restoration project. It is a complex, orderly, and thorough process that addresses all concerns from local, state and federal regulatory agencies in regard to impacts on listed species and critical habitat specific to each site or region.

Thank you on behalf of your City’s waterfront property owners for a transparent, balanced and fair process.

Dave Douglas
Waterfront Construction, Inc.

Mark B. Nelson
299 Lake Avenue West
Kirkland, WA 98033-6139
425-576-5670
425-576-5438 (FAX)
nelsonmb@gte.net

November 24, 2008

Houghton Community Council
123 Fifth Avenue
Kirkland, WA 98033

Re: Shoreline Master Program Update

Enclosed you will find illustrations from the City of Kirkland Planning Department which were presented to the Kirkland Planning Commission on November 20.

These illustrations provide you with an advance look at what you will be asked to consider in the coming months as you learn more about the Shoreline Master Program Process.

As a shoreline property owner I find the illustrations profound examples of what is being proposed to happen to shoreline property.

I'm sure that your constituents will be interested in being alerted to these illustrations and being provided with the opportunity to engage in the planning process.

I requested that the City notify each affected property owner with an illustration for their specific property. I encourage the Houghton Community Council to also request that the City advise each individual property owner concerning the impact of the illustrations.

Very truly yours,

Mark B. Nelson

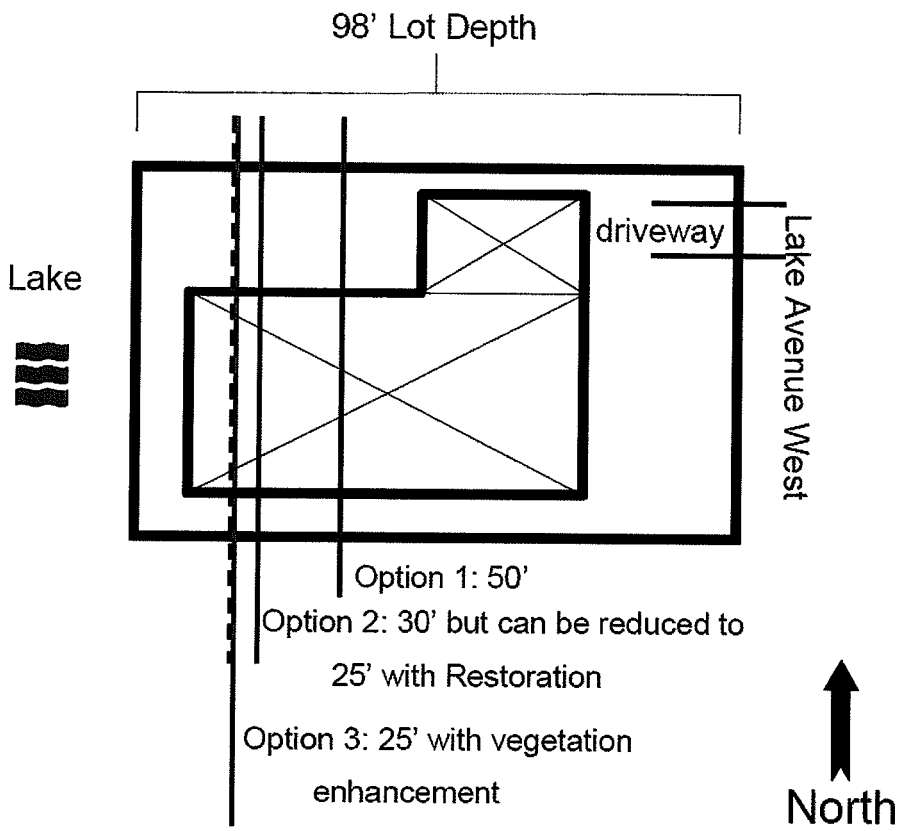
Mark B. Nelson

Enclosures: As Stated (4 pages)

Existing Single Family Setback in Market St. Neighborhood

Lot Depth Group of < 100'

13.2' Setback (Low Range Group)

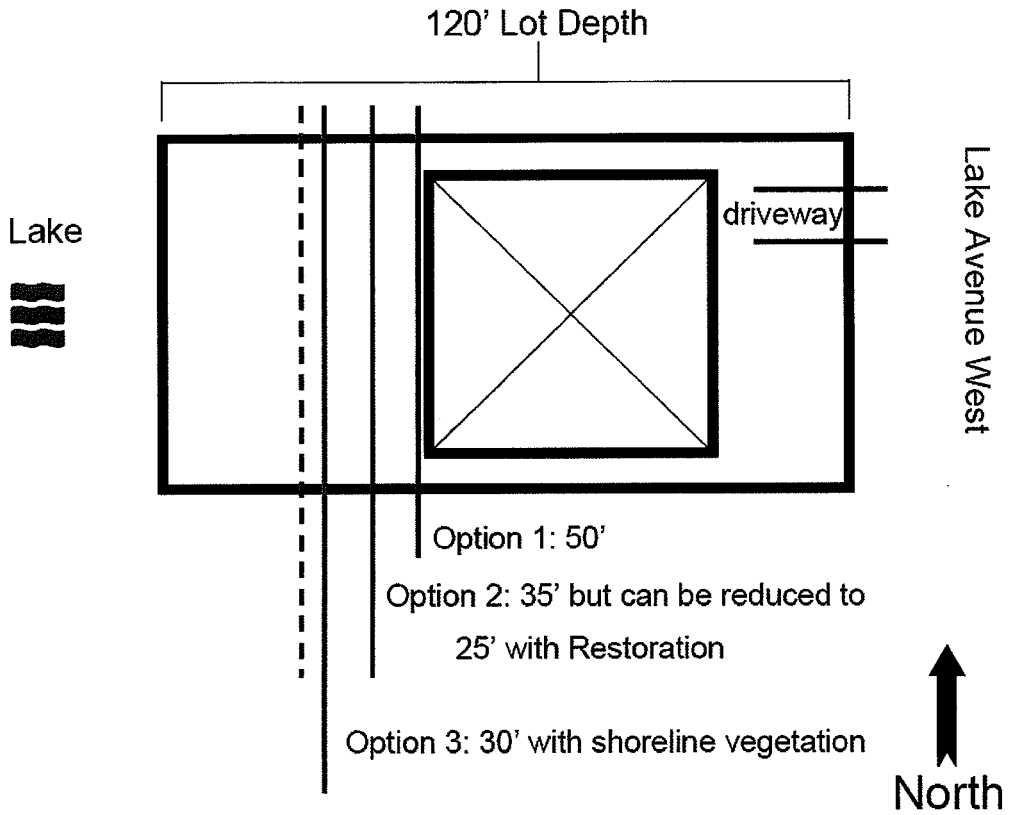


Source: Shoreline Master Programs Regulations – November 11, 2008
Presented to: Kirkland Planning Commission – November 20, 2008

Existing Single Family Setback in Market St. Neighborhood

Lot Depth Group of 100' – 175'

54.71 Setback (Median Range Group)

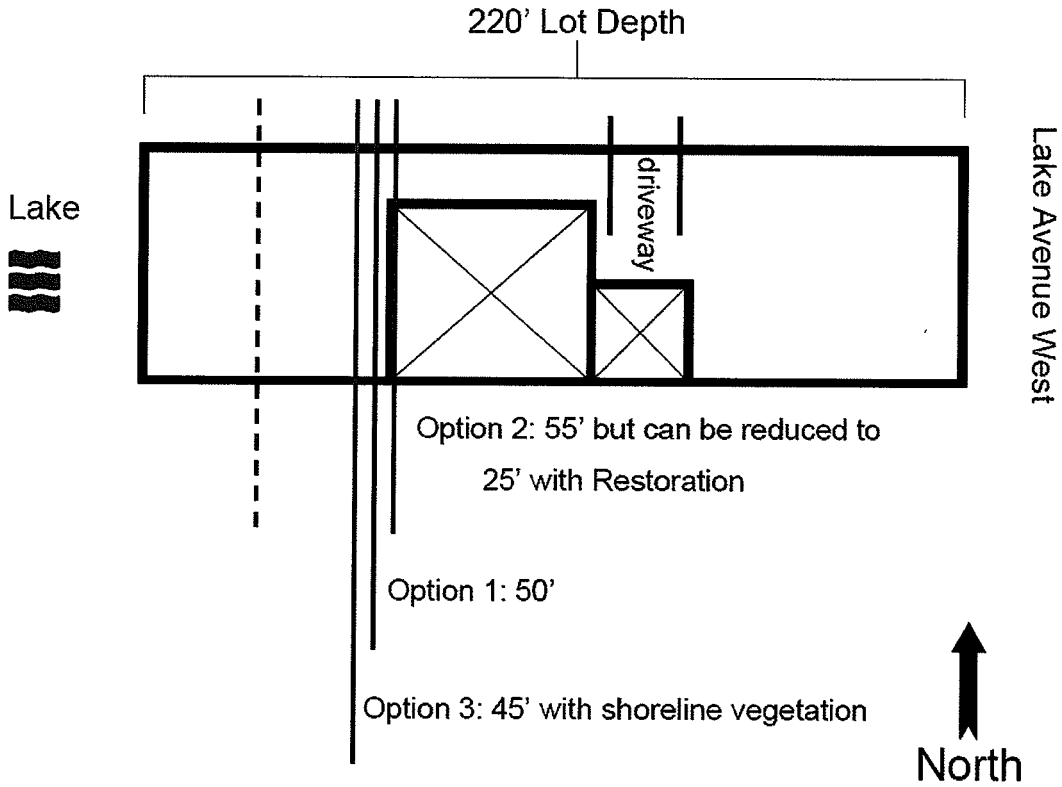


Source: Shoreline Master Programs Regulations – November 11, 2008
Presented to: Kirkland Planning Commission – November 20, 2008

Existing Single Family Setback in Market St. Neighborhood

Lot Depth Group of > 175'

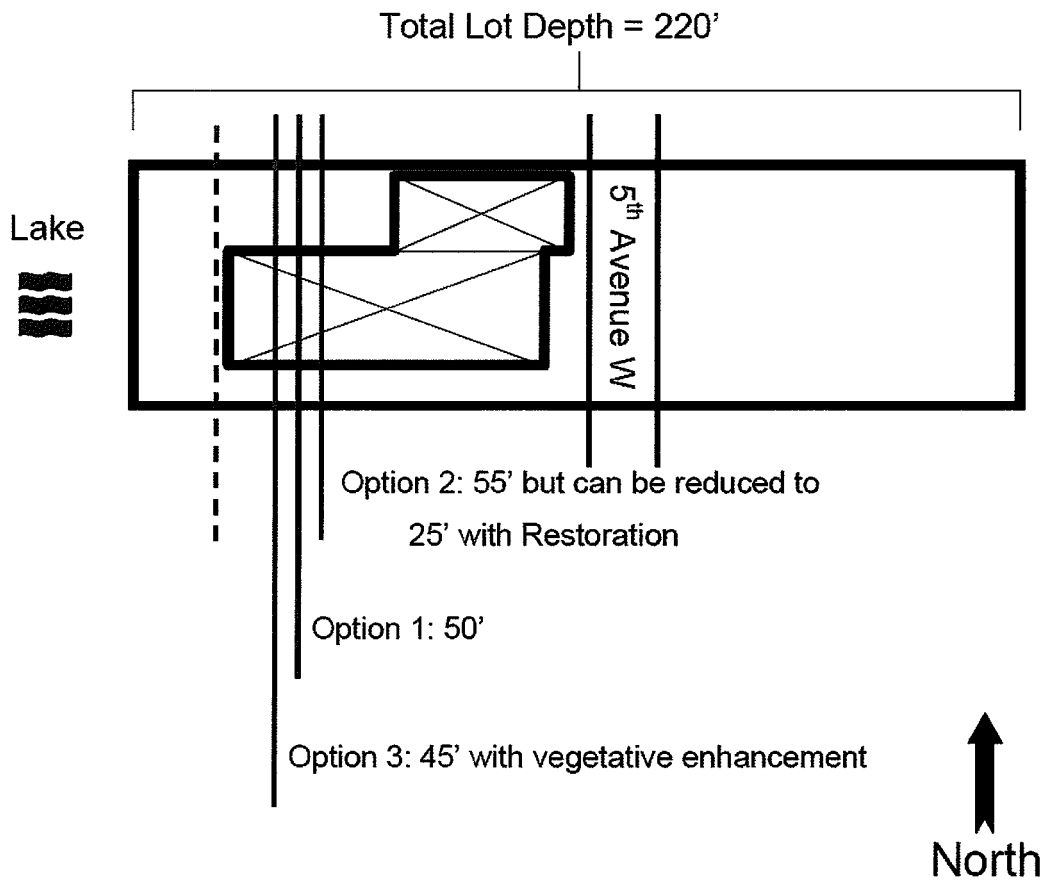
54.71' Setback (Upper Range Group)



Source: Shoreline Master Programs Regulations – November 11, 2008
Presented to: Kirkland Planning Commission – November 20, 2008

Existing Single Family Setback in Market St. Neighborhood 5th Avenue West

31.03' Setback with split lot depth



Source: Shoreline Master Programs Regulations – November 11, 2008
Presented to: Kirkland Planning Commission – November 20, 2008

Teresa Swan

From: RLSTYLE [rlstyle@aol.com]
Sent: Tuesday, November 25, 2008 10:32 AM
To: Teresa Swan
Cc: KirklandCouncil; nelsonmb@gte.net; jrogers407@comcast.net; eride@msn.com
Subject: Shoreline information

Teresa:

A sincere thanks for researching and providing the information I asked regarding the migration pattern of Chinook and other fish. It's a mass (or mess) of information I'm still trying to digest. Your doing great for the fish. Now it's time to do great for property owners.

Some of my initial impressions so far from all the data are:

Opinions need to be based on facts. Yes there are fish in Lake Washington Other than streams, their migration patterns are not specific enough to justify putting the onus of construction, development, and modifications to single family homes solely on the property owner. Many homes will lose value and be limited from full utilization of their property if the new SMP "guidance" standards are adopted.

There are so many disclaimers to the maps and statements shown in the studies that it almost makes them worthless, almost. Just how much needs to be determined before governments take away or reduce what is now usable property for a single family home. And, they should not require the property owner to pay for their losses through Conditional Use Permits (CUP) and Substantial Development Permits (SDP).

One of the studies you referred me to showed a map of the Salmon Recovery Funding Board (SRFB) Projects. **None of them are in Kirkland.** If Kirkland thinks that protection of salmon is so important, why hasn't Kirkland applied for one of their grants. The information only goes to 2007 so may be you already have. Funding for the lake's improvement to restore habitat could come from several sources. How about these?

Because the Lake can be enjoyed by everyone in the State and County, get a grant to the city from DOE or the SRFB to soften all the existing hard bulkheads by installing sloping cobbles to the bulkheads and to provide calm waters for the fist to migrate. Pardon the comparison but it would be killing two birds with one stone. You could protect property thereby meeting one of the requirements of the SMP and you could help restore the environmental conditions for fish migration, another requirement of the SMP.

At last nights Houghton Community Council meeting, staff explained a multiple of times that even without a CUP or SDP, property owners still have to meet city standards controlled through Kirkland's land use regulations. Even though I was exempted from an SDP, I was still required to put in sloping cobbles and spawning gravel even though fish do not spawn there. That being the case, why can't the city notify the DOE it is already in compliance with the SMP goals of restoring habitat and protecting property?

For the city to spend money on private property for public benefit is not unprecedented. As an example, the city installed a $345,000 reinforced bank (in other terms, a bulkhead on a stream) on private property to stabilize Juanita Creek to prevent erosion. That's not much different than stabilizing the shores of Lake Washington. Also, we all pay for surface water management regardless if we personally benefit or not. It's the social thing to do and keeps the price per property down because everyone has to pay rather than a few. Why not do the same for the improvements needed to Lake Washington? The City, County, and State all benefit from the Lake therefore all should pay. Having the City install sloping cobble makes sense.

More to come later.

Bob Style

Fellow shoreline owners: December 2, 2008

After reviewing some of the proposed Shoreline Master Program amendments, I have the following concerns.

1. I had to repair my bulkhead. Even though the project was exempt from several provisions of the Shoreline Master Program, I still had to comply with the existing city, state, and federal regulations. I had to "soften" the bulkhead by putting in sloping cobbles and fish spawning gravel in the water although fish do not spawn there. For my 62 feet of waterfront, it cost $17,500 and took 5 months. Yes, my property benefited, but so did the fish, adjacent properties, the city, the state, and those who use the lake. **Yet, I was the only one who had to pay for it.** Should I and other shoreline owners have to carry the burden alone? Instead, the city should do a citywide geotechnical report and provide the cobble and spawning gravel for each property owner thereby complying with the provision of the Shoreline Manage Program that mandates protection for single-family properties.

2. If you apply to remodel or build a new home, or repair your bulkhead, your property will become subject to review by the city. Homes close to the shoreline may cease to exist unless the homeowner pays for a hydraulic geotechnical report showing the need for a bulkhead. **The city just funded a private property owner's bulkhead on Juanita Creek to stabilize the shoreline and prevent erosion.** It cost $345,000. They should do the same shoreline stabilization for lake front owners. This is a state mandated program that should be covered by the state.

3. To increase setbacks decreases the amount of property that can be used for a single-family home and where it's located on the property. The city has yet to meet with shoreline owners and show them the impacts of the new setbacks their properties. The city's **Shoreline flier dated 11-20-08** prepared for the Planning Commission shows the new setbacks. If you live on the shoreline, you should evaluate the new setbacks, 25, 30, or 50 feet from the shoreline, 25-foot front yard setback, and 5-foot side yard setbacks if you are north of downtown. There is right-to-sunlight provision of an additional 10 feet side yard setback on the north side for a total of 15 feet of shadow allowance during the winter to properties owners south of downtown.

Why is that different than any other property in Kirkland? I've included two setback examples. Contact the city (425-587-3225) for an example of the how the new setbacks affects your property.

4. To increase setbacks from bulkheads from 15 feet to 25, 30, or 50 feet is not justified. The city wants low profile vegetation to generate shadows along the shoreline. And yet, they want sunlight under docks adjacent to shorelines. That's not being consistent. Any low profile vegetation would have to be less than 3 feet in height not to block the view of the homeowner. It will not generate enough shadow area to enhance fish habit. It takes trees. A building 25 feet tall with a 15-foot setback does the same thing. To plant trees along the shoreline blocks views and decrease property values. Trees in the side yard setback and not in the shoreline setback are desirable.

5. The city's requirements for 30% of properties for view corridors are contrary to many of the city's desires. The city wants trees. I ask, does the city want greater side yard setback without trees and without morning shadows for the shoreline?

6. Instead of being straightforward and understandable, the proposed regulations allow for judgmental and subjective opinions anytime someone wants to build or remodel their single-family home. It's not required for other single-family homes in the city. By requiring either a SDP (Substantial Development Permit) or a CUP (Conditional Use Permit), the city is opening the door for a discretionary, possibly confrontational, and an uncertain process that regulates single-family homes. It increases the cost the applicant has to pay and the amount of time it takes to complete the process.

Thanks for listening to my concerns. I wish you the best over the holidays.

Sincerely,

Robert L. Style
6735 Lake Washington Blvd, NE
Kirkland, WA 98033
827-0216
rlstyle@aol.com

Teresa Swan

From: Jim Tosti [jetosti@msn.com]
Sent: Wednesday, December 10, 2008 2:18 PM
To: Teresa Swan

Miss Swan,
I am a SPO that lives in Kirkland and have attended a couple of the PC meetings. I am an area wide developer and have been involved in these kinds of actions for many years. At one of the past PC meetings I requested a stakeholder's meeting and I have not heard back from the PC on this request. Since then I have requested two more times through Paul Stewart for a stakeholder's meeting and have heard nothing from him directly but have heard through Mark Nelson that he wants to limit the stakeholder number for a meeting.
My view on the above is quite simple, if the City or any of its commissions, councils, or representatives continues to refuse to let the PC have a stakeholders meeting or in any way tries to limit the number of stakeholders in a meeting then our group will take immediate action to force a stakeholders meeting.

I worked closely with the City of Sammamish on their moratorium in a situation somewhat like this and we were able to fashion an agreement between the PC and the stakeholders that we could both support at the council level. This is what we should be doing here. You need to be able to explain in a rational manor what your supportable needs are. At this point no shoreline owner understands or supports any of the reports you are basing your action on. In short, there is a large disconnect between what the PC is looking at doing by law and what may actually be accomplished in the field.

The single fact that the city exempted themselves from the kinds of regs that would apply to the shoreline owners is a show of bad faith on the City's part as is being seen that way citywide to those that are involved in this project.

I sincerely suggest that the City change its attitude towards the shoreline property owners and makes a sincere effort to bring us into these meetings as a valuable resource. This is the only way we are going to be able to get an update completed without untold amounts of money being spent on legal representation.

Jim Tosti

ATTACHMENT 22
HCC 2/23/09

RECEIVED
DEC 09 2008
AM PM
PLANNING DEPARTMENT
BY

Eastside Audubon
your connection to nature

birding
conservation
education

December 8, 2008

Planning Commission
City of Kirkland
123 Fifth Avenue
Kirkland, WA 98033

Re: Shoreline Management Plan Update

Dear Commissioners,

Eastside Audubon strongly endorses the concept of "no-net-loss" of shoreline ecological function and that the existing shoreline ecological function should remain the same or be improved over time.

To that end we urge the City of Kirkland to adopt the updated Shoreline Management Plan ("SMP") consistent with the Washington State Department of Ecology ("DOE") guidelines.

Key elements of the updated SMP to be implemented for new development or substantial redevelopment should include:

- Increased setbacks from the shorelines, streams and wetlands.
- Shoreline restoration that is appropriate to the existing site conditions, which could include bulkhead removal and replacement with soft structural shoreline stabilization measures.
- Other restoration techniques may include placement of gravel in front of an existing bulkhead or planting of native vegetation.
- Incorporation of natural shoreline vegetation planted at the shoreline edge.
- Revisions for piers and docks to make them more fish friendly.
- Emphasis on shared docks to reduce new structures in the water.
- New standards for application of herbicides, pesticides and fertilizers near shorelines.

Urban shoreline is only one small piece of the extensive area used by salmon, and yet it is the least survivable area for the species. These

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proposed changes will greatly increase the habitability of Kirkland's shorelines for salmon and other wildlife who de
pend on this habitat. Regulations for every other zone where salmon exist are being changed to reflect the need and desire to restore habitat to survivable conditions. It's time to update shoreline regulations to be consistent with this trend.

Sincerely,

Tim McGruder
Conservation Chair

December 10, 2008

Kirkland Planning Commission
c/o Teresa Swan, Senior Planner
Kirkland Planning Department
23 5th Avenue
Kirkland, Washington 98033

Sent by email to: tswan@ci.kirkland.wa.us

Re: Kirkland Shoreline Master Program Update

Dear Planning Commission:

Futurewise appreciates the opportunity to comment on several important issues currently under discussion by the Planning Commission as the City of Kirkland develops its Shoreline Master Program (SMP) update. Futurewise is a statewide citizens group that promotes healthy communities and cities while protecting working farms, forests, and shorelines for this and future generations. A substantial number of our members live in the City of Kirkland.

We commend your planning staff for doing a very thorough job of describing several important issues you have been dealing with lately. As they have pointed out in previous materials, three of these issues are interrelated and need to be considered together. They are:

- Shore Stabilization – particularly bulkheads.
- Vegetative Buffers
- Restoration of degraded ecological functions

The reason these are interrelated is due to the highly degraded nature of Kirkland's waterfront shoreline. This degradation has happened over the course of 30 years or more, in spite of the Shoreline Management Act requirements to protect shorelines. It is a common situation in most cities in the state, and is major reason why restoration is now required for all updated Shoreline Master Programs. The City's restoration plan needs to include both incremental small-scale restoration in the course of permitting, and project restoration more typically undertaken by resource agencies and organizations (though on occasion, individual landowners may also do a restoration project).

The strategy for incorporating restoration into the permitting process is an important consideration that has been one of the subjects of the staff memos for the last few Planning Commission meetings. We understand it has been the cause for much public opposition, as well.

<u>We are writing this letter</u> to emphasize the importance of doing the right thing in developing the strategy for protecting and restoring Kirkland's Shorelines, particularly since Lake Washington is a Shoreline of Statewide Significance which must receive special consideration in your SMP.

The protection and restoration of shorelines needs to use current science and technology, follow a line of logic that makes sense, and is implemented by a clear and understandable system. Staff has laid out several options for each subject area. Using these options one can develop a restoration strategy. We

814 Second Avenue Suite 500 Seattle, WA 98104 www.futurewise.org phone 206 343-0681 fax 206 709 8218

have thoughts on such a strategy that we would like to share, as well as some important additional points we would like to make on related issues.

In developing a restoration strategy to use in the Shoreline Regulations, we recommend the following:

1. **Establish what the science indicates is needed to protect ecological function.** This is one major issue we see that has not yet been dealt with.

   The current standards in the SMP are 15 feet. These widths do not match what the science says is needed to protect near-shore and riparian functions, and it is imperative that the buffers be based on science. The science indicates that widths more in the range of 100 feet are needed; not considering providing wildlife habitat for even modest sized species.[1] The staff memos and attachments do a good job of describing the protection functions that buffers perform; however, the 20-50 foot buffer widths discussed in the staff memos also need to be changed to be based on science. The discussion of buffer widths in the staff memos are based on land use and existing conditions. While these are important considerations, the science on the buffer widths needed to protect fish and wildlife habitats must also weight heavily in the decision making process.

   In addition, the buffer options in the staff memos use an approach of allowing higher intensity uses to have smaller buffers than lower intensity uses. Such an approach is opposite to the scientific findings that more intense uses need larger buffers. This approach in the buffer options needs to be changed, with the only exception being for water-dependent and water-related uses (there is no reason that water-enjoyment uses can't meet the buffer and maintain their enjoyment function).

   A science-based buffer width is important, even in already developed areas, because it identifies the area where restoration needs to be considered. It also establishes the area where additional encroachments need to be thoughtfully designed and carefully considered, not assumed to be automatically acceptable. It does not mean that the entire buffer width has to be restored to original condition.

2. Acknowledge that a buffer that is degraded cannot protect the shoreline or critical area from the impacts of an adjacent use. This is one reason that restoration is needed in the regulations. For permit approvals, degraded buffers need to be restored as much as possible.

3. Acknowledge that existing development can continue to exist and operate without additional permits and without performing restoration. It is new development (on vacant land, redevelopment, expansions, etc.) that would be subject to the restoration requirements. This is a common concern for property owners in all SMPs and can be effectively dealt with through public education. Given shoreline land costs and the size and

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[1] The maintenance of large woody debris requires 100 to 150 foot wide buffers. K. L. Knutson & V. L. Naef, *Management Recommendations for Washington's Priority Habitats: Riparian* p. 164 (Wash. Dept. Fish and Wildlife, Olympia WA: 1997). Available at: http://wdfw.wa.gov/hab/ripxsum.htm This is important to maintaining habitat along the lake. For example, coho salmon smolts seek cover near large woody debris during migration. Tom Kahler, The Watershed Company, and Martin Grassley and David Beauchamp, Washington Cooperative Fish & Wildlife Research Unit, *Final Report: A Summary of the Effects of Bulkheads, Piers, and Other Artificial Structures and Shorezone Development on ESA-listed Salmonids in Lakes* p. 9 (Prepared for the City of Bellevue: 13 July 2000). Available at: http://www.ci.bellevue.wa.us/pdf/Utilities/dock_bulkhead.pdf. Wildlife habitat generally requires buffers of 100 to 200 feet wide, with wider buffers needed for some wildlife. *Management Recommendations for Washington's Priority Habitats: Riparian* p. 165 – 67.

cost of new construction on shorelines, restoration costs will be a very small fraction of the total project costs.

4. Distinguish between new development that can meet the buffer and existing development already within the buffer. Two different approaches are needed.

5. Where the buffer can be provided, degraded conditions should be addressed, and encroachments into the buffer need to meet the Shoreline Variance criteria, except for water-dependent and water-related uses, which have to be in the buffer by their nature.

6. New permits for existing development already in the buffer also need to address degraded conditions; however, the existing facilities mean that the approach needs to be slightly different. The restoration approach will be very site specific, and the buffer would be restored as much as possible, which would need case-by-case consideration. Options could include reduction of lawn area, replanting buffer areas, fill removal or other grading options, etc. Most improvements to existing development that lie within the buffer would typically meet the Variance criteria, but such review will also ensure that the development adequately provides mitigation for increased impacts and increased intensity of use, rather than the historic practice of continual and gradual encroachment with little or no review under a Shoreline Exemption.

7. Two options for shore stabilization were described in the staff memo. The first option included the use of a Conditional Use Permit for hard stabilization methods, while soft methods could use a Substantial Development Permit or, most typically, a Shoreline Exemption for residential bulkhead. The second option treated all stabilization as a Substantial Development Permit, and thus almost all bulkheads would be done under a Shoreline Exemption.

   Given the high percentage of bulkheads on Kirkland's shorelines, it is critically important to halt the further armoring of the remaining unarmored shoreline segments. If hard stabilization methods are to be used, they need to be reviewed through a formal process, not a Shoreline Exemption. This would have to be the Conditional Use Permit.

   Similar to the idea of mitigation sequencing (i.e. avoidance and minimization), a preference list needs to be incorporated into the shore stabilization provisions to emphasize the use of softer measures over harder measures, as follows:
   - revegetation
   - bio-engineering and wood structures
   - rock structures
   - concrete structures.

   One of the staff memo options included the use of development/expansion thresholds that would trigger the need to undertake bulkhead restoration. We support such an idea. It is also consistent with the recommendations of the *Final Report: A Summary of the Effects of Bulkheads, Piers, and Other Artificial Structures and Shorezone Development on ESA-listed Salmonids in Lakes* which calls for the removal of bulkheads in favor of shoreline restoration measures such as low-gradient beaches and planting native vegetation to both protect upland properties and protect salmon habitat in Lake Washington.[2] These designs have been successfully used in recovery efforts on the Great Lakes.[3]

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[2] Tom Kahler, The Watershed Company, and Martin Grassley and David Beauchamp, Washington Cooperative Fish & Wildlife Research Unit, *Final Report: A Summary of the Effects of Bulkheads, Piers, and Other Artificial*

8. A similar issue that will come up in the update is that of docks and piers. The percentage of properties with docks or piers is roughly the same as for those with bulkheads. While docks and piers have direct impacts in the water, they also have land-based components that equally impact the land within shoreline jurisdiction. Like bulkheads, it is critically important to protect the remaining segments of shoreline without docks or piers. Indeed, the *Final Report: A Summary of the Effects of Bulkheads, Piers, and Other Artificial Structures and Shorezone Development on ESA-listed Salmonids in Lakes* recommends consideration of "of 'a no new piers' policy as the best option for protecting fish and fish habitat. Encourage the use of floats or buoys instead."[4] The report recognizes that this may not be politically possible and recommends as a backup no net increase in overwater coverage. In order to build a new dock, existing docks would have to be slimmed down to to compensate for the increased coverage. So docks and piers should have carefully crafted standards to protect Lake Washington from their significant impacts. We have the following recommendations:

   A. Limit use: Prohibit docks and piers associated with non-water oriented uses, except for single family residences.

   B. Require that any new area of docks and piers be mitigated by the removal of like area from another dock or pier (for example removal of a dilapidated dock, or a reduction of an overly-large dock).

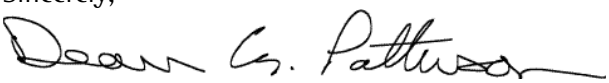
   C. Include design standards for docks and piers similar to those of the draft King County SMP; particularly as they relate to repair and replacement.

   D. New and expanded docks and piers should be reviewed through a Conditional Use Permit.

   E. As with other development, docks and piers should include restoration as much as possible.

Thank you for the opportunity to provide our thoughts to you. We strongly support your Planning Staff's effort to bring these difficult issues to light, and wish this to be a successful update effort. We also appreciate the many hours that the Planning Commissioners are devoting to this important project. It is easy to forget that you are all volunteers. Thank you for your important work. If you require more information please contact me at telephone (509) 823-5481 or email dean@futurewise.org.

Sincerely,



Dean Patterson
Shoreline Planner
Futurewise

Structures and Shorezone Development on ESA-listed Salmonids in Lakes p. 9 (Prepared for the City of Bellevue: 13 July 2000).

[3] *Id.*

[4] *Id.* at p. 51.

Teresa Swan

From: Daved [Daved@waterfrontconstruction.com]
Sent: Friday, January 02, 2009 7:30 AM
To: CLAUSON Stacy A; Paul Stewart; Teresa Swan
Cc: Mark Nelson; Richard Sandaas; vanskamok@verizon.net
Subject: COMMENTS ON 12/3/08 SMP PACKET
Attachments: Kirkland SMP Response 12-31-2008.doc

Hi Stacy, Paul and Teresa,

Here are comments for the Planning Commission from the latest packet. Because the City (and DOE) seems to be placing such a strong emphasis on WAC 173-26-231 Shoreline Modifications I have devoted a lot of time and space to that particular section. I think there is room for flexibility by local governments for total or partial bulkhead replacements and do not see where DOE has adequately justified requiring a geotechnical report all of a sudden since these are actually taken from 2003 guidelines which they have never enforced although they could have through the comment and appeal process at local, state and federal levels. To all of a sudden place the requirement for geotechnical justification on the local government and property owner or openly deny bulkhead replacements with or without the report is unreasonable.

Please take special note that the WAC allows property owners to protect their property also although this has never been mentioned by DOE or at any of the meetings I have attended.

Thanks,
Dave Douglas
Permit Coordinator
Waterfront Construction, Inc.

WATERFRONT

December 31, 2008

From: David Douglas, Waterfront Construction, Inc.
To: City of Kirkland
Attn: Paul Stewart
Stacy Clauson
Teresa Swan
Planning Commission Members

Ref: COMMENTS TO DECEMBER 3, 2008 PLANNING COMMISSION MEMORANDUM REGARDING SHORELINE MASTER PROGRAM UPDATE

Dear City of Kirkland Staff,

I have reviewed the most recent Planning Commission packet dated December 3, 2008 and provide the comments below.

1) Page 3 of 35
ADDRESSING INDIVIDUAL AND CUMULATIVE IMPACTS AND SHORELINE RESTORATION
Purpose
   a) "No net loss" continues to be an ever-evolving term and has been extrapolated to place the responsibility of "net gain" or "restoration" on property owners as the process moves forward and DOE is challenged. This term as defined by DOE means "the existing condition of shoreline ecological functions should remain the same or be improved over time". Please do not lose sight of this meaning for bulkheads, piers and other shoreline development, especially when it involves redevelopment.

   b) Improving shoreline ecological functions to enhance habitat for salmon has been taking place for a long time and in most cases local policy has not been the major contributing factor for this improvement. It has been WA Dept of Fish and Wildlife and the Army Corps of Engineers regulatory processes, with DOE standing on the fringes to ensure compliance with local SMP's that have driven improvements of salmon habitat. Are sweeping changes to local SMP's necessary or simply routine to further sustain the agency and remove local control which is currently working well in combination with state and federal regulatory review? Each time a new project is placed before local, state and federal regulatory agencies, especially for redevelopment, there are vast improvements. Is the wheel really broken and need fixed? Please take time to understand the entire regulatory process.

      Please note that it is only Sockeye Salmon that reportedly spawn in Lake Washington so we are mainly concerned with salmon migration to rivers and streams. Documented sockeye spawning maps used by WDFW have not been updated for over 20 years and WDFW does not have a budget to do an updated inventory on the lake so they use old information to regulate inwater work.

   c) Restoration is now included in the evaluation of cumulative impacts even though the state does not provide specific guidance on how and to what extent to include restoration. This leaves it in the city's hands to do as much or as little "beyond what is required" as they wish. Once again the "no net loss" definition does not include restoration.

What does this mean for Kirkland?

a) Longer piers to provide access to deeper waters are viewed as an adverse impact as it is read in context. In reality, a longer pier in deeper water reflects an improvement because even though it does typically require additional overwater coverage, it relocates human and boating activities away from the most critical nearshore area. This is highly favorable. Wider platforms and pier sections over deeper water have fewer impacts on migration and aquatic vegetation.

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b) More flexible standards, especially for redevelopment of piers and bulkheads, will provide greater opportunity for "no net loss', "net gain" and restoration". I cannot comment on residential construction because it is not my specialty, but to take a practical and reasonable approach by individually comparing what exists against what is proposed seems to be the least complex way of achieving the "no net loss" mandate. Linking individual property owners to what exists elsewhere and using that as a means for not properly crediting them with measurable improvements on their own property is unreasonable. Once again the state does not prescribe how the regulations should change so this leaves it in the city's hands to do as much or as little "beyond what is required" as they wish. The "no net loss" mandate can be met with little or no changes.

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Additional Information- Restoration Feasibility

a) Please provide examples for property owners of what the City refers to in the term "soft structural stabilization measures". It says these designs use large boulders, log and other features to attenuate wave energy and stabilize the shoreline. If large the boulders are proposed waterward of the OHWL are they considered obstructions to fish migration, will they provide ambush opportunity for predator fish, do they stop the natural drift of sediment, and does wave deflection cause injury to fish? Other regulatory agencies have not allowed this unless they are used to shelter emergent vegetation in very shallow water.

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a) It appears that the biological consultant may have identified individual properties according to restoration potential. One would also presume the properties with a high restoration potential will have the most difficult time getting new or replacement bulkheads approved and those with moderate or low restoration potential would have an easier time. Will the city provide each of the identified property owners with their "restoration potential" so they know where they stand for possible future development or redevelopment? The City continues to allow the biological consultant to refer to and promote itself as a company that has extensive shoreline restoration experience and while this is appreciated it should be acknowledged that there are many biological firms and marine contractors that offer these same services.

Other jurisdiction approaches

a) The City should exercise caution in gauging the approach of other cities because each has a different and unique scenario. In addition, updated SMP's will be challenged and face the possibility of legal action. Should one of the cities further along in the process experience this it would cause a domino effect for all subsequent jurisdictions.

Page 8 of 35 Matrix- Action at or Waterward of the Ordinary High Water Line

1. Construction of Bulkheads

a) Please provide an updated and current map of documented sockeye spawning areas along the Kirkland shoreline showing where sockeye currently spawn and where future restoration will enhance this opportunity. This will provide the city and property owners with accurate information in regard to this element listed as a development impact. There does not appear to be any updated documented sockeye

spawning maps for Lake Washington or Lake Sammamish available from WDFW so if this is listed as an impact, accurate information should be provided to city leaders and property owners.

b) Each of the 3 opportunities listed are already being accomplished through the existing biologists and experienced staff at local, state and federal agencies. Why does an SMP need to further address this rather than requiring that proof of other required permits have been completed at the time of the building permit review process?

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2. Construction of Piers

a) The relatively inconclusive development impacts from the construction of piers listed have been known and used for years by state and federal regulatory agencies to evaluate and direct projects. The impacts listed have never been quantified as a part of the "Best Available Science" process but have been widely accepted as factual. As a result, hundreds of pier, boatlift and moorage cover projects have been reviewed and approved over the past 5 to 10 years, with the vast majority resulting in an improvement to the aquatic environments and nearshore area.

b) Using the SMP as an opportunity to reduce overwater coverage through size minimization of replacement overwater structures, use of grating, and other impact minimization measure not mentioned is understandable. If reducing the size and number of inwater structures can be accomplished without thwarting the rights of private property owners it should be pursued. If DOE is requiring dimensional standards it is suggested that the City recommend the maximum possible and as the Corp RGP-3 continues to be referenced it should also be noted that there are other processes available to attain federal approval and there have been main walkways approved at 6 feet wide and ELLS and platforms approved at 10 feet wide in Lake Washington recently. These are typically through a redevelopment where the proposed structure was a vast improvement over the existing conditions but the main point is if the city adopts the overly restrictive dimensional standards DOE is trying to push on them it will remove any incentive for existing piers to be removed. Existing piers can be maintained and repaired under an exemption so if an alternative process for redevelopment is not adopted the chance for improvement and an overall "no net loss" is unlikely.

The city should inventory the existing overwater coverage of all private and commercial piers to adequately assess existing conditions. The replacement of existing piers with the same or smaller sized piers, grated surfaces, elevated higher above the water surface, using glu-lam beams for longer spans between piles, smaller diameter and less piles, along with approved wood preservative treatments should all be considered when evaluating a redevelopment project. Placing an emphasis only on the size of a replacement pier does not take all aspects into account.

Flexible size and dimensions for new piers should also be considered since the RGP-3 DOE is promoting contains recommended guidelines and less than 5% of approved projects have met the overly strict standards.

NOTE: IT IS VITAL THAT A TOTALLY SEPARATE PROCESS BE DEVELOPED FOR THE REDEVELOPMENT OF EXISTING PIERS AND OVERWATER STRUCTURES. DOE HAS ACKNOWLEDGED THAT REPLACING AN EXISTING PIER, REGARDLESS OF WHETHER THE NEW PIER ALIGNS WITH THE DEVELOPMENT STANDARDS IN THE RGP-3, CAN RESULT IN "NO NET LOSS". THIS CAN BE EASILY PROVEN AND IT WE MUST REMEMBER THAT THE RGP-3 WAS NOT WRITTEN TO ARRIVE AT A "NO NET LOSS". ARBITRARILY CHOOSING TO USE THE RGP-3 TO ARRIVE AT A "NO NET LOSS" IS UNFAIR TO THOSE WHO HAVE EXISTING STRUCTURES THEY ARE REMOVING WHEN COMPARED TO THOSE WHO ARE PROPOSING TOTALLY NEW STRUCTURES. THIS WILL HAVE A DIRECT IMPACT ON PROPERTY VALUES.

All agencies recommend that the main section of piers along with moorage covers and boatlifts be located further from the shoreline and in deeper water. This encourages all human and boating activity to be away from the most critical nearshore area. Longer walkways mean more coverage. Overly strict dimensional standards, for new or redeveloped structures, will push reasonable projects into the Shoreline Variance process and place decisions into the hands of the state and remove local control.

Take time to review some recently approved projects which will show that many recent projects reflect size reduction and vast improvements over existing conditions.

D. Conceptual Policy Options for Shoreline Restoration

a) Linking shoreline restoration with new development or redevelopment of property is very costly and involves permitting from agencies that would not be involved in residential development.

b) Shoreline vegetation standards from the perspective of piers and bulkheads are already a major part of project approval.

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5. In-Water Activity

a) Proposed regulations: Best Management Practices are currently practiced for all inwater and overwater construction activities as required by state and federal regulatory agencies and as an accepted industry practice. In addition, there are specific and general conditions that accompany each state and federal permit depending upon the project scope. There are also area specific inwater work windows throughout the Puget Sound's fresh and salt water bodies to protect fish migration and spawning imposed by WDFW and the Corps of Engineers.

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Public Comments

B. Response to Specific Issues

- Provisions for replacement bulkheads.

  The City and DOE continue to point out that standards in the SMP must respond to WAC requirements for "no net loss" and over the years the standards for justifying a protective bulkhead common to a single family residence has become increasingly stringent based on ever changing information from regulatory agencies. In 2002 when I started with Waterfront Construction new and replacement bulkheads were approved with little or no resistance from local, state and federal agencies with the only requirement being that a residence must be on site. Currently local governments under the direction of the state have placed additional restrictions for new and replacement bulkheads using limited scientific data and placing the onus on the property owner through geotechnical reports required to predict the future erosion rates that could be nullified through a single storm event leaving local governments in the vulnerable position of turning down an application for new or replacement bulkheads as a result of state requirements even when a "no net loss" or in many cases a "net gain" over existing shoreline ecological functions can be established. Essentially, the expense of a geotechnical report is being placed on the property owner to justify a structure that would otherwise be categorically exempt from the Shoreline Substantial Development Process. Geotechnical engineers are also being placed in a very vulnerable and legally compromising position by being asked to predict erosion rates. From 2002 to present there has been limited new information regarding the effects of bulkheads discovered and it has not prevented the approval of new or replacement bulkheads in fresh water lakes by local, state and federal regulatory agencies. Salt water applications differ greatly due to tidal activity and habitat and location of shoreline development so they cannot be similarly applied in most cases.

A lot of emphasis has been placed on WAC 173-26-231 regarding shoreline stabilization. I have reviewed this section and while it is quite ambiguous and a little contradictory it appears to provide a lot of flexibility for local governments to boldly defend a property owner's right to provide shoreline protection for residence and property. I have inserted responses to each statement from this section of the WAC as needed to provide Planning Commissioners and City Council Members with information a the design and permitting perspective through the experience of a non-agency applicant who has handled hundreds of projects since this information was made effective on 1/172004.

WAC 173-26-231
Shoreline Modifications

(1) ***Applicability.*** Local governments are encouraged to prepare master program provisions that distinguish between shoreline modifications and shoreline uses. Shoreline modifications are generally related to construction of a physical element such as a dike, breakwater, dredged basin, or fill, but they can include other actions such as clearing, grading, application of chemicals, or significant vegetation removal. Shoreline modifications usually are undertaken in support of or in preparation for a shoreline use; for example, fill (shoreline modification) required for a cargo terminal (industrial use) or dredging (shoreline modification) to allow for a marina (boating facility use).

The provisions in this section apply to all shoreline modifications within shoreline jurisdiction.

(2) ***General principles applicable to all shoreline modifications.*** Master programs shall implement the following principles:

(a) Allow structural shoreline modifications only where they are demonstrated to be necessary to support or protect an allowed primary structure or a legally existing shoreline use that is in danger of loss or substantial damage or are necessary for reconfiguration of the shoreline for mitigation or enhancement purposes.
Structural shoreline modifications are allowed.

(b) Reduce the adverse effects of shoreline modifications and, as much as possible, limit shoreline modifications in number and extent.
Structural shoreline modifications which are allowed should result in reducing adverse effects and should be limited in number and extent.

(c) Allow only shoreline modifications that are appropriate to the specific type of shoreline and environmental conditions for which they are proposed.
Structural shoreline modifications which are allowed should be appropriate for the shoreline and environmental conditions for which they are proposed.

(d) Assure that shoreline modifications individually and cumulatively do not result in a net loss of ecological functions. This is to be achieved 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.
Structural shoreline modifications which are allowed should not result individually or cumulatively in a net loss of ecological functions.
Note: This supports the replacement of existing bulkheads or other structures with similar structures that will result in less impacts and "no net loss" compared to existing conditions.

(e) Where applicable, base provisions on scientific and technical information and a comprehensive analysis of drift cells for marine waters or reach conditions for river and stream systems. Contact the department for available drift cell characterizations.
Does not apply to fresh water lake applications.

(f) Plan for the enhancement of impaired ecological functions where feasible and appropriate while accommodating permitted uses. As shoreline modifications occur, incorporate all feasible measures to protect ecological shoreline functions and ecosystem-wide processes.
Allow for permitted uses but use scientific and technical information to enhance impaired ecological functions and use all feasible measures to protect ecological shoreline functions individually and ecosystem-wide.
Note: Current designs of shoreline stabilization structures classified as hard reflect a softer shoreline than existing vertical bulkheads. Rock bulkheads are installed at a 3:1 batter to provide a softer design and very few vertical concrete bulkheads are installed along fresh water lake shorelines. Existing bulkheads replaced in the same location or slightly, often with beaches or pocket coves result in a "no net loss" over existing conditions. If existing conditions on an individual site are considered "impaired" a more environmentally friendly designed bulkhead, even if it consists of rock, would contribute to an overall improvement.

(g) Avoid and reduce significant ecological impacts according to the mitigation sequence in WAC 173-26-201 (2)(e).
The following section of WAC 173-26-201 referencing mitigation sequencing is provided.
(A) Avoiding the impact altogether by not taking a certain action or parts of an action;
(B) Minimizing impacts by limiting the degree or magnitude of the action and its implementation by using appropriate technology or by taking affirmative steps to avoid or reduce impacts;
(C) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
(D) Reducing or eliminating the impact over time by preservation and maintenance operations;
(E) Compensating for the impact by replacing, enhancing, or providing substitute resources or environments; and
(F) Monitoring the impact and the compensation projects and taking appropriate corrective measures.

This section acknowledges that new impacts will be unavoidable and approved while outlining the preferred method for limiting the impacts caused.
Note: For new shoreline stabilization letter A would be the obvious choice using the most environmentally friendly design possible.
For projects where a large percentage of the shoreline is hardened with existing vertical concrete or rock bulkheads, letters B, C, E, and F would be most appropriate. Letter D may be achievable in some cases on a larger scale through total site development that could support total removal of existing shoreline stabilization. On a case-by-case basis the required mitigation sequencing in WAC 173-26-201 can be achieved by local government.
Each project where a hard shoreline stabilization structure is proposed to replace an existing one, the result is always an improvement over existing conditions and will meet the "no net loss" requirement. The existing condition of shoreline ecological functions would typically reflect a "net gain" but at a minimum would remain the same or be improved over time whereby meeting the DOE goal for no net loss".

Please note that new or replacement shoreline stabilization complies with one or more of the above mitigations as listed below:
A) Areas where shoreline stabilization and erosion protection are left untouched,

B) **New and replacement shoreline stabilization measures, whether hard or soft, are designed in an environmentally friendly manner to limit or avoid impacts to the greatest extent possible,**

C) **Most replacement bulkheads or other shoreline stabilization measures meet this mitigation sequence by improving conditions and resulting in a "net gain" of shoreline ecological functions.**

E) **Each shoreline stabilization project, whether new or replacement, includes mitigation, impact minimization and conservation measures designed to compensate for impacts. Native riparian and emergent vegetation, restoration of natural shoreline, pocket coves, and nearshore fill to provide shallow fish migration and spawning habitat are some examples.**

F) **Ongoing maintenance and inspection occur for each project. Planting plans approved by state and federal regulatory agencies are monitored for a 5 year period requiring 100% survival of all vegetation after 3 years and 80% after 5 years. Initial and annual reports and photos are submitted to WDFW and the Army Corps of Engineers.**

(3) ***Provisions for specific shoreline modifications.***

(a) **Shoreline stabilization.**

(i) **Applicability.** Shoreline stabilization includes actions taken to address erosion impacts to property and dwellings, businesses, or structures caused by natural processes, such as current, flood, tides, wind, or wave action. These actions include structural and nonstructural methods.
The WAC shoreline stabilization includes actions taken to address erosion impacts to property and dwellings.
Note: Very little is said regarding property as most attention is directed toward protecting a residence but this clearly lists a property owners' right to the protection of property.

Nonstructural methods include building setbacks, relocation of the structure to be protected, ground water management, planning and regulatory measures to avoid the need for structural stabilization.
Note: These types of nonstructural methods are typically addressed through zoning and code regulations.

(ii) **Principles.** Shorelines are by nature unstable, although in varying degrees. Erosion and accretion are natural processes that provide ecological functions and thereby contribute to sustaining the natural resource and ecology of the shoreline. Human use of the shoreline has typically led to hardening of the shoreline for various reasons including reduction of erosion or providing useful space at the shore or providing access to docks and piers. The impacts of hardening any one property may be minimal but cumulatively the impact of this shoreline modification is significant.
Note: While shoreline hardening has receive much scrutiny, it is important to remember that each has been reviewed and approved by local, state and federal regulatory agencies responsible for the protection of natural resources and fish and wildlife. Changes in design standards for bulkheads, docks and piers have resulted in nearshore and overwater structures that meet state and federal guidelines regarding impacts to listed species and critical habitat. Each of the soft and hard shoreline stabilization measures constructed at or below the OHWL has received extensive review and approval by local, state and federal agencies based on current regulatory standards. The WA Department of Ecology has the same review, comment and appeal opportunity offered to all regulatory agencies on each project and has rarely commented on or opposed any of the projects approved for residential property owners in Kirkland and throughout the Puget Sound. This is despite the fact that the new SMA guidelines were published over 5 years ago in 2003. If hard shoreline stabilization measures were as impacting as we are told why hasn't DOE take a more aggressive approach in stopping them rather than waiting until the burden can be placed on local governments through their SMP updates?

Shoreline hardening typically results in adverse impacts to shoreline ecological functions such as:

• Beach starvation. Sediment supply to nearby beaches is cut off, leading to "starvation" of the beaches for the gravel, sand, and other fine-grained materials that typically constitute a beach.
Note: If substantiated, this is a salt water issue and not applicable to fresh water lakes.

• Habitat degradation. Vegetation that shades the upper beach or bank is eliminated, thus degrading the value of the shoreline for many ecological functions, including spawning habitat for salmonids and forage fish.
Note: While this may have been true 10 or 20 years ago, all shoreline stabilization projects include native riparian and/or emergent vegetation resulting in vast improvement over existing conditions. The removal of bulkheads and restoring of a natural shoreline may result in no vegetation being installed or if installed it is often further from the shoreline. Bulkheads actually allow and encourage the installation of riparian vegetation within a few feet of the water's edge. If people cannot replace bulkheads they may be less likely to install native vegetation near or in the water.

• Sediment impoundment. As a result of shoreline hardening, the sources of sediment on beaches (eroding "feeder" bluffs) are progressively lost and longshore transport is diminished. This leads to lowering of down-drift beaches, the narrowing of the high tide beach, and the coarsening of beach sediment. As beaches become more coarse, less prey for juvenile fish is produced. Sediment starvation may lead to accelerated erosion in down-drift areas.
Note: If substantiated, this is a salt water issue and not applicable to fresh water lakes.

• Exacerbation of erosion. The hard face of shoreline armoring, particularly concrete bulkheads, reflects wave energy back onto the beach, exacerbating erosion.
Note: Current design standards and 3:1 battering (laying back) of rock bulkheads limits wave deflection and exacerbation of erosion. They also help to decrease oversplash into the upland area to further control erosion. The addition of nearshore fill to assist in wave dissipation further from the toe of the bulkhead can eliminate deflection altogether. As stated, vertical concrete bulkheads tend to promote a lot of deflection.

• Ground water impacts. Erosion control structures often raise the water table on the landward side, which leads to higher pore pressures in the beach itself. In some cases, this may lead to accelerated erosion of sand-sized material from the beach.
Note: If substantiated, this is a salt water issue and not applicable to fresh water lakes. Using modern techniques, new and replacements bulkheads along fresh water lakes do not attribute to a rise in the water table and we have never been asked by local governments to address this as an issue of concern.

• Hydraulic impacts. Shoreline armoring generally increases the reflectivity of the shoreline and redirects wave energy back onto the beach. This leads to scouring and lowering of the beach, to coarsening of the beach, and to ultimate failure of the structure.
Note: If installed improperly and not appropriately "keyed in" this can be true. This is a problem when bulkheads have not been properly installed, especially in salt water where wave activity is less predictable. A properly installed bulkhead along with the standard requirement for nearshore fill to offset assumed impacts should not result in this happening. Properly installed bulkheads are not destined for failure and there are many bulkheads that were built 40 or more years ago still in place and showing no signs of failure. Longevity is a combination of location and construction technique and while no guarantees can be made a properly installed bulkhead should provide several decades of protection.

• Loss of shoreline vegetation. Vegetation provides important "softer" erosion control functions. Vegetation is also critical in maintaining ecological functions.
Note: Bulkhead replacements typically result in a gain of shoreline vegetation through mitigation and in many cases non-armored shorelines are overgrown with non-native and invasive vegetation. Bulkheads provide the opportunity for native vegetation in the form of plants, shrubs and even large trees to be planted close to the water and provide shade, leaf litter and insects for fish. When properly installed and combined with nearshore fill and native vegetation a hard shoreline stabilization measure results in an improvement in ecological functions.

• Loss of large woody debris. Changed hydraulic regimes and the loss of the high tide beach, along with the prevention of natural erosion of vegetated shorelines, lead to the loss of beached organic material. This material can increase biological diversity, can serve as a stabilizing influence on natural shorelines, and is habitat for many aquatic-based organisms, which are, in turn, important prey for larger organisms.
Note: If substantiated, this is a salt water issue and not applicable to fresh water lakes.

• Restriction of channel movement and creation of side channels. Hardened shorelines along rivers slow the movement of channels, which, in turn, prevents the input of larger woody debris, gravels for spawning, and the creation of side channels important for juvenile salmon rearing, and can result in increased floods and scour.
Note: If substantiated, this is a river issue and not applicable to fresh water lakes.

Additionally, hard structures, especially vertical walls, often create conditions that lead to failure of the structure. In time, the substrate of the beach coarsens and scours down to bedrock or a hard clay. The footings of bulkheads are exposed, leading to undermining and failure. This process is exacerbated when the original cause of the erosion and "need" for the bulkhead was from upland water drainage problems. Failed bulkheads and walls adversely impact beach aesthetics, may be a safety or navigational hazard, and may adversely impact shoreline ecological functions. **Note: This is a far reaching statement that may or may not have validity and applies to vertical concrete bulkheads. This is similar to the argument made under Hydraulic Impacts above. Please see those comments regarding properly installed rock bulkheads.**

"Hard" structural stabilization measures refer to those with solid, hard surfaces, such as concrete bulkheads, while "soft" structural measures rely on less rigid materials, such as biotechnical vegetation measures or beach enhancement. There is a range of measures varying from soft to hard that include:

• Vegetation enhancement;
• Upland drainage control;
• Biotechnical measures;
• Beach enhancement;
• Anchor trees;
• Gravel placement;
• Rock revetments;
• Gabions;
• Concrete groins;
• Retaining walls and bluff walls;
• Bulkheads; and
• Seawalls.

Generally, the harder the construction measure, the greater the impact on shoreline processes, including sediment transport, geomorphology, and biological functions.

Note: If substantiated, this is primarily a salt water issue although some aspects could be applied to fresh water lakes.

Structural shoreline stabilization often results in vegetation removal and damage to near-shore habitat and shoreline corridors. Therefore, master program shoreline stabilization provisions shall also be consistent with WAC 173-26-221(5), vegetation conservation, and where applicable, WAC 173-26-221(2), critical areas.
Note: These issues are addressed through the SSDP and SEPA reviews locally and by WDFW and Corps of Engineers at the state and federal regulatory levels. Nearly all shoreline stabilization measure projects involve the removal of some existing vegetation, typically non-native, invasive and/or noxious and the planting of native plants, shrubs and trees. Existing SMP's take vegetation conservation and critical areas into consideration and with the overlapping reviews by the state and federal agencies the result is always an improvement over existing conditions.

In order to implement RCW 90.58.100(6) and avoid or mitigate adverse impacts to shoreline ecological functions where shoreline alterations are necessary to protect single-family residences and principal appurtenant structures in danger from active shoreline erosion, master programs should include standards setting forth the circumstances under which alteration of the shoreline is permitted, and for the design and type of protective measures and devices.

(iii) **Standards.** In order to avoid the individual and cumulative net loss of ecological functions attributable to shoreline stabilization, master programs shall implement the above principles and apply the following standards:

(A) New development should be located and designed to avoid the need for future shoreline stabilization to the extent feasible. Subdivision of land must be regulated to assure that the lots created will not require shoreline stabilization in order for reasonable development to occur using geotechnical analysis of the site and shoreline characteristics. New development on steep slopes or bluffs shall be set back sufficiently to ensure that shoreline stabilization is unlikely to be necessary during the life of the structure, as demonstrated by a geotechnical analysis. New development that would require shoreline stabilization which causes significant impacts to adjacent or down-current properties and shoreline areas should not be allowed.
Note: These are typically addressed through zoning and code regulations.

(B) New structural stabilization measures shall not be allowed except when necessity is demonstrated in the following manner:

(I) To protect existing primary structures:
Note: This may be in direct conflict with and contradictory to the WAC Sections below:

WAC 173-26-231(2)(a) states:
(2) ***General principles applicable to all shoreline modifications.*** Master programs shall implement the following principles:
(a) **Allow structural shoreline modifications only where they are demonstrated to be necessary to support or protect an allowed primary structure or a legally existing shoreline use that is in danger of loss or substantial damage or are necessary for reconfiguration of the shoreline for mitigation or enhancement purposes.**
Note: This indicates that structural shoreline modifications are allowed when they support or protect an allowed primary structure or a legally existing shoreline use that is in danger of loss or substantial damage. Residential development is a legally existing shoreline use. Are other structures that support the primary structure a part of the legally existing shoreline use and therefore also afforded protection?

WAC 173-26-231(3)(a)(i) states:

(3) ***Provisions for specific shoreline modifications.***

(a) **Shoreline stabilization.**

(i) **Applicability.** Shoreline stabilization includes actions taken to address erosion impacts to property and dwellings, businesses, or structures caused by natural processes, such as current, flood, tides, wind, or wave action. These actions include structural and nonstructural methods. **Note: Does this provision of the WAC allow a property owner to use structural and nonstructural methods for the protection of the property itself, regardless of whether the primary structure is threatened? In other words, if a property is being naturally eroded does a property owner have the right to prevent further erosion based on this premise alone? This section of the WAC allows action to be taken to address erosion impacts to *property, dwellings, businesses, or structures.* Out buildings, garages, gazebos, retaining walls, upland rockeries, stairs, and bulkheads are all considered structures so this provision appears to allow a property owner to address erosion impacts to them using structural and nonstructural methods. A property owner's right to protect their property itself may have been overlooked. Do they or do they not have a right to protect their property which in many cases is valued at more than the residential structure ?**

• New or enlarged structural shoreline stabilization measures for an existing primary structure, including residences, should not be allowed unless there is conclusive evidence, documented by a geotechnical analysis that the structure is in danger from shoreline erosion caused by tidal action, currents, or waves. Normal sloughing, erosion of steep bluffs, or shoreline erosion itself, without a scientific or geotechnical analysis, is not demonstration of need. The geotechnical analysis should evaluate on-site drainage issues and address drainage problems away from the shoreline edge before considering structural shoreline stabilization.

Note: A geotechnical report is a costly expense for a property owner. This section of the WAC has been effective since 1/17/2004 but local governments and DOE itself has not required or requested such reports even though many new and enlarged structural shoreline stabilization measures have been approved and constructed since that time. DOE has always had the authority to request and local governments the authority to require these reports if they were considered vital to deciding whether to approve or deny a shoreline stabilization measure, especially in the case of a bulkhead if they are as impacting as believed.

• The erosion control structure will not result in a net loss of shoreline ecological functions.

Note: New erosion control structures, if needed, can usually be designed resulting in a "no net loss of shoreline ecological functions" or offset through mitigation. Replacement erosion control structures can in nearly every case result in meeting DOE's definition of "no net loss of shoreline ecological functions".

(II) In support of new nonwater-dependent development, including single-family residences, when all of the conditions below apply:

Note: I trust non-water dependent development is interpreted to mean those residences or developments which do not include waterfront property but are within 200 feet of the OHWL. If this is referring to single family residences located on the water then it may be an error since they are considered water-dependent uses.

• The erosion is not being caused by upland conditions, such as the loss of vegetation and drainage.

Note: No Comment

• Nonstructural measures, such as placing the development further from the shoreline, planting vegetation, or installing on-site drainage improvements, are not feasible or not sufficient.
Note: No Comment as this is a zoning and code issue.

• The need to protect primary structures from damage due to erosion is demonstrated through a geotechnical report. The damage must be caused by natural processes, such as tidal action, currents, and waves.
Note: As noted above, the WAC allows protection of property and dwellings. The wording in this provision is confusing since it states "the need to protect primary structures from damage in the first sentence and then in the second sentence it says the damage must be caused by natural process … If the intent is to prevent damage then what damage must be caused? Erosion is not damage but a natural process that can lead to damage.

• The erosion control structure will not result in a net loss of shoreline ecological functions.
Note: Please refer to previous comments addressing the issue of "no net loss".

(II) In support of water-dependent development when all of the conditions below apply:
Note: I trust water-dependent development is interpreted to mean single family residences located on waterfront property which are defined as water-dependent uses.

• The erosion is not being caused by upland conditions, such as the loss of vegetation and drainage.
Note: Erosion from tidal action, current or waves should be evident.

• Nonstructural measures, planting vegetation, or installing on-site drainage improvements, are not feasible or not sufficient.
Note: Erosion from tidal action, current or waves should be evident.

• The need to protect primary structures from damage due to erosion is demonstrated through a geotechnical report.
Note: Erosion from tidal action, current or waves is typically evident and does not require a geotechnical report to verify. It is recommended that local governments have staff trained to address such issues in order to save property owner expense. Should the property owner disagree with the opinion of the staff they should hire a geotechnical engineer to prepare a geotechnical report. On the other hand, should DOE disagree with city staff, they should be required to hire a geotechnical engineer at department expense to prepare a geotechnical report. This procedure engages the city as an active part of the process and places the onus on the party who disagrees rather than solely on the property owner.

• The erosion control structure will not result in a net loss of shoreline ecological functions.
Note: Please refer to previous comments addressing the issue of "no net loss".

(IV) To protect projects for the restoration of ecological functions or hazardous substance remediation projects pursuant to chapter 70.105D RCW when all of the conditions below apply:
Note: No Comment

• Nonstructural measures, planting vegetation, or installing on-site drainage improvements, are not feasible or not sufficient.
Note: No Comment

• The erosion control structure will not result in a net loss of shoreline ecological functions.
Note: No Comment

(C) An existing shoreline stabilization structure may be replaced with a similar structure if there is a demonstrated need to protect principal uses or structures from erosion caused by currents, tidal action, or waves.
Note: No Comment

• The replacement structure should be designed, located, sized, and constructed to assure no net loss of ecological functions.
Note: No Comment

• Replacement walls or bulkheads shall not encroach waterward of the ordinary high-water mark or existing structure unless the residence was occupied prior to January 1, 1992, and there are overriding safety or environmental concerns. In such cases, the replacement structure shall abut the existing shoreline stabilization structure.
Note: No Comment

• Where a net loss of ecological functions associated with critical saltwater habitats would occur by leaving the existing structure, remove it as part of the replacement measure.
Note: No Comment

• Soft shoreline stabilization measures that provide restoration of shoreline ecological functions may be permitted waterward of the ordinary high-water mark.
Note: No Comment

• For purposes of this section standards on shoreline stabilization measures, "replacement" means the construction of a new structure to perform a shoreline stabilization function of an existing structure which can no longer adequately serve its purpose. Additions to or increases in size of existing shoreline stabilization measures shall be considered new structures.
Note: No Comment

(D) Geotechnical reports pursuant to this section that address the need to prevent potential damage to a primary structure shall address the necessity for shoreline stabilization by estimating time frames and rates of erosion and report on the urgency associated with the specific situation. As a general matter, hard armoring solutions should not be authorized except when a report confirms that there is a significant possibility that such a structure will be damaged within three years as a result of shoreline erosion in the absence of such hard armoring measures, or where waiting until the need is that immediate, would foreclose the opportunity to use measures that avoid impacts on ecological functions. Thus, where the geotechnical report confirms a need to prevent potential damage to a primary structure, but the need is not as immediate as the three years, that report may still be used to justify more immediate authorization to protect against erosion using soft measures.
Note: This requirement places a professional geotechnical engineer, local government, and the state in a legally vulnerable position because it requires someone to estimate erosion rates based on unsubstantiated data. A single or unusual storm event could negate the professional opinion and result in damage or more extensive repairs than what would have been required if it was originally approved. Once again, the protection is directed toward a primary structure and does not consider the protection of the property itself which the WAC does appear to allow.

(E) When any structural shoreline stabilization measures are demonstrated to be necessary, pursuant to above provisions.

• Limit the size of stabilization measures to the minimum necessary. Use measures designed to assure no net loss of shoreline ecological functions. Soft approaches shall be used unless demonstrated not to be sufficient to protect primary structures, dwellings, and businesses.
Note: Once again, there is no mention of protecting the property itself which the WAC appears to allow. This offers excellent opportunity for partial replacement with beaches and pocket coves and returns on each end if the size of the property and site conditions will support it. "No net loss", as mentioned earlier, can be achieved on full and partial bulkhead replacements.

• Ensure that publicly financed or subsidized shoreline erosion control measures do not restrict appropriate public access to the shoreline except where such access is determined to be infeasible because of incompatible uses, safety, security, or harm to ecological functions. See public access provisions; WAC 173-26-221(4). Where feasible, incorporate ecological restoration and public access improvements into the project.
Note: No Comment

• Mitigate new erosion control measures, including replacement structures, on feeder bluffs or other actions that affect beach sediment-producing areas to avoid and, if that is not possible, to minimize adverse impacts to sediment conveyance systems. Where sediment conveyance systems cross jurisdictional boundaries, local governments should coordinate shoreline management efforts. If beach erosion is threatening existing development, local governments should adopt master program provisions for a beach management district or other institutional mechanism to provide comprehensive mitigation for the adverse impacts of erosion control measures.
Note: No Comment (Salt water application)

(F) For erosion or mass wasting due to upland conditions, see WAC 173-26-221 (2)(c)(ii).
Note: No Comment

Please keep in mind as you review the hundreds of pages of literature associated with the SMP Update process that it has been provided by regulatory agencies and their preferred biological firms and is designed to make nearshore and overwater structures look as impacting as possible. Much of the white papers and scientific data referenced is inconclusive and self-contradicting and have been funded using taxpayer money by the agencies regulating these activities or by conservation or environmental groups opposed to shoreline development.

Thank you for your time and attention to this very important matter on behalf of those living within 200 feet of state waters and particularly those living on the shoreline of Lake Washington. If you have any questions I can be reached at 206-786-6470.

Sincerely,

David Douglas
Permit Coordinator
Waterfront Construction, Inc.

Teresa Swan

From: RLSTYLE [rlstyle@aol.com]
Sent: Tuesday, January 06, 2009 1:43 PM
To: Teresa Swan
Subject: Wave action

Now that we've had our first wind storm exceeding 50 mph coming from the SW, about half of the spawning gravel was washed away from the bulkhead about 5 to 6 feet toward deeper water. The other half is gone moved to somewhere else not on my property.

I've taken camcorder movies of what the "softened" bulkhead looks like now. You're welcome to see for yourself.

Bob Style

Teresa Swan

From: Richard Sandaas [eride@msn.com]
Sent: Thursday, January 08, 2009 11:26 AM
To: Stacy Clauson; Teresa Swan; Paul Stewart
Subject: Comments for tonight's Planning Commission Meeting

Stacy, Teresa, and Paul:

Here are some comments on the materials being discussed at the January 8 Planning Commission Meeting.
They are brief, primarily because I haven't had the time in the two days since these were posted on the website to give them a complete review. I would ask that agenda materials be made available to the public with greater leadtime before a meeting.

In reviewing the agenda materials including the comment letters as well as Mr. David Douglas' letter of December 31, 2008, one important issue, once again, comes to light. And that is the 'science' and technical data which is driving the SMP updates and the shoreline restoration.

The importance of restoring shoreline habitat is continually mentioned as the basis for bulkhead removal, beach restoration, and other 'eco-friendly' measures. But where do the fish migrate and travel? As Mr. Douglas points out on page one of his letter, old information is used regarding Sockeye Salmon. Other species travel to and from the Samammish Slough or the Cedar River (including Sockeye). Do any of these fish travel anywhere near the Kirkland shoreline? This is a critical question that needs a definitive answer. Millions of dollars of shoreline restoration projects are resting on this, money that should be spent where it makes the most environmental difference.

Another example, this being questionable or lack of science driving decisions, is found in Mr. Dean Patterson's comment letter, Attachment 5, representing Futurewise. In it he cites a report prepared by the Watershed Company for the City of Bellevue: *Final Report: A summary of the Effects of Bulkheads, Piers, and Other Artificial Structures and Shorezone Development on* ESA-*listed Salmonids in Lakes.* This report is not a scientific study but rather a literature review.

Refering to this report, Mr. Patterson cites that ..."removal of bulkheads in favor of shoreline restoration measures such as low-gradient beaches and planting native vegetation...protect(s) salmon habitat in Lake Washington." A review of this report finds this conflicting statement on page 43: **No studies were located that specifically inivestigated the effects of piers and armored shorelilnes on the migration of juvenile chinook and coho salmon along lakeshores.** And on page 49 of the report there is a list of 13 questions that are unanswered by the literature review that was conducted. These questions range from how juvenile salmoids respond to piers and bulkheads to what are cumulative impacts of overwater coverage on total lake productivity among may other questions.

In light of this lack of information it would seem extremely important for the jurisdictions on Lake Washington as well as the Department of Ecology to conduct comprehensive studies to answer these questions before completing the SMP update processes.

Thank you for your efforts in carrying out the SMP update process. It is most important that the results are credible and that they will provide cost effective and true environmental benefits.

Richard Sandaas
Shoreline property owner
Chair, SPOCA

Thielsen
ARCHITECTS

January 8, 2009

Kirkland Planning Commission
123 5th Avenue
Kirkland, WA 98033

Re: Shoreline Master Program Update

Dear Planning Commission Members,

Thielsen Architects commends the commission and the City planning staff on the depth, breadth and detail of the work they have undertaken in updating the City's Shoreline Master Program. We appreciate the opportunity to make comments to the Planning Commission on this complex and vitally important piece of work. Thielsen Architects has been located in Kirkland since its founding in 1991. Over the past eleven years we have had the opportunity to complete eleven projects on Kirkland's shoreline. These have included new and remodeled single family homes and accessory dwelling units. We have also worked extensively with the new King County Critical Areas Ordinance and recently completed one of the first projects incorporating a full shoreline restoration under the City of Sammamish's new shoreline master program.

We recommend that the Planning Commission requests the City planning staff to make specific provisions for the property owners on Rose Point Lane. These property owners are squeezed between wetland buffers on the east and shoreline setbacks on the west. With buffers for the Juanita Bay wetland expected to double from 75 to 150 feet and the shoreline setback increase on the agenda for discussion tonight these properties can expect to be left with little to no buildable area.

Thielsen Architects analyzed two lots, 2069 and 2075 Rose Point Lane, for which we have a current wetland delineation, by The Watershed Company, and boundary and topographic survey. This analysis shows that the buildable areas would be reduced to forty-nine square feet at 2075 and zero square feet at 2069. Other properties will be similarly encumbered. The attached drawings show the two parcels with the proposed wetland buffer, buffer setback and a 35% shoreline setback (Option #4 of Approach Option 4 – Shoreline Setbacks, page 2 of 11 of attachment #1 in the January 8, 2009 packet).

Thielsen Architects recommends that the language in the December 11th, 2008 packet on page 106 for 83.450.4.a be revised to state that where the wetland buffer is bisected by a legal right of way the buffer shall stop at the wetland side of the right of way. The King County Critical Areas Ordinance (CAO) is being used by City staff as the model for the new wetland categories and buffers in the SMP update. The CAO, in 21A24.325.D.4 establishes the criteria for this buffer reduction. The Rose Point Lane properties meet the stated criteria. There is a berm three to four feet in height between the right of way and the wetland meaning all runoff from these properties flows into Lake Washington rather than the wetland. The buffer area west of Rose Point Lane is fully developed with houses and driveways and does not provide any ecological or biological buffer function. As such the buffer for the Juanita Bay wetland adjacent to Rose Point Lane should be formally designated as ending at the wetland (east) side of the right of way.

On page 13 of 23 of the packet for the January 8, 2009 Planning Commission meeting the planning staff states that the City Attorney's Office believes that there are significant legal issues with requiring shoreline restoration as a condition of permit for upland development. Thielsen Architects recommends that the Planning Commission

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FAX: 425.828.9376

accept the City Attorney's guidance that such a requirement would not be a legally defensible position and instead seek to achieve the restoration of the shoreline through the implementation of incentives in the zoning code which will encourage shoreline property owners to voluntarily undertake shoreline restoration.

To this end we recommend that the Planning Commission advise the City planning staff to develop sufficient regulatory flexibility in the shoreline setbacks and other sections of the code to make voluntary shoreline restoration appealing to the shoreline property owners, especially those in the residential-L (low density single family residential) shoreline environment. 55% of the properties in the residential-L environment have been assessed as having a high potential for restoration and residential-L properties account for 80% of all properties deemed to have that high restoration potential. Properly crafted regulations can encourage redevelopment which will enhance shoreline ecological function. If the regulations are not crafted in a manner which creates a significant incentive to redevelop and restore these properties a huge opportunity will be lost.

It was stated at the December 11, 2008 meeting that mitigation options should allow only small shoreline setback reductions. This is the opposite of what will incent shoreline restoration. If there is little or no incentive for restoration property owners will not take on the added expense as they redevelop, instead they will redevelop within the standard requirements and retain their bulkheads and lawns. It is only by creating meaningful incentives for shoreline restoration that it will be accomplished.

City consultant Amy Summe of The Watershed Company was asked at the December 11th meeting if she believed a house set 100 feet from the high water mark with an armored shoreline and lawn had a greater or lesser impact on shoreline ecological function than a house set 25 feet from the shoreline with a soft shoreline and native vegetation. She stated that the reduced setback and soft shoreline option would be preferable ecologically. This can be encouraged through regulatory flexibility which encourages voluntary shoreline restoration.

Beyond regulatory flexibility for shoreline setbacks, Thielsen Architects recommends that the Planning Commission advise the City planning staff to allow increases in allowable building height in exchange for shoreline restoration and other low impact development techniques. In the current proposal many lots have more restoration and low impact development options than they could use to reduce their shoreline setback. If there were other incentives more restoration or low impact development could be accomplished on each parcel than if the incentives were limited to simply a reduction in shoreline setback.

As was noted in the December 11, 2008 meeting, many of the parcels in the residential-L environment could have increased height while not impacting the views of those parcels behind them. Thielsen Architects believes that sixty-four of the ninety-six parcels in the residential-L environment fall into this group. On that small minority of parcels where a view impact could possibly occur with an increase in allowable height, such an impact would be offset by the restoration accomplished. This additional restoration which would allow the height increase would constitute a significant public good and is a restoration opportunity that would otherwise be lost.

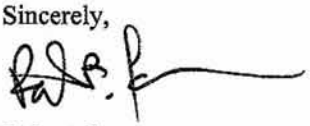
Thielsen Architects strongly recommends that the Planning Commission request the City planning staff to make specific provisions in the code language for the lot depth calculation of those parcels along Lake Avenue West and 5th Avenue West where, due to access easements and topography, the buildable depth of the lot is significantly less than the actual lot depth. These parcels account for thirty-five of the ninety-six parcels in the residential-L shoreline environment. For these parcels the shoreline side of the access easement should be treated as the front property line.

In analyzing three parcels in this area, 437, 509 and 537 5th Avenue West, Thielsen Architects determined that with a shoreline setback of 35% of lot depth (Option #4) if the full lot depth were used the buildable areas would be reduced to 1,771.8, 1,380.8 and 371.43 square feet respectively. Using the access easement line as the front property line would result in buildable areas of 3404.5, 3409.5 and 2,747.2 square feet respectively while still

leaving shoreline setbacks of 43.25 feet, 43.03 feet and 36.42 feet for the three lots. We feel this strikes a good compromise between protecting the shoreline environment and protecting the private property rights of these homeowners. Should any of the parcels along these two streets have buildable depths significantly shallower than the three parcels analyzed the proposed minimum shoreline setback of 30 feet in Option #4 would provide insure of the protection the shoreline. Attachments 2, 3, and 4 show the three lots referenced with shoreline setbacks based on the actual lot depth and the buildable lot depth.

Thank you for your consideration of these recommendations. If any members of the Planning Commission or City staff would like to discuss our recommendations further please do not hesitate to call us at (425) 828-0333 or email robertc@thielsen.com.

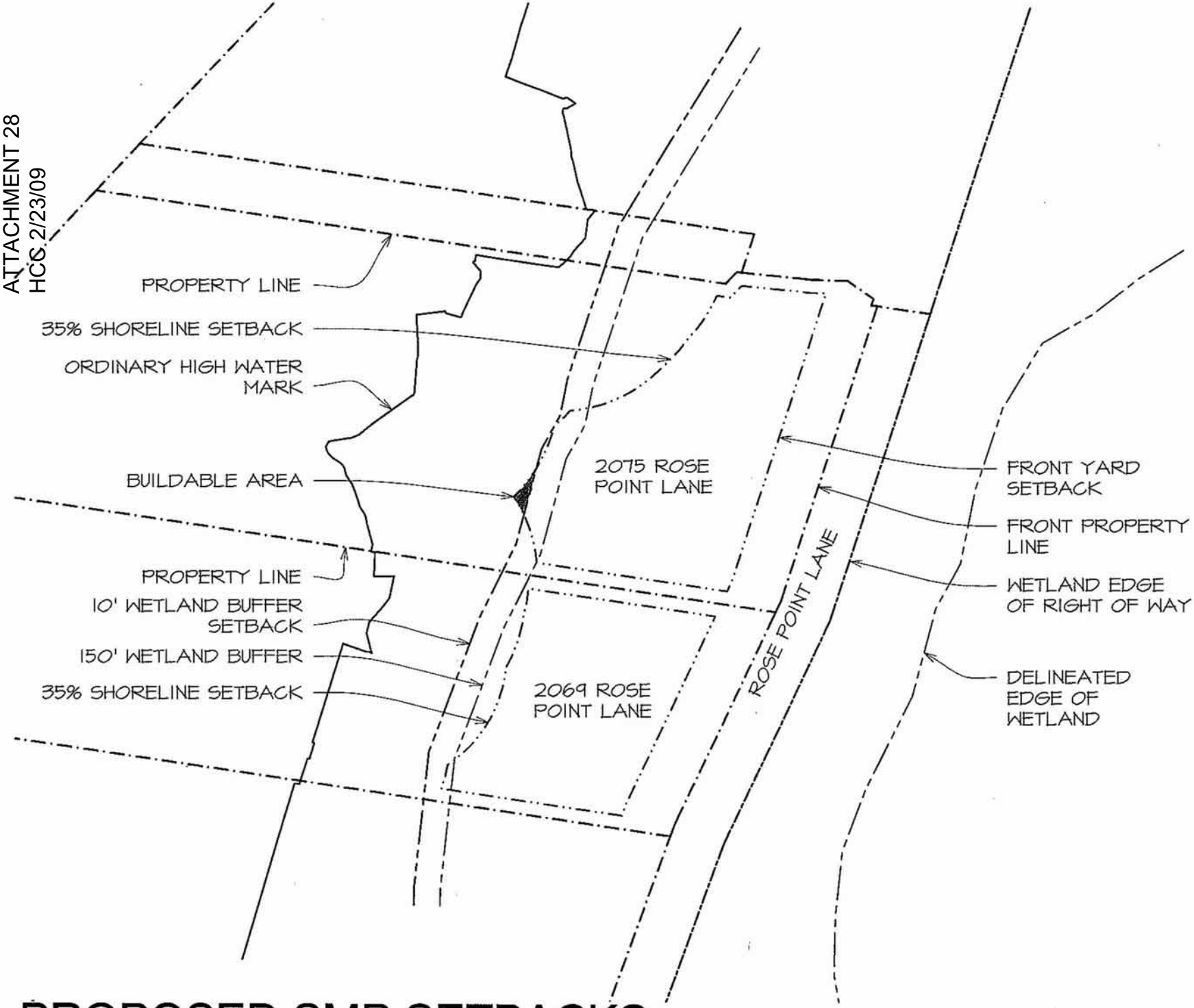
Sincerely,



Robert Connor
Thielsen Architects

Cc: Kirkland City Council
Houghton Community Council
Paul Stewart, Deputy Director of Planning
Teresa Swan, Senior Planner
Stacy Clauson, Contract Planner

ATTACHMENT 28
HCS 2/23/09



PROPOSED SMP SETBACKS

1" = 50'

Issued: 01/08/09
Drawn: RBC
Revised:

Thielsen ARCHITECTS
Kirkland, WA 98033 ◥ Tel 425.828.0333 ◥ Fax 425.828.9376

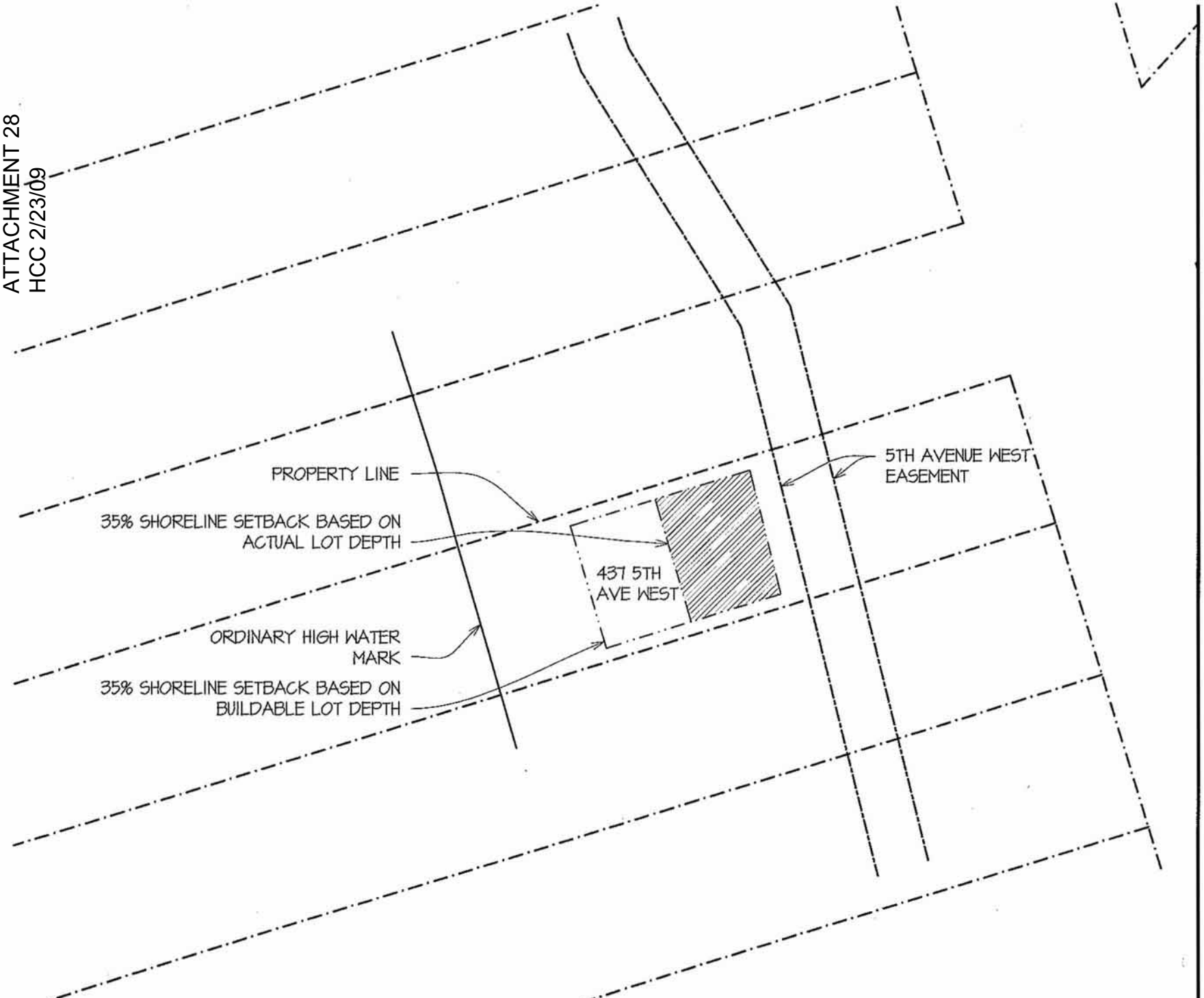
Project: CITY OF KIRKLAND SHORELINE MASTER PROGRAM UPDATE

Sheet Title: ROSE POINT LANE SETBACKS

Sheet: 1

Project No.

ATTACHMENT 28
HCC 2/23/09



PROPOSED SMP SETBACKS

1" = 50'

Issued: 01/08/09
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Revised:

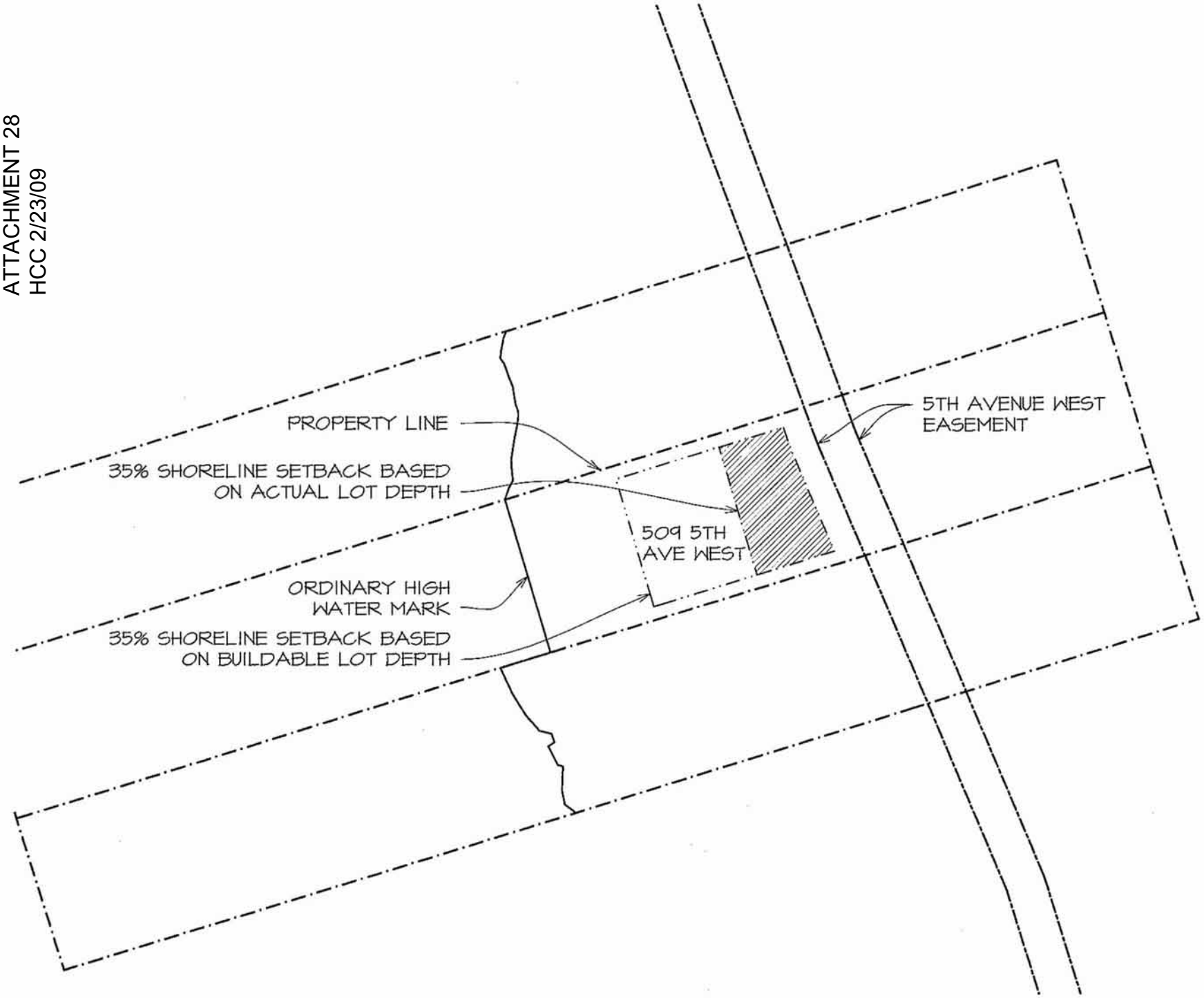
Thielsen ARCHITECTS
Kirkland, WA 98033 ◥ Tel 425.828.0333 ◥ Fax 425.828.9376

Project: CITY OF KIRKLAND SHORELINE MASTER PROGRAM UPDATE

Sheet Title: 5TH AVENUE WEST SETBACKS

Sheet: 2
Project No.

ATTACHMENT 28
HCC 2/23/09



PROPOSED SMP SETBACKS

1" = 50'

Issued: 01/08/09
Drawn: RBC
Revised:

Thielsen ARCHITECTS
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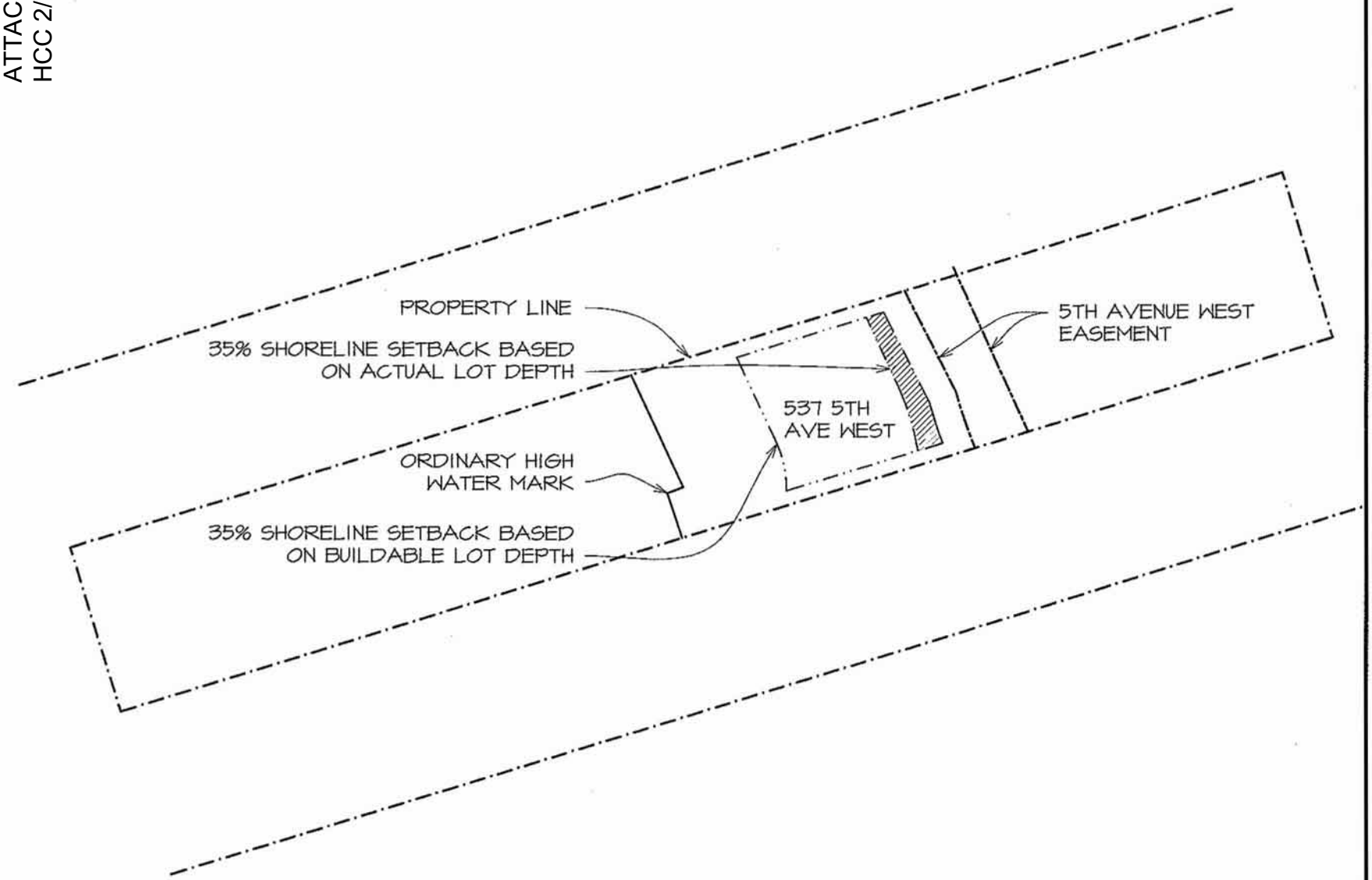
Project: CITY OF KIRKLAND SHORELINE MASTER PROGRAM UPDATE

Sheet Title: 5TH AVENUE WEST SETBACKS

Sheet: 3
Project No.

ATTACHMENT 28
HCC 2/23/09



PROPOSED SMP SETBACKS

1" = 50'

Issued: 01/08/09
Drawn: RBC
Revised:

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Project: CITY OF KIRKLAND SHORELINE MASTER PROGRAM UPDATE

Sheet Title: 5TH AVENUE WEST SETBACKS

Sheet: 4
Project No.

Teresa Swan

From: RLSTYLE [rlstyle@aol.com]
Sent: Wednesday, January 21, 2009 3:42 PM
To: Teresa Swan
Subject: Shoreline 1-22-09 citizen update

Shoreline update (1-21-09)

Ref: 83.300 2a: The 10-foot waver for geotech reports pertains to so few existing properties; it doesn't achieve the goal protecting existing property rights. You've whitewashed the staff report and have ignored the request from shore owners. The shoreline setback has been 15 feet for more than 20 years and affects many homeowners. The waver for geotech reports should be 15 feet.

It's important to acknowledge existing conditions. To impose additional onus on the property owners who live on the shoreline who have developed according to existing rules and regulations should not be punished for obeying the law. I have not seen any justification for reducing the 15-foot setback to 10 feet making the 10-foot rule arbitrary and capricious since there has not been a public hearing on shoreline setbacks. During that hearing, the commission should recommend and honor the existing 15-foot setback of those who live on the shoreline in Kirkland. Do not turn your backs on them especially when there is no reason to change, perceived or otherwise. The difference of 5 feet will have little of no adverse environmental impacts.

There are many references to the 10-foot rule throughout the staff report. Change all the references to 15 feet if you care about Kirkland. The will not be any additional net lose from what there is now.

Almost all of Kirkland needs protection from wave action. For additional "demonstrated need" reports to show how erosion over 3 years will negatively impact properties and therefore is necessary to protect single-family homes is ridiculous. We already know what happens if bulkheads are not allowed. It's time you acknowledged what we already know when wave heights exceed above 2 feet and/or the wind exceeds 25 MPH from the SW or NW.

2b: Repairs of bulkheads should allow 100% of bulkheads to be repaired without being categorized as a "major" modification. All the property needs protection, not just 75%, and since they are repairs, they should be exempted from additional geotech requirements regardless of how far the home is from the shoreline.

Ref: 5d General Design Standards: Patios not higher than 4 inches are allowed and should be allowed to within 5 feet from the water. They should not be prohibited. Just how much benefit shoreline vegetation provides is questionable if the vegetation will shade areas that the city and DOE have acknowledged that need sunlight. The sunlight requirements are incorporated in the proposed dock regulations. The width of native riparian vegetation should be 5 feet, not an average of 10 feet and far less than 75 percent in length. I don't know why you chose the depth and width criteria. I think it was arbitrary and capricious and certainly should not be adopted unless there is a public hearing.

Para 5f is extremely vague. Just what is meant when shoreline stabilization substantially interferes with visual access to the water? What is meant by "substantially?" What is meant by visual access? It would be nice if you used language that is more precise. Any vegetation should not be higher than 3 feet as to not block views. If the height exceeds 3 feet, vegetation will only be placed in the side yard setbacks. Existing vegetation should be preserved when possible.

Before preceding any further with what you think will be acceptable to DOE, please define no net loss. Fingerlings swim the shores of Lake Washington, and many other locations, eagles still fly, and species such as muskrats, beavers, nutria, and milfoil, lily pads are being reduced and relocated because they are incompatible with development Much has already been lost so what more is needed. As long as what we adopt doesn't result in a net loss on top of what has already occurred, we are in compliance with DOE. If we are not, let them prove it.

It's hard for me to see just how you are working for the City of Kirkland. The DOE and the environment may be a higher calling over local regulations but only if what they require complies with the best management practices, the best available science, and include the laws of physics. And, if mandated by them, let them fund all the improvements they think are necessary.

Sincerely,

Robert L. Style
6735 Lake Washington Blvd, NE
Kirkland, WA 98033
425-827-0216

Teresa Swan

From: RLSTYLE [rlstyle@aol.com]
Sent: Tuesday, January 27, 2009 11:21 AM
To: KirklandCouncil
Cc: Teresa Swan; Eric Shields
Subject: Fwd: Shoreline Master Plan updates
Attachments: RE: Shoreline Master Plan updates

Honorable Councilmembers:

I sent Rep. Eddy and other state reps this message about the Shoreline Master Plan. Ignoring all the personal differences, the first line of her response is what is important. It says **she does not disagree that the state should help fund the SMA process**. For her not to see the connection between the state's requirement and the city update contradicts her first sentence and is ludicrous. Also, I'm not complaining about having to pay for my mitigation's; just what I had to pay for the benefit of others like Rep. Eddy who don't pay.

I would hope that staff, the Planning Commission, and ultimately you pursue substantial funding from the state for the improvements you adopt. If not, then the improvements that benefit all those who use the lake should be adopted on the condition that the state provide the funds. Otherwise, no.

Sincerely,

Robert L. Style
6735 Lake Washington Blvd, NE
Kirkland, WA 98033
425-827-0216

Teresa Swan

From: Daved [Daved@waterfrontconstruction.com]
Sent: Thursday, January 22, 2009 12:35 PM
To: Cathy Beam; MPaine@bellevuewa.gov; Stacy Clauson; peterr@ci.issaquah.wa.us; jding@ci.kenmore.wa.us; rgrumbach@ci.medina.wa.us; EConkling@ci.renton.wa.us; mvannostrand@ci.sammamish.wa.us; Margaret.glowacki@seattle.gov; mhgreen@comcast.net; Harry.reinert@kingcounty.gov; Michelle Whitfield; SBennett@ci.lake-forest-park.wa.us; Paul Stewart; travis.saunders@mercergov.org; White, Jean; george.steirer@mercergov.org; Burcar, Joe (ECY); Matt.torpey@mercergov.org; Teresa Swan
Cc: eride@msn.com; donovan@donovantracy.com; raa@vnf.com; Dennis Reynolds; Ken Sethney
Subject: PUGET SOUND PARTNERSHIP PLANS FOR POSSIBLE OVERTAKE OF LOCAL GOVERNMENT SHORELINES AND AUTHORITY
Attachments: PSP Response.doc; Coalition Power Point--Oct 2008.pdf

Dear Local SMP Contacts and Interested Parties,

Hope everyone is having a great week.

You may already know about the Puget Sound Partnership but if you haven't reviewed the Draft 2020 Action Agenda for Puget Sound they are going to be requesting billions of taxpayer dollars to implement an aggressive agenda then you may find it some interesting reading. Public comment was given and no acknowledgment or replies were received and they approved the draft and forwarded it to the legislature on December 1, 2008 for review and adoption.

It appears to be another example of targeting private property owners and failing to address the primary causes of water quality degradation and impacts to fish and habitat. They seem to be directing most of their efforts at residential bulkheads and piers similar to what DOE is doing with the SMP Updates. If you haven't read the original 95 page agenda that is now 207 pages sent to the legislature you might find it interesting. It does very little to address impacts from aquaculture and businesses that contribute significantly to the region's economic base and point sources of pollution. The document also uses the "no net loss" term being used for the SMP Updates.

Although it is named the "Puget Sound" Partnership it also pulls in the watersheds and Lake Washington and Sammamish are included in the South Central Puget Sound Area. This means the state could take regulatory control of your shorelines and your citizens. Of course it doesn't come right out and say that but none of us were born yesterday. You owe it to your citizens to do some research and discuss this with your local leaders and decide where you will stand on the issue. It will probably be more controversial than the SMP Updates (which by the way are listed in the agenda matrix as one of their targets so the updates are just a routine requirement

The Puget Sound Partnership is including everyone except the shoreline property owners who will be most impacted. They hope to either restrict or eliminate residential piers and bulkheads or require them to go through the Conditional Use Process where the state will approve or deny them.

The link to the agenda is: http://www.psp.wa.gov/downloads/ACTION_AGENDA_2008/Action_Agenda.pdf

I have attached my comments to the PSP and as stated did not receive acknowledgment or a response (no surprise there). I also included an interesting slide show from the Coalition to Protect Puget Sound Habitat showing the damage from aquaculture that is far more impacting than any amount of piers and bulkheads.

If you aren't interested please delete this correspondence.

Thanks and have a great day.

Sincerely,
Dave Douglas
Permit Coordinator
Waterfront Construction, Inc.

Teresa Swan

From: Daved [Daved@waterfrontconstruction.com]
Sent: Wednesday, January 28, 2009 2:49 PM
To: Daved; Cathy Beam; MPaine@bellevuewa.gov; Stacy Clauson; peterr@ci.issaquah.wa.us; jding@ci.kenmore.wa.us; EConkling@ci.renton.wa.us; mvannostrand@ci.sammamish.wa.us; Margaret.glowacki@seattle.gov; mhgreen@comcast.net; Harry.reinert@kingcounty.gov; Michelle Whitfield; SBennett@ci.lake-forest-park.wa.us; Paul Stewart; travis.saunders@mercergov.org; White, Jean; george.steirer@mercergov.org; Burcar, Joe (ECY); Matt.torpey@mercergov.org; Teresa Swan; Robert Grumbach; DBent@ci.kenmore.wa.us
Cc: eride@msn.com; donovan@donovantracy.com; raa@vnf.com; Dennis Reynolds; Ken Sethney; Gregory W. Ashley
Subject: SLIDE PRESENTATION ON THE "SHORELINE PERMITTING PROCESS"

Dear SMP Points of Contact and Interested Parties,

If you are interested, I have created a thorough and informative slide presentation entitled, **The Shoreline Permitting Process; A System of Checks and Balances; "An Applicant's Perspective"**. I am available to present any of the 3 presentations (Standard, Condensed and Further Condensed) for your audience. It can be presented as a part of a study session prior to your council or commission meetings or during the regular meeting time.

I am offering this because after attending dozens of SMP Update meetings along with a company meeting with DOE staff and speaking with multiple planners and property owners I have discovered most people are unfamiliar with the local, state and federal regulatory permitting process or have not taken the time or invested the effort to evaluate the vast improvements made over the last 5 to 10 years along the shorelines of Lake Washington and Lake Sammamish. This and the use of "best available science", from white papers which when read are inconclusive at best, has resulted in bulkheads and piers on private property being targeted for sweeping changes that will impact every local government and its citizens. People are only told the bad and improvements are never recognized or rewarded in this type of business or for this group of private property owners. Reference photos are usually those of older and large piers built many years ago to paint the worst picture in people's minds.

Following meetings in Seattle and Kirkland over a year ago I realized there was a lot of imbalance and misinformation being distributed to local governments and SMP decisions are being made by a small number of well-meaning but uninformed or misdirected parties who may be unfamiliar with the process. Attendance by waterfront property owners and the general public was sparse (and still is) and most people in this group did not understand how the future use and value of their properties would be impacted. SMP Updates could very well have been discussed and approved in a "smoke filled room at midnight" to coin an appropriate phrase. All of this would be done at the expense of an unsuspecting and trusting public.

It is important for local government leaders and staff to understand that the responsibility of protecting natural resources is not resting solely on their shoulders and to adopt an overly restrictive SMP will turn control of their shorelines over to the state because most existing structures will become legally nonconforming and many new and replacement structures, even if they are an improvement over existing conditions, will require a variance. The term "no net loss" was being used without clarity and there was no discussion supporting the fact that replacement structures, both piers and bulkheads, could meet this DOE requirement.

The presentation was done for the Kirkland Planning Commission on January 22, 2009 and it seemed to go very well. It resulted in excellent discussion, a lot of good questions and the Commissioners expressed appreciation. It was scheduled for 15-20 minutes but with discussion lasted nearly 1 hour and 15 minutes. It was a very cordial atmosphere and Joe Burcar from DOE and Tom Sibley from NMFS were also in attendance. The City of Kirkland is doing an excellent job in addressing their property owner concerns and gathering all available information and listening to all sides. They are trying to fully understand the impacts of their decisions and protecting the community and I believe the presentation assists to that end.

Please note that it is a very honest and transparent presentation from the applicant's perspective based on my 6+ years of representing waterfront property owners in working for Waterfront Construction on over 300 projects. It also includes photos of some recent pier, bulkhead and shoreline renovation projects completed since the establishment and review of projects under the Endangered Species Act, the 2003 SMA Guidance from DOE, and the Corps Regional General

Permits for Residential Piers and Watercraft Lifts. It includes the positive and negative aspects of the current permitting process.

At this time it looks as though I may be doing the presentation for Bainbridge Shoreline Homeowners, Renton, Issaquah and Kenmore. I wish I could have offered the presentation before Redmond and Lake Forest Park got so far along in their update process because it may have impacted some of their decisions. Depending on where they are in the process with DOE there may still be time.

This offer of single or multiple presentations is being made to Councils, Commission, General Public, Homeowners Associations or interested parties in the following areas: Bellevue, Hunts Point, Issaquah, Kenmore, Kirkland (Houghton), Lake Forest Park, Medina, Mercer Island, Redmond, Renton, Sammamish, Seattle, Yarrow Point, King County, Pierce County, Kitsap County, and Bainbridge Island.

Every Planning Commissioner, City/County Council Member and citizen should have an understanding of the shoreline permitting process from the ground level and this offers them the opportunity. I look forward to hearing from you. I am available most evenings with limited Wednesdays. I am unavailable from Feb 26 through March 7 and July 17 through July 27. The owner of Waterfront Construction is covering my time and expenses so there is no cost for the presentation. Please let me know as soon as possible. I look forward to hearing from you.

Working with you to ensure SMP Updates are accomplished with the integrity, honesty and balance your citizens deserve.

Sincerely,
Dave Douglas
Permit Coordinator
Waterfront Construction, Inc.

Richard K. Sandaas
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Kirkland, WA 98034
425.823 2145
eride@msn.com

February 7, 2009

Kirkland Planning Commission
Paul Stewart, Deputy Director of Planning
Teresa Swan, Senior Planner
Stacy Clauson, Contract Planner
City of Kirkland
123 Fifth Avenue
Kirkland, WA 98033

Reference: Kirkland's Shoreline Master Program Update

Dear Planning Commission members and staff:

I first commented on Kirkland's SMP update process in a letter sent on October 3, 2006. I raised concerns about the scientific basis being used and stated:

> "*Conclusions must be supported by sound science. The draft Inventory contains a number of suppositions, inferences, and hypotheses".*

Over the nearly two and a half years since, I have continually raised this issue, most recently in my letter of January 8, 2009. The packet prepared for the Planning Commission Study Session on January 22, 2009 contained a response to this most recent letter where I again questioned the scientific basis supporting the SMP updates.

I have reviewed the materials cited in the Study Session packet and do not find any scientific study that is specific to salmon migration or presence along Kirkland's shoreline. Here is my analysis of these citations which began on page 27 of the packet:

Shoreline Analysis Report (Inventory)

This report, in Section 5.2.1, describes the travel of Chinook fry. It says they

> *"…congregate near the mouths of tributary streams and prefer low gradient, shallow-water habitats with small sub-strates."*

It goes on to state:

> *"…they do not disperse far from the mouth of their natal stream…"*

Then,

> *"As the juvenile Chinook salmon mature to fingerlings and move offshore, their distribution extends throughout Lake Washington. Although early emigrating Chinook fry from the Cedar River and North Lake Washington tributaries (primary production areas) initially do not disperse to shoreline areas in Kirkland, any salmon fry from smaller tributaries such as Juanita, Forbes, or Yarrow Creeks would depend on nearshore habitats of the Kirkland waterfront."*

Most of the Chinook salmon that migrate through Lake Washington travel to and from the Cedar River. Much small numbers have Bear Creek, the Sammamish River, and Lake Sammamish as their origin and destination. And as the citation in the *Inventory* states, these fish do not disperse to the Kirkland shoreline. As for Chinook fry from Juanita, Forbes, or Yarrow Creeks, neither their numbers or their travel patterns have been studied or documented.

Links to Available Maps

The first three links are to maps which are intended to show distribution of Chinook, Sockeye, and Coho salmon in Lake Sammamish, Lake Washington, and mid-Puget Sound. This distribution is indicated by a scattering of dots throughout these water bodies. I challenge the use of these maps to draw any scientific conclusions about migratory patterns of salmon along Kirkland's shoreline because of their high level array with lack of any detail on a specific area. Furthermore, this disclaimer appears on each map:

> *"This map is not warranted as fit for a particular purpose."*

I was unable to access the fourth link as depicted. I did locate a document, *Lake Washington and Ship Canal Acoustic Tracking,* December 2008, which studied Chinook salmon migration from the Cedar River, through Lake Washington, and into the Ship Canal. This report makes it clear that none of the Chinook from the south end of the lake travel anywhere near the Kirkland shoreline. Regarding Chinook from other tributaries, the report states:

> *"In addition, small numbers of Chinook salmon spawn in several tributaries to Lake Washington and Lake Sammamish, but juvenile production from these streams is unknown."*

It goes on to state on page 3:

> *"However, little research has been conducted to understand habitat use or finer-scale movement patterns of juvenile Chinook salmon during their migratory phases in late-May, June and July. Various methods such as snorkeling and hydro acoustic surveys have been tried to study the habitat use patterns of juvenile Chinook salmon after mid-May but these efforts were met with limited success."*

I was also unable to access the fifth link, the WDFW SalmonScape map. This was said to document fish use of Kirkland streams. It does not mention fish travel along the shoreline.

Roger Tabor comments

Mr. Tabor is with the U.S. Fish and Wildlife Service and is one of the parties who prepared the *Lack Washington and Ship Canal Acoustic Tracking* report mentioned above (which finds little research done on Chinook salmon movement). He also is a contributor to the *Synthesis of Salmon Research and Monitoring* report, which finds that little is known about outmigration of Coho, sockeye, and steelhead. A review of this report follows.

In views of his involvement in these studies, I find his shown comment on page 29 of the January 22, 2009 packet to be curious:

> *"It seems logical that Chinook are all over the lake. The only way Chinook could entirely miss Kirkland is that if all the hatchery and naturally-produced fish from the eastside decided to only use the west shoreline of Lake Washington, which is highly unlikely".*

Here is my counter-supposition to his:

> *It seems logical that after remaining at the mouth of the Sammamish Slough for a period of time, the emigrating eastside fry would begin their travel to the Ship Canal by traveling along the shoreline of St Edwards Park and then move through deeper water towards Magnuson Park and then south along the western shoreline to Webster Point to begin their journey to the Locks. While some may stray elsewhere in the lake for a brief period,, this path would seem to be the most likely way for their journey to the Ship Canal and Locks.*

My supposition is supported by several studies that I reviewed. The point here is that until a conclusive study of the so-called eastside Chinook is performed, with the same scope and effort of the December, 2008 study for the Cedar River Chinook, there is no sound science documenting "eastside" Chinook behavior along Kirkland's shoreline or the rest of Lake Washington. This also applies to Coho, steelhead, and sockeye as noted below.

Scientific Studies, page 29

A point is highlighted in the packet that "scientific information continues to be developed." It was pointed out that since the year 2000 other studies have been conducted. This is in reference to a literature search that had been cited by a letter from Futurewise (to which I responded) that was conducted in 2000.

To that point I have located a very recent study titled *Synthesis of Salmon Research and Monitoring. Investigations Conducted in the Western Lake Washington Basin. December 31, 2008.* Here are several important findings:

Page 4. Table showing Major Research Findings.
Under the heading Lake Washington Outmigration, it states:

> *"Little is known about the outmigration of Coho, sockeye, or steelhead."*

Page 41. Coho Salmon and Steelhead.

"Not much information is known about the habitat use of Coho salmon and steelhead in Lake Washington."

Page 44. Habitat Use and Behavior.

"Observations of migrating Chinook indicate that these fish aggregate and move along the shoreline during the day, generally in water depths of 6.8 feet to 14.8 feet"

Page 45. Habitat Use and Behavior.

"Outmigration behaviors of sockeye, Coho, and steelhead have not been studied in Lake Washington.

This analysis of the January 22, 2008 packet show that many unanswered questions remain about salmon migration in Lake Washington along the Kirkland shoreline, and that there is a lack of sound science that is fully vetted to support and justify the remediation and restoration approaches that are being developed in the SMP update process.

Both the Department of Ecology and WRIA8 have put the jurisdictions on Lake Washington in a difficult position by "playing the salmon card". DOE has imposed the precautionary principle that is most unreasonable and unrealistic. It is a "press on regardless" line of thinking. And WRIA8 has designated Kirkland's shoreline as a Tier 1 migratory corridor, absent studies to support that. As it now stands, decisions on the SMP updates are being based on policy, not science.

It is important for the Kirkland Planning Commission members and the City Council to be fully aware of the scientific basis that is being used to support the SMP goals, policies, and resulting regulations. All members should review the studies that are cited, understand what is known and what is not known. Then, if it is the decision to move forward with regulations that drive towards "green shorelines" so be it. At least it will be a fully informed decision, but one that will drive the expenditure of millions of dollars by Kirkland shoreline property owners and all the other Kirkland taxpayers for "shoreline enhancements" with questionable salmon based environmental and ecological benefits.

Lake Washington must be protected and enhanced. In the past, millions of dollars were spent to restore its health through the Metro clean up program. The threats were known and the solutions were crafted to deal with them. Today, limited public and private dollars must be spent wisely, targeted at real threats so that successful outcomes are assured.

And the real threats of stormwater runoff, non-point pollution, and invasive weeds remain.

In providing these comments I once again want to make it clear that, as a shoreline property owner, no one has a greater interest in the protection and enhancement of our shoreline and the ecology of Lake Washington. Along with other SPOCA members, we want to continue to work with you to achieve feasible, effective, and beneficial goals and policies resulting from the SMP process.

Very truly yours,

Richard K. Sandaas
Chair, SPOCA
Shoreline property owner