



# SHORELINE MASTER PROGRAM UPDATE



# **Shoreline Master Program (SMP) Public Hearing**

**July 23, 2009**



# SHORELINE MASTER PROGRAM UPDATE



## Meeting Format:

- Staff presentation
- Public comments
- Questions from Planning Commission
- Planning Commission deliberation



# SHORELINE MASTER PROGRAM UPDATE



## Background

- 2006 - Inventory, Public Workshops and Shoreline Tour
- 2007 - Study Sessions and Argosy Tour
- 2008 - Study Sessions and Open House
- 2009 - Study Sessions, Property Owner Forum and Focus Group, Open House, Public Hearings



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## **SHORELINE MANAGEMENT ACT (SMA)**

RCW 90.58

To prevent harm caused by uncoordinated and piecemeal development of the state's major shorelines.



## **Shoreline Master Program Guidelines**

WAC 173-26



## **Shoreline Master Program (SMP)**

Carries out provisions of SMA  
Must be approved by Dept. of Ecology,  
using policy of RCW 90.58.020 and  
Guidelines as approval standards/criteria

**Deadline: December 1, 2009**

Note: SMP is a State-based regulation which we have less control over compared to typical zoning provisions



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## Policy Goals of the Act

- Encourage water-dependent uses
- Protect shoreline natural resources
- Promote public access to shorelines





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## SMP Guidelines (WAC 173-26)

- Three Purposes:
  - Assist local governments in developing SMP
  - Serve as standards for regulating shorelines
  - Serve as criteria for Ecology's review of SMP

## Governing Principals:

- **No net loss** of shoreline ecological functions and processes
- **Restoration** of degraded and/or impaired shorelines (incentive/voluntary)
- **Cumulative impacts** must be addressed



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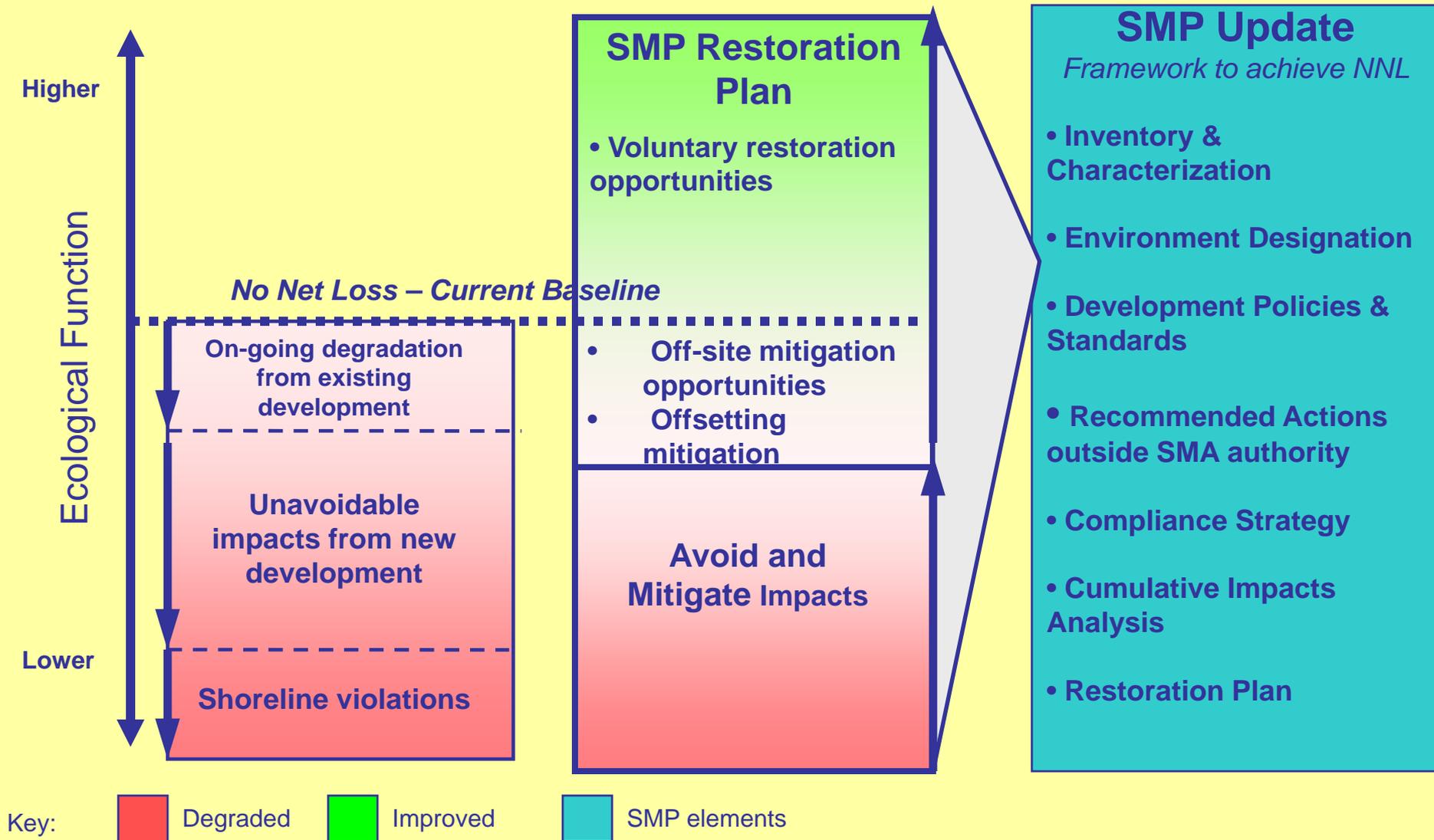


No Net Loss -What does it mean?

*“...the policy of the SMA is that...all uses of and development must be carried out in a manner that does not degrade the environmental resources of the shoreline.”*

*- Ecology's 2004 NNL Memo*

# Two Distinct Objectives: No Net Loss of Shoreline Ecological Functions and Restoration Over Time





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## Major **required elements** of SMP:

- Shoreline Inventory and Characterization
- Shoreline Goals and Policies
- Shoreline Environment Designations
- Shoreline Regulations
- Restoration Plan
- Cumulative Impacts Analysis



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## Shoreline Inventory and Characterization

- Lake Washington
  - Important resource for salmon and other wildlife
  - Water quality parameters at risk
  - Habitat elements not properly functioning
  - Shoreline conditions not properly functioning
- Kirkland's Shoreline
  - Juanita and Yarrow Bay wetlands retain significant ecological function
  - Other areas generally have low function
- Key management issues:
  - Hardened shoreline
  - Extent of overwater coverage
  - Lack of shoreline riparian vegetation
- Other issues of concern:
  - Impervious surfaces/compacted lawns
  - Aquatic invasive species



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- **Shoreline Environment Designations**
  - Similar to a zoning overlay
  - Applied to shore segments based on ecological conditions and land use
  - Provides a system for assigning different standards based on characteristics of different geographic areas
- **6 Designations Proposed:**
  - Urban Mixed
  - Residential M/H
  - Residential L
  - Urban Conservancy
  - Natural
  - Aquatic



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What is the difference between these designations?

- Allowed uses
- Development Standards
  - Minimum lot size
  - Lot coverage
  - Shoreline setback
  - Building height
  - Public access
  - View corridors



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## Shoreline Regulations - Some **Key Changes**:

1. Shoreline Setbacks
2. Shoreline Vegetation
3. Shoreline Stabilization
4. Piers

### Must consider:

- “No net loss” of ecological functions
- Other specific guidance from Shoreline Guidelines



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## 1. Shoreline Setbacks

- Purpose:
  - Reduce impacts on shoreline habitat
    - Moderate surface water, pollutants/chemical and sediment inputs
    - Buffer light and noise
  - Provide for vegetation
  - Protect structures from shoreline erosion
  - Provides opportunity for natural or soft shoreline stabilization



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## Impacts addressed by setbacks:

- Increase in surface water runoff  $\Rightarrow$  soil erosion
- Reduction in filtration of water runoff.
- Potential contamination of surface water.
- Elimination of upland habitat.
- Lighting disturbances.



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**Goal:** Determine a setback standard that appropriately balances:

- Ecological functions,*
- Use of property, and*
- Takes into account existing development patterns.*

## **Proposed Approach to Setbacks:**

Review existing built conditions, average parcel depths.

Minimum setback to protect water quality and habitat



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## Proposed Setbacks (pg.117 of 7/23 packet)

<b>ENVIRONMENTAL DESIGNATIONS</b>	<b>Draft Shoreline Setback Regulations</b>
<b>Residential Low</b> (north of CBD), except along Lake Ave West north of Street End Park	30% of average parcel depth with 30' minimum and 60' maximum
<b>Residential Low</b> (north of CBD) along Lake Ave West south of Street End Park	Average of the existing setback on adjacent properties, with 15' minimum
<b>Urban Mixed and Residential Medium-High</b> (CBD and south of CBD)	15% of average parcel depth with 25' minimum

Note: Average parcel depth is measured to west side of street providing access to the property



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## Proposed regulation changes to offset increase in the shoreline setback:

- North of CBD (WD II zone) (see pg. 464 of 7/23 packet)
  - Building height increased from 25' to 30' for properties with lake frontage.
  - Front (street) yard decreased from 20' to 10', provided the shoreline setback is met.
  - North property setback requirement deleted, replaced with 2 potential options:
    - Side yard setback of 5' with 2 equaling 15' OR
    - 5' on each side with upper modulation at 15% less than 1<sup>st</sup> floor.
  - Eliminate front yard on unopened street ends.
  - Eliminate setback on east side of the 5<sup>th</sup> Ave W private easement road.



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## Proposed regulation changes to offset increase in the shoreline setback:

- South of CBD (WD I and III zones) (see pg. 445 & 472 of 7/23 packet)
  - Front (street) yard can be decreased 1 ft for each foot required shoreline setback is increased if shoreline setback is met.
  - North property setback requirement has been deleted and replace with side yard setback of 5' with 2 equaling 15'.



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## Nonconforming Structures (see pg. 212 of 7/23 packet)

Non-Conforming Structure	What Improvements Can be Made
Interior Remodels	Yes
Additions Outside of the Required Setback	Yes
Additions Within of the Required Setback	Yes, maximum 10% gfa of existing structure. Requires offsetting restoration.
Replacement	Yes, must meet required setback. Special provisions for replacement on properties with limited buildable area.
In case of damage by fire or other casualty	May be restored or replaced in kind



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## Incentives to improve ecological function

- Setback reduction options (see pg. 171 of 7/23 packet):
  - Highest reduction:
    - Natural shoreline (75% of linear frontage)
  - Second tier of reduction:
    - Beach cove
    - Daylighting stream
    - Setback/slope bulkhead from OHWM
  - Other reductions:
    - Enhancement waterward of OHWM
    - Bioinfiltration instead of piped discharge
    - Additional 5 ft of shoreline vegetation
    - Additional native vegetation outside shoreline setback
    - Use of porous materials
    - Limit lawn area

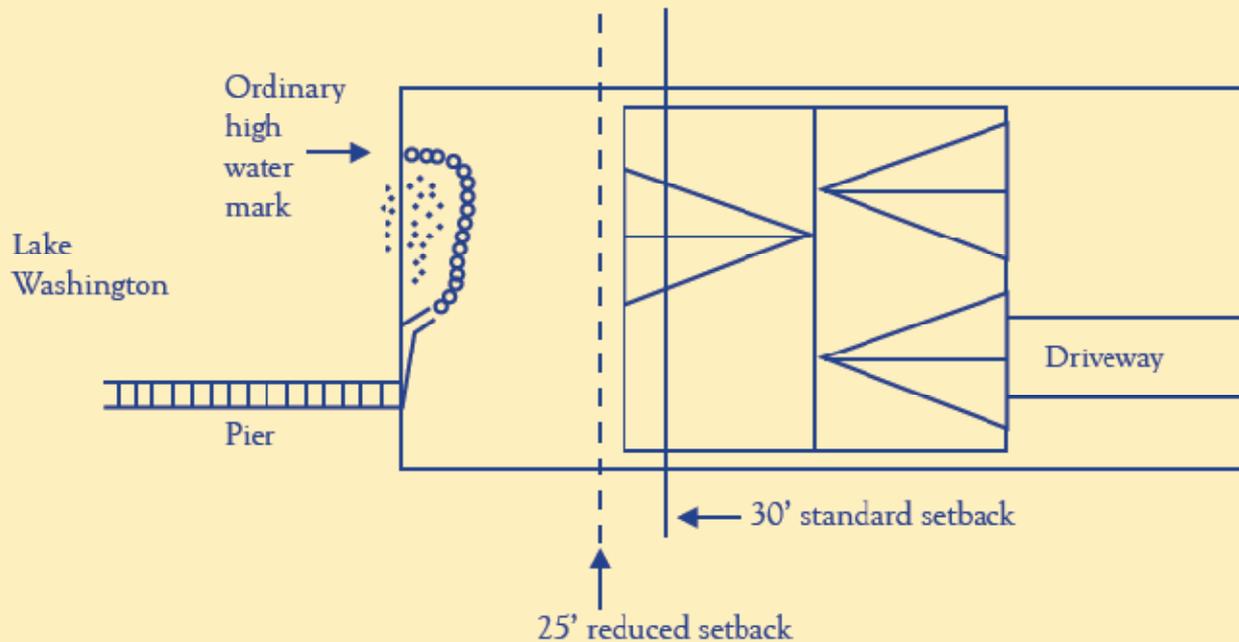


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are needed to see this picture.

## Shoreline Setback Reduction



- Required Shoreline Setback = 30% Average Parcel Depth
- With min. 15' of soft shoreline, 30' required setback reduced to 25' setback (from 30% to 25% of average parcel depth for 100' deep parcel)



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## 2. Shoreline Vegetation

Vegetation provides number of benefits to shoreline ecology

- Filter sediment and chemicals from runoff
- Provide food and shelter for fish and wildlife
- Stabilize banks
- Slow or prevent shoreline erosion.
- Moderate light and disturbance



Vegetation in Kirkland shoreline park



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**Goal:** Establish vegetation along the shoreline edge to contribute to ecological functions/ minimize impacts.

- Shoreline vegetation may be required if:
  - Building new primary structure
  - Adding more than 10% gfa to existing structure
  - Completing improvements valued at more than 50% replacement cost of structure
  - Installing new or adding onto existing shoreline stabilization measure
  - Installing new pier



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## Vegetation in Shoreline Setback (see pg. 177 of 7/23 packet)

- 10 ft wide landscape strip
- Native vegetation
- 3 trees per 100 linear ft of shoreline + shrubs and ground cover.
- Required along 75% of the shoreline frontage
- Alternative provisions allowed.

### Exceptions:

- Residential Medium/High = 15 ft for multifamily developments
- Water-dependent uses = required outside of areas needed for direct water access.



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## **Tree Management in Shoreline Setback (see pg. 175 of 7/23 packet)**

**Goal: Preserve vegetation along the shoreline edge to contribute to ecological functions.**

- Standard tree removal provisions (up to 2 trees/year)
- Removal of Trees in Shoreline Setback: Requires 3 replacement trees for each 1 tree removed
- Alternative Replacement: 80 square feet of native shrubs and groundcover for each tree



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## 3. Shoreline Stabilization

### Goals:

- Ensure protection of structures from erosion.
- Improve shoreline ecological functions.
- Enhance habitat for salmon.
- Respond to new State requirements.
- Provide consistency with state and federal permitting.





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## Ecological impacts of shoreline stabilization

(WAC 173-26-231(3)(a))

- Decrease natural gravel recruitment
- May cause excessive erosion on non-bulkheaded properties
- “Wave bashing” effect
- Decreases complex habitat and shallow water
- Increases habitat for predators (bass/sculpin)

**Soft engineering** (vegetation enhancement, upland drainage control, strategic placement of gravel/cobble/boulders/logs) typically has smaller impacts than hard engineering (riprap, bulkheads).





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## Review of key State provisions:

- Protection of single-family residences
- Allow only where necessary
- Existing primary structure must be in danger from erosion (not upland erosion)
- Geotechnical analysis showing damage is likely within 3 yrs.
- Allow bulkhead replacement if there is demonstrated need.
- Soft approaches must be used unless demonstrated not to be sufficient.



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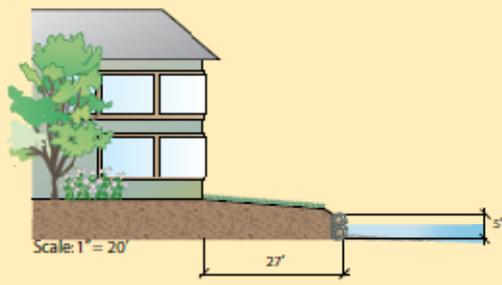
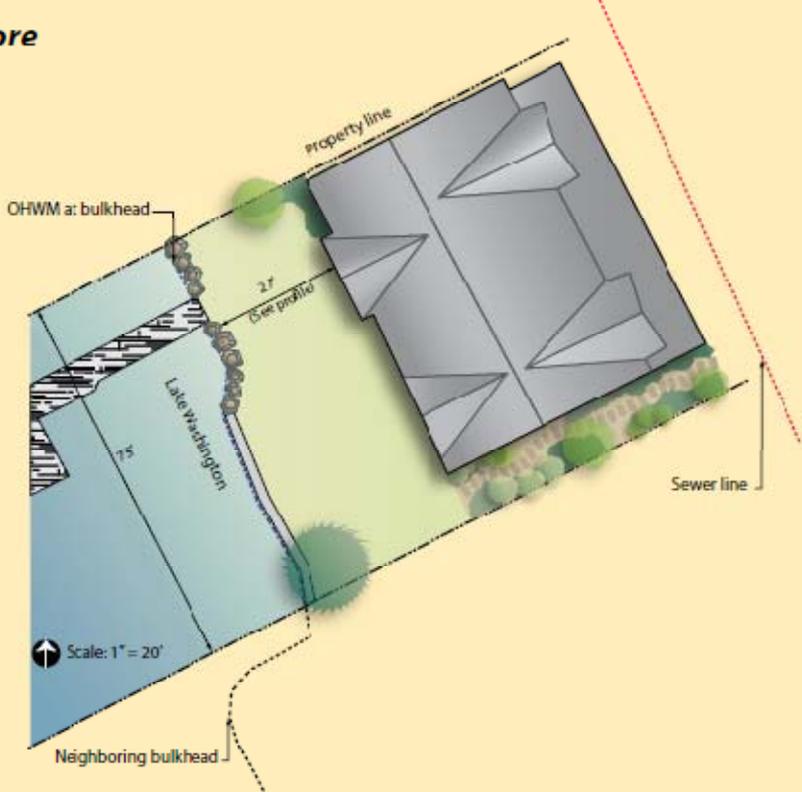


## General Provisions (see pg. 160 of 7/23 packet):

- Regulations address:
  - New or Enlargement
    - Soft approaches if feasible, based upon evaluation of site characteristics.
    - Requires geotechnical report (some exceptions).
    - Minimize size.
    - Minimize and mitigate for new impacts.
  - Major Repair or Replacement
    - Major repair:
      - Structure has lost integrity/collapsed
      - Repair to more than 15 ft. of toe/footings (provisions apply to section being repaired),  
OR
      - Repair to more than 75%
    - Soft approaches if feasible.
    - Needs assessment to evaluate site characteristics/feasibility of soft approaches (some exceptions).
    - Minimize size.
  - Minor Repair
    - Permitted, no assessments needed.

Note: Provisions do allow for gravel, logs and rocks waterward of OHWM

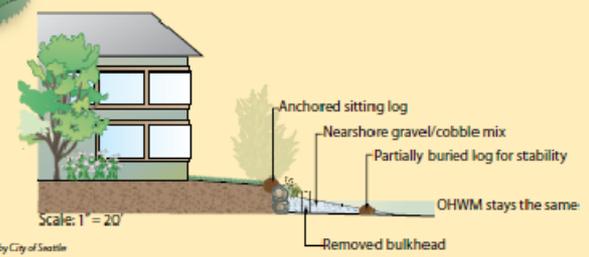
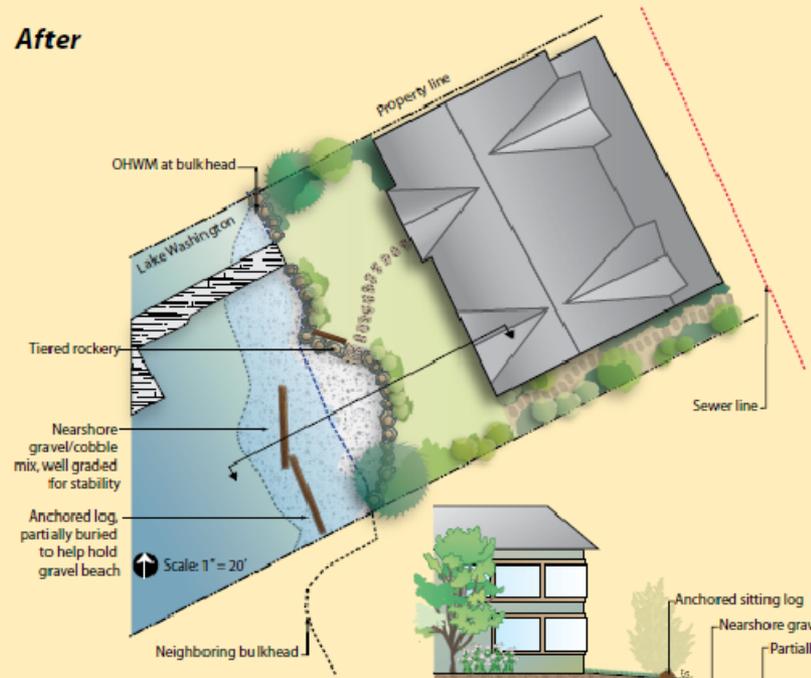
Before



\*Figures modified by The Watershed Company from "Green Shorelines," a guidebook prepared by City of Seattle

# Example of Soft Shoreline Stabilization in Kirkland

After



\*Figures modified by The Watershed Company from "Green Shorelines," a guidebook prepared by City of Seattle



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## 4. Piers and Docks

### Goals:

- Provide for recreational use along shoreline.
- Respond to new State requirements.
- Improve shoreline ecological functions.
- Enhance habitat for salmon.
- Provide consistency with state and federal permitting.



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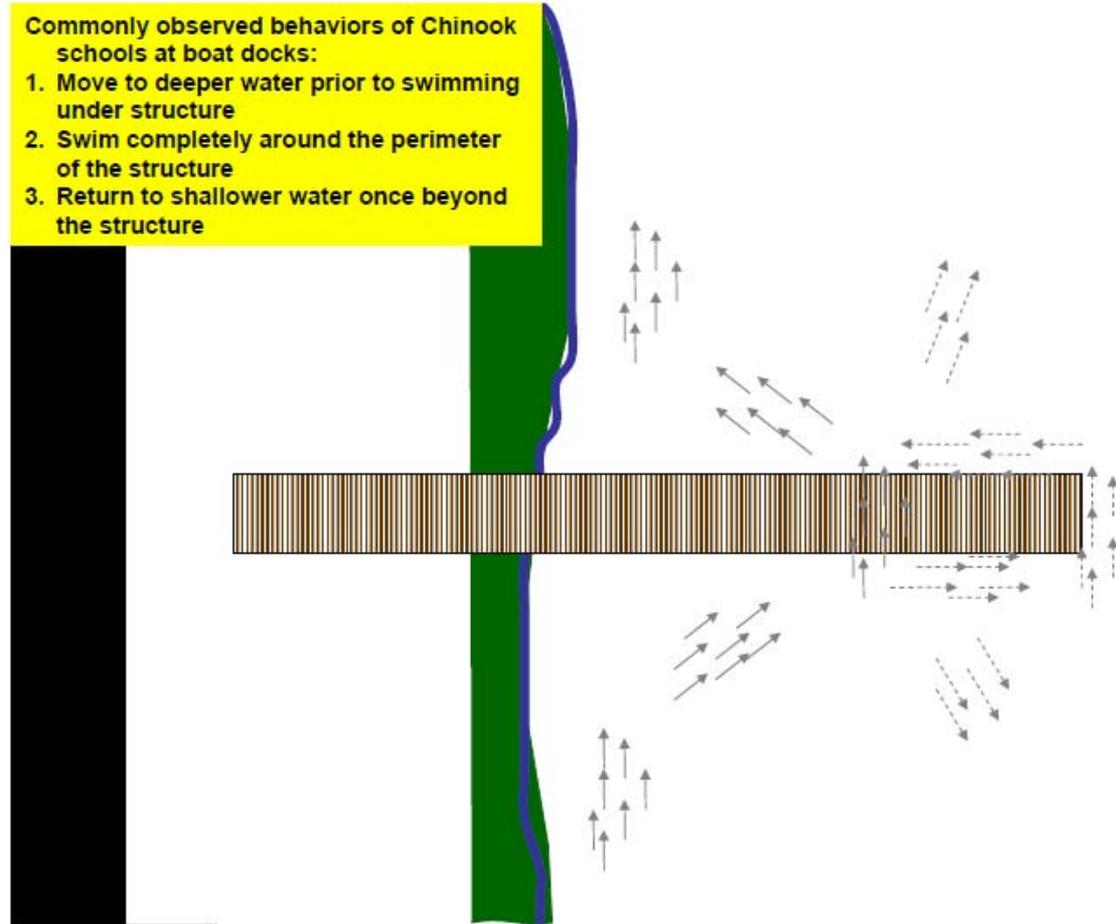


## *How do traditional piers impact salmon?*

- Inhibit juvenile migration
- Sharp shade lines
- Shading inhibits aquatic vegetation
- Predator habitat (piles and cover)
- Nearshore habitat is compromised

Commonly observed behaviors of Chinook schools at boat docks:

1. Move to deeper water prior to swimming under structure
2. Swim completely around the perimeter of the structure
3. Return to shallower water once beyond the structure





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## Ecology Guidance on Piers and Docks

- Must meet NNL
- Design to avoid, minimize and mitigate impacts
- Restrict to the minimum size necessary
- Must base regulations on relevant scientific information
- City cannot depend on another agency's standards to maintain NNL
- Dimensional standards must be proposed as part of the updated SMP



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## *Pier Design Alternatives*

- Width reduction
- Grated decking
- Increase height off water
- Extend eels to deeper water
- Elevated nearshore walkways
- Longer pile spans
- Reduce pile size and number





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## **Pier Regulations address** (see pg. 141 of 7/23 packet):

- New piers
  - Dimensional standards similar to Corps, OR
  - Administrative approval for alterations approved by state/federal agencies (area, pier width)
- Replacement piers/Major repairs
  - Major repair = >50% of pilings and decking/stringers
  - Dimensional standards similar to Corps, OR
  - Administrative approval for alterations approved by state/federal agencies (area, pier width, ell/finger design)
    - Pier area no larger than existing under admin. approval
- Additions to piers
  - Must demonstrate need
  - Dimensional standards similar to Corps
  - Install grating in nearshore area
- Minor repair activities
  - No dimensional standards
  - Replacing >50% decking, convert to grated material in nearshore 30'



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## Other proposed changes:

- New Use Listings (see pg. 107 of 7/23 packet):
  - Float plane facilities
  - Concession Stands
  - Tour Boat Facilities
  - Passenger-only ferry terminal
  - Water taxi
- Wetlands (see pg. 191 of 7/23 packet):
  - New wetland rating system
  - Buffers
  - Mitigation Standards
  - Permitting
- View corridors (see pg. 179 of 7/23 packet):
  - Eliminated for Downtown and Juanita Business Districts
- Lighting (see pg. 186 of 7/23 packet):
  - New standards for shielding fixtures
- Boatlift canopies (see pg. 147 of 7/23 packet)



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## **Implications of Key Changes to SMP:**

- Stricter standards in response to State requirements
- Use of incentives, where possible, to initiate improvements in shoreline conditions
- Improved consistency with federal and state standards
- Improved habitat and water quality over time
- Enhance existing shoreline stewardship



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## **Restoration Plan** (see pg. 227 of 7/23 packet)

### **Goals:**

- Maintain, restore or enhance watershed processes...
- Maintain or enhance fish and wildlife habitat...
- Contribute to conservation and recovery of chinook salmon and other anadromous fish...



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## Restoration Plan

- On-going projects and programs that will contribute to long-term restoration goals:
  - WRIA 8 continued participation
  - Comprehensive Plan/Natural Resource Plan
  - Critical Area Regulations
  - Stormwater Management and Planning
  - Green Building Program
  - Comprehensive Park, Open Space and Recreation Plan
  - Green Kirkland Partnership
  - Parks and Community Services Activities
  - Public Education
  - Capital Improvement Program
  - Other



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## Restoration Plan

- Future additional projects:
  - Unfunded WRIA 8 projects (improvements to Juanita Creek)
  - Projects in City owned properties
    - Juanita Beach Park breakwater
    - Juanita Bay Park invasive vegetation removal
    - Waverly Beach Park
    - David E. Brink Park
    - Dock grating/vegetation in various shoreline parks
  - Projects on private property
  - Public Education/Outreach



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## **Cumulative Impact Analysis** (see pg. 349 of 7/23 packet)

No Net Loss - How do we do it?

- Two scales:
  - Plan level
  - Individual project level
- Carefully designate properties
- New Standards
  - Setbacks, vegetation, lighting, water quality, etc.
- Require developments to mitigate their impacts
  - Avoid impacts
  - Minimize impacts
  - Mitigate for unavoidable impacts
- Create opportunities/incentives for restoration



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## Cumulative Impact Analysis Findings:

- Development closer to the water's edge, but the condition of shoreline area improved overall
- Effective overwater coverage should decrease; d
- Overall shoreline hardening condition will remain the same or improve over time; and
- Potential for improvements on Park property.

**Based on draft SMP provisions, no net loss of shoreline ecological functions is anticipated.**



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## Clarifications - The Proposed SMP Does Not....

- Require existing structures to be brought into compliance – new provisions will apply to additions or new/replacement structures.
- Prohibit replacement of a nonconforming structure in the case of fire or other disaster.
- Require existing lawn to be removed.
- Prohibit removal of trees.



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## Clarifications - The Proposed SMP Does Not....

- Require removal of existing shoreline stabilization measures, such as bulkheads, when redevelopment of a residence occurs.
- Prohibit the use of bulkheads or similar shoreline stabilization measures.
- Require use of softer shoreline stabilization measures in all circumstances.
- Create new limits on the overall size of existing private docks.
- Regulate activities that are not already regulated under city code.



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## Next Steps

- HCC Public Hearing
  - July 27
- Additional PC Meeting(s) to deliberate
  - August 13
- City Council Study Session
  - October 6 or October 20 (tentative dates)
- City Council Deliberation
- Submittal to Ecology
  - Public comment period + hearing (optional)
- Ecology's Review Response
- Council Action
- Submittal to Ecology for Final Approval



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ANY QUESTIONS?

*Next...*

- Public comments
- Questions from the Planning Commission
- Planning Commission deliberation



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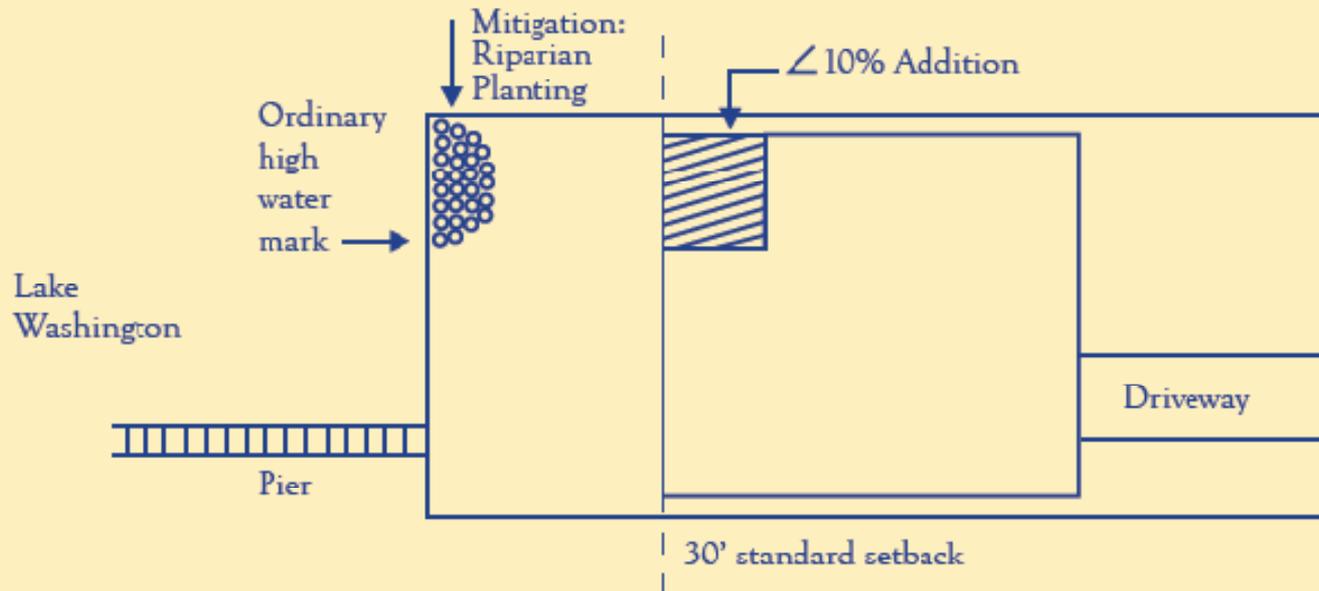
Additional Background Slides



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## Addition to Nonconforming Structure



Example of potential addition and mitigation.

Note: Riparian planting is one option – other mitigation options are also possible.

# Incentive to improve ecological function

Shoreline Setback Reduction Options	Standard Reduction in Required Setback, but No Less Than 25' Setback	Residential-L, south of Lake Ave W Street End Park, but No Less Than 15' setback
Removal of bulkhead or presence of natural shoreline (75% of linear frontage)	15%	Reduce required setback by 15 feet
Creation of shoreline cove or presence of natural shoreline (15' minimum linear length)	5%	Reduce required setback by 5 feet
Daylighting stream	5%	Reduce required setback by 5 feet
Hard structural shoreline stabilization setback from OHWM between 2-4 feet with max slope of 3 vertical to 1 horizontal	5%	Reduce required setback by 5 feet
Soft shoreline stabilization measures installed waterward of OHWM (gravels, cobbles, boulders, logs & vegetation)	2%	Reduce required setback by 2 feet
Biofiltration mechanisms in place of piped discharge to lake	2%	Reduce required setback by 2 feet
Increase shoreline vegetation by an additional 5' in width	2%	Reduce required setback by 2 feet
Install pervious materials, such as driveways, patios, etc	2%	Reduce required setback by 2 feet
Limit lawn area in shoreline setback to 50%	2%	Reduce required setback by 2 feet
Preservation or restore minimum 20% of lot area outside of shoreline setback with native vegetation	2%	Reduce required setback by 2 feet



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## Proposed regulations:

Shoreline Stabilization Measures	Requirements
Soft Shoreline versus Hard Shoreline	Natural shoreline preferred, but if stabilization measure is demonstrated to be needed to protect primary structure, then soft stabilization must be considered prior to hard stabilization.
New or Enlargement	<ul style="list-style-type: none"> <li>-Requires geotechnical report, except when existing primary structure is 10 feet or less from OHWM.</li> <li>-Requires evaluation of feasibility of soft shoreline stabilization measures in lieu of hard structural shoreline stabilization measures and design recommendations for minimizing structural shoreline measures.</li> <li>-Enlargement includes additions to increases in size (such as height, width, length, or depth) to existing shoreline stabilization measures.</li> </ul>
Major Repair or Replacement	<ul style="list-style-type: none"> <li>-Threshold Determination:               <ul style="list-style-type: none"> <li>•Repair for collapsed or eroded away stabilization structure or demonstrates loss of structural integrity of stabilization of structure; or</li> <li>•Repair of toe rock or footings; and</li> <li>•Greater than 15 feet in continuous linear length; or</li> <li>•Repair to more than 75 percent of the linear length of the existing hard structural shoreline stabilization measure where repair work involves replacement of top or middle course rocks or other similar repair activities.</li> </ul> </li> <li>-Requires a needs assessment (not geotechnical report), except if existing primary structure is 10 feet or less from the OHWM or when replaced with soft stabilization measure.</li> </ul>
Minor Repair	<ul style="list-style-type: none"> <li>-Does not meet threshold of new, enlarged, major repair or replacement measurement.</li> <li>-No geotechnical report or needs assessment required.</li> </ul>

**Notes:** Sites with less than a 10' building setback are not included with this decision tree as those sites will likely require some form of hard armoring. However, those sites may still benefit from the addition of an in-water gravel/cobble wedge to improve shoreline gradient along with a native plant buffer.

**SETBACK**

**BULKHEAD HEIGHT**

As measured vertically from the toe to top

**DEPTH AT BULKHEAD**

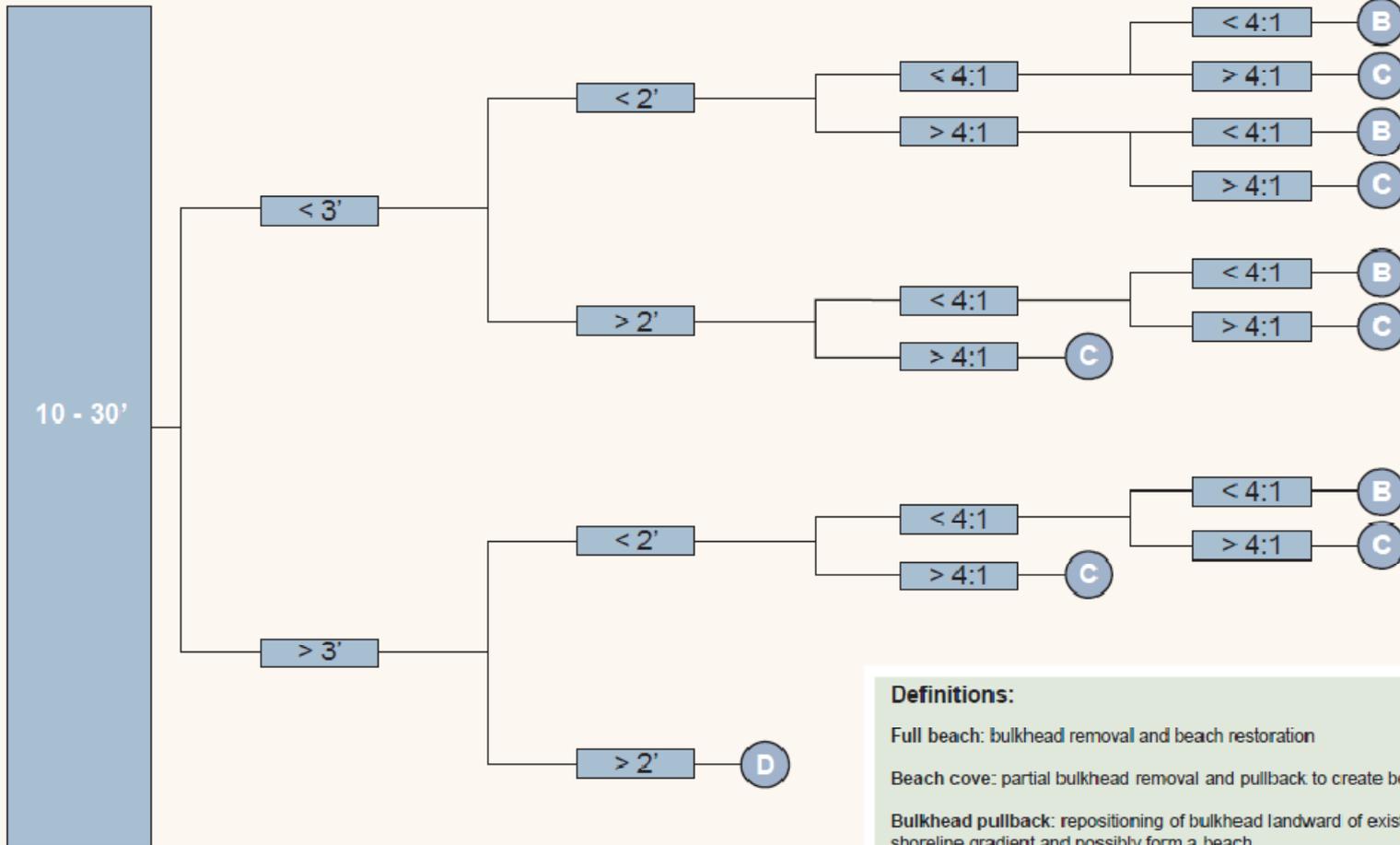
Depth of water at the bulkhead as measured from the ordinary high water mark (OHWM).

**NEARSHORE SLOPE**

In-water slope of substrate as measured for the first 30 feet waterward of the OHWM.

**YARD SLOPE**

Slope of upland area as measured for the first 30 feet landward of the OHWM.



**Definitions:**

**Full beach:** bulkhead removal and beach restoration

**Beach cove:** partial bulkhead removal and pullback to create beach cove

**Bulkhead pullback:** repositioning of bulkhead landward of existing location to improve shoreline gradient and possibly form a beach

**Slope bioengineering:** shoreline stabilization using plant material and other biodegradable materials to hold upland soils in place

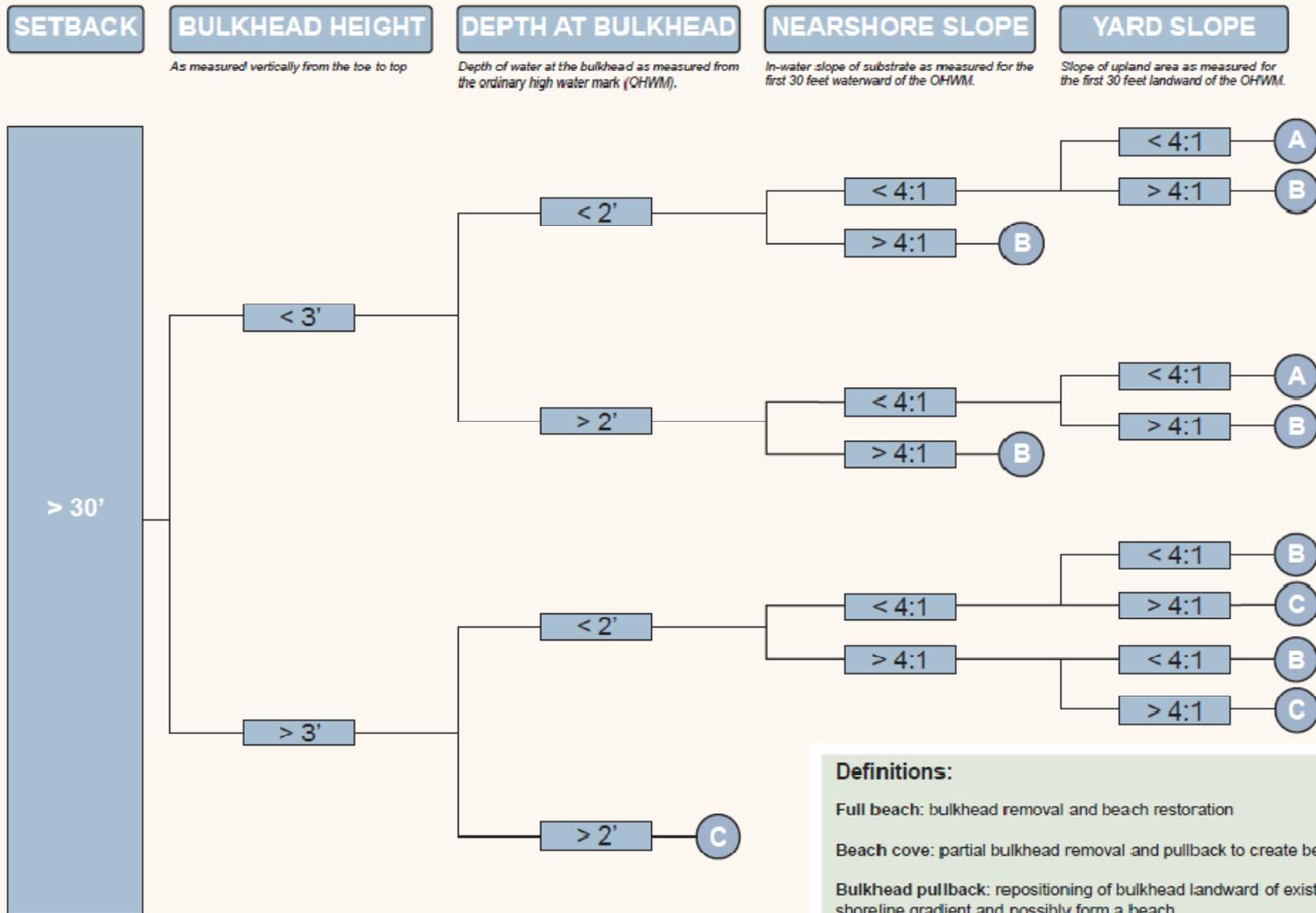
**Bulkhead enhancement:** bulkhead may stay in same general location, but modifications may include sloping back existing hard structure and/or modifying material type and layout to create potential pocket beach areas.

**Nearshore gradient improvement:** installation of gravel/cobble substrate wedge for the purposes of improving nearshore gradients

**Options:**

- (A)** Full beach, beach cove, pullback, bioengineering, enhancement, gradient improvement
- (B)** Beach cove, pullback, bioengineering, enhancement, gradient improvement
- (C)** Pullback, bioengineering, enhancement, gradient improvement
- (D)** Bioengineering, enhancement, gradient improvement

**Notes:** Sites with less than a 10' building setback are not included with this decision tree as those sites will likely require some form of hard armoring. However, those sites may still benefit from the addition of an in-water gravel/cobble wedge to improve shoreline gradient along with a native plant buffer.



### Definitions:

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### Options:

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- (C) Pullback, bioengineering, enhancement, gradient improvement
- (D) Bioengineering, enhancement, gradient improvement

<b>Pier, Dock or Moorage Piles for Detached Dwelling Unit</b>	<b>Dimensional and Design Standards</b>
<b>Maximum Area:</b> surface coverage, including all attached float decking, ramps, ells and fingers	480 sq. ft. for single property owner 700 sq. ft. for joint-use facility used by 2 residential property owners 1000 sq. ft. for joint-use facility used by 3 or more residential property owners Where pier cannot reasonably be constructed under the area limitation above to obtain moorage depth of 10 ft. measured above OHWM, an additional 4 sq. ft. of area may be added for each additional foot of pier length needed to reach 10 feet of water depth. OR <u>Administrative approval</u> allowed for larger area, provided design is approved by federal and state agencies with jurisdiction.
<b>Maximum Length</b> for piers, docks, ells, fingers and attached floats	150 ft, but piers or docks extending further waterward than adjacent piers or docks must demonstrate that they will not have an adverse impact on navigation. 26 ft. for ells 20 ft. for fingers and float decking attached to a pier
<b>Maximum Width</b>	4 ft. for pier or dock within 30 ft of OHWM and 6 ft beyond that point 6 ft. for ells 2 ft. for fingers 6 ft. for float decking attached to a pier, must contain a minimum of 2 ft. of grating down the center of the entire float.
<b>Height</b> of piers and diving boards	Minimum of 1.5 ft above OHWM, except the floating section of a dock and float decking attached to a pier Maximum of 3 feet above deck for diving boards or similar features above the deck surface
<b>Minimum Water Depth</b> for ells and float decking attached to a pier	Must be in water with depths of 9 feet or greater at the landward end of the ell or finger. Must be in water with depths of 10 feet or more at the landward end of the float
<b>Decking</b> for piers, docks walkways, ells and fingers	Piers must be fully grated with 40% open area If float tubs for docks preclude use of fully grated decking material, then a minimum of 2 ft. of grating down the center of the entire float shall be provided
<b>Location</b> of ells, fingers and deck platforms	30 ft. waterward of the OHWM 0 ft. to 30 ft. of the OHWM only can contain access ramp portion of pier or dock
<b>Pilings and Moorage Piles</b>	First set of piles located no closer than 18 ft from OHWM

Pier, Dock or Moorage Piles for Detached Dwelling Unit	Dimensional and Design Standards
<b>Additions to Existing Piers</b>	<p>Must demonstrate need for addition (safety, depth)            Convert existing nearshore decking to grated decking equivalent in size to the additional surface coverage</p>
<p><b>Replacement</b> of entire existing pier or dock, including piles OR more than 50 percent of the pier-support piles and 50 percent of the decking or decking substructure (e.g. stringers)</p>	<p>Must meet the dimensional and design standards for new piers, but can be <u>administratively approved</u> for the following alternative design features:</p> <ul style="list-style-type: none"> <li>•Increased pier area, but no larger than existing pier.</li> <li>•Max. 26 ft. length for fingers and float decking attached to a pier</li> <li>•Max 8 ft. width for ells and float decking attached to a pier</li> </ul>



# SHORELINE MASTER PROGRAM UPDATE



## Priority restoration projects for City owned properties:

Site	Park	Restoration Type	Description
1	Juanita Beach Park	Redesign breakwater	Remove or redesign the breakwater to improve migratory conditions for juvenile salmonids and water circulation.
3	Forbes Creek - Juanita Bay Park	Remove invasive vegetation	Invasive vegetation, primarily reed canarygrass, purple and garden loosestrife, and Himalayan blackberry in the terrestrial zones.
9	Waverly Beach Park	Reduce shoreline armoring	Removing or minimizing the impacts of shoreline armoring.
10	Waverly Beach Park	Enhance shoreline vegetation	Supplementation of nearshore native vegetation to improve habitat conditions for juvenile salmonids.
11	Waverly Beach Park	Reduce stormwater runoff	The impact of existing impervious surfaces (paved parking areas) could be reduced through the use of pervious materials, relocation, or minimization.
17	David Brink Park	Reduce shoreline armoring	Removing or minimizing the impacts of shoreline armoring.
Various	Various	Reduce overwater cover	Reducing overwater cover through the installation of deck grating on the existing piers and removing pier skirting as feasible.
Various	Various	Enhance shoreline vegetation	Improving nearshore native vegetation.