



Conducting a Comprehensive SMP Update

Restoration Planning

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Presentation objectives

- Define restoration
- Review SMP Guideline requirements
- Discuss approach to restoration planning and plan content
- Provide examples of effective restoration plan elements

Definition of restoration

Restoration means returning an ecosystem to a close approximation of its pre-disturbance state in terms of structure and function (NRC 1992). This includes measures needed to protect and preserve restored systems in perpetuity.

Restoration does not imply a requirement for returning the shoreline area to aboriginal or pre-European settlement conditions.

Restoration principles

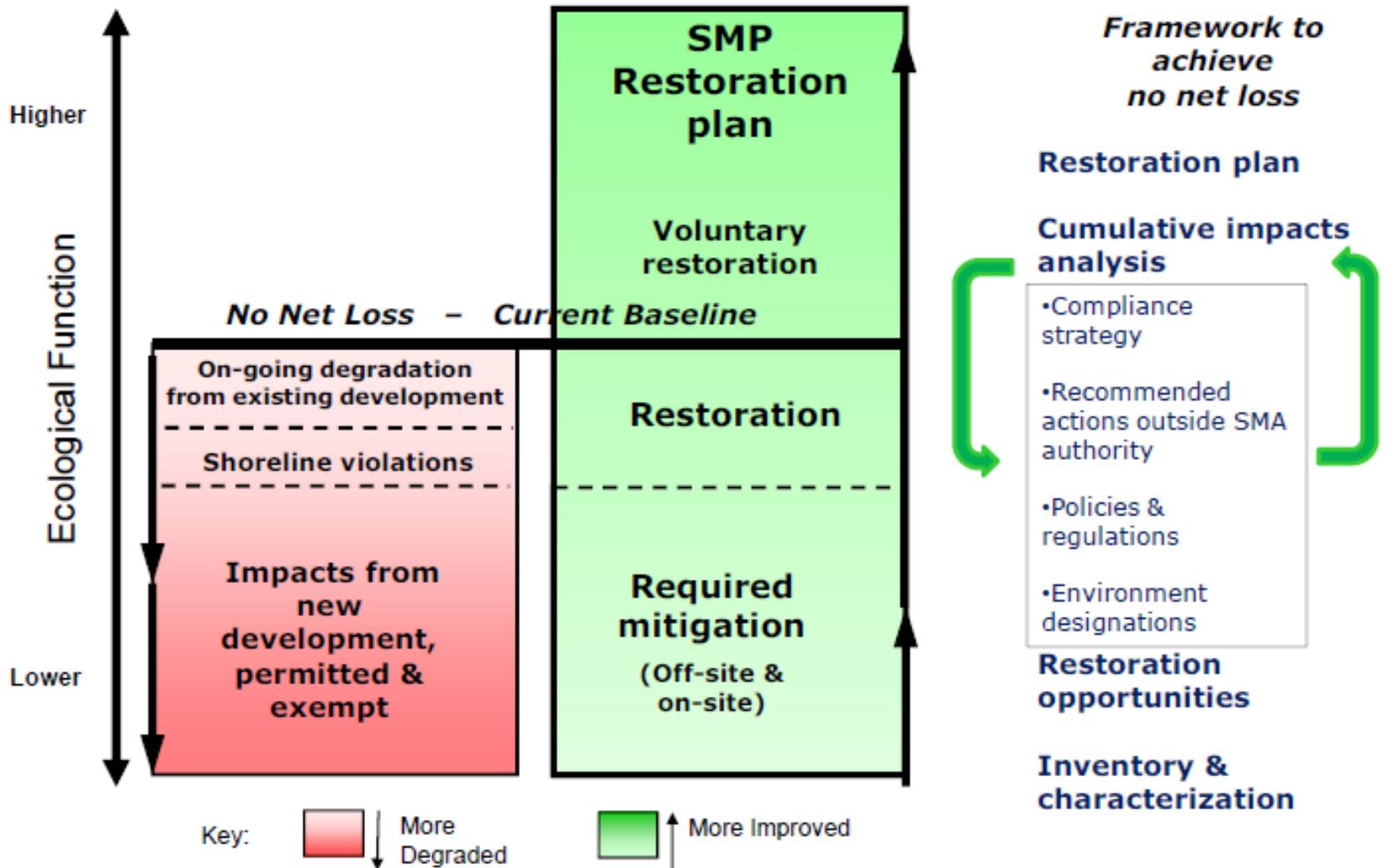
- Restoration is the reinstatement of driving ecological processes
- Restoration should be integrated with the surrounding landscape
- The goal of restoration is a persistent, resilient system
- Restoration should generally result in the historic type of environment, but may not always result in the historic biological community and structure.

Guidelines requirements

*“...prepare master program policies and regulations designed to achieve **no net loss** of ecological functions necessary to support shoreline resources and to plan for the **restoration** of the ecosystem-wide processes and individual ecological functions on a comprehensive basis over time.”*

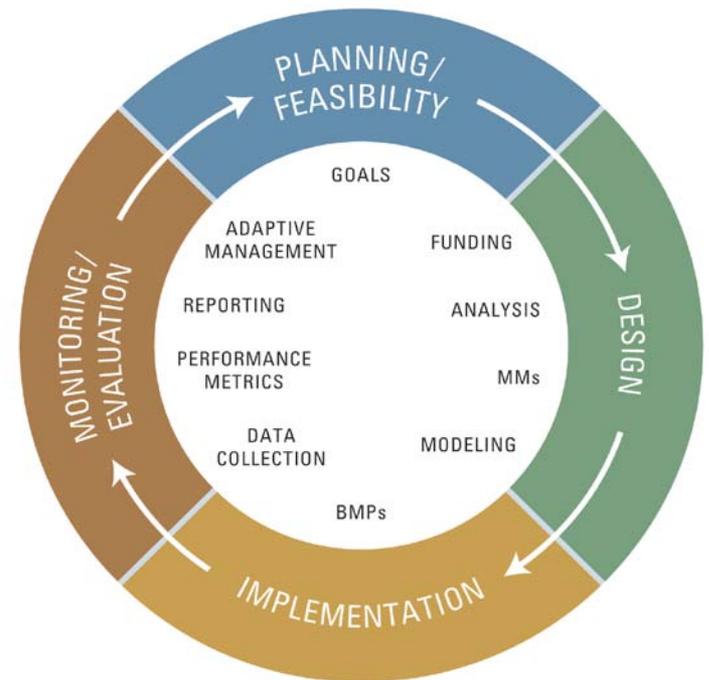
“...provisions should be designed to achieve overall improvements in shoreline ecological functions over time, when compared to the status upon adoption of the master program.”

Role of Restoration in No Net Loss



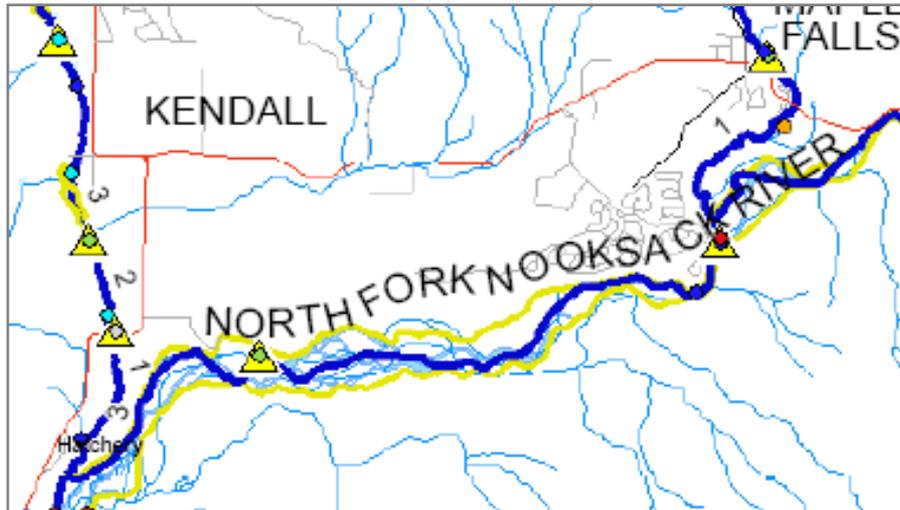
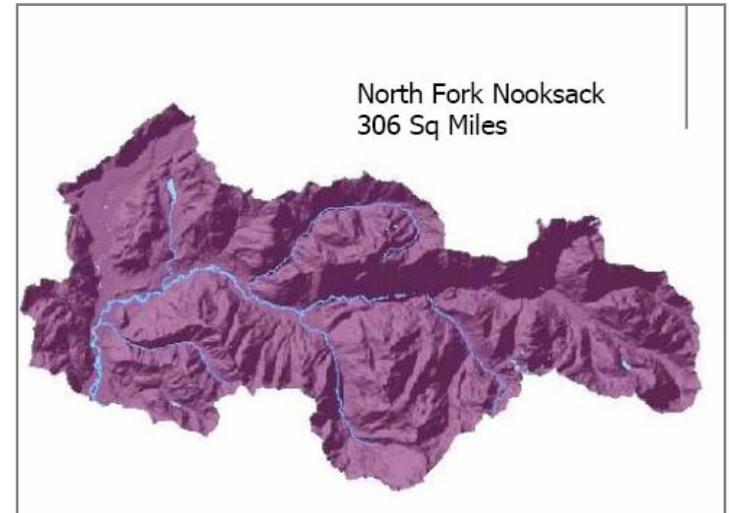
For each locale, restoration plans should identify:

- Degraded areas, sites with restoration potential;
- Goals and priorities;
- Projects and programs that contribute to goals;
- Implementation strategies, timelines and benchmarks;
- Funding sources;
- Monitoring mechanisms.



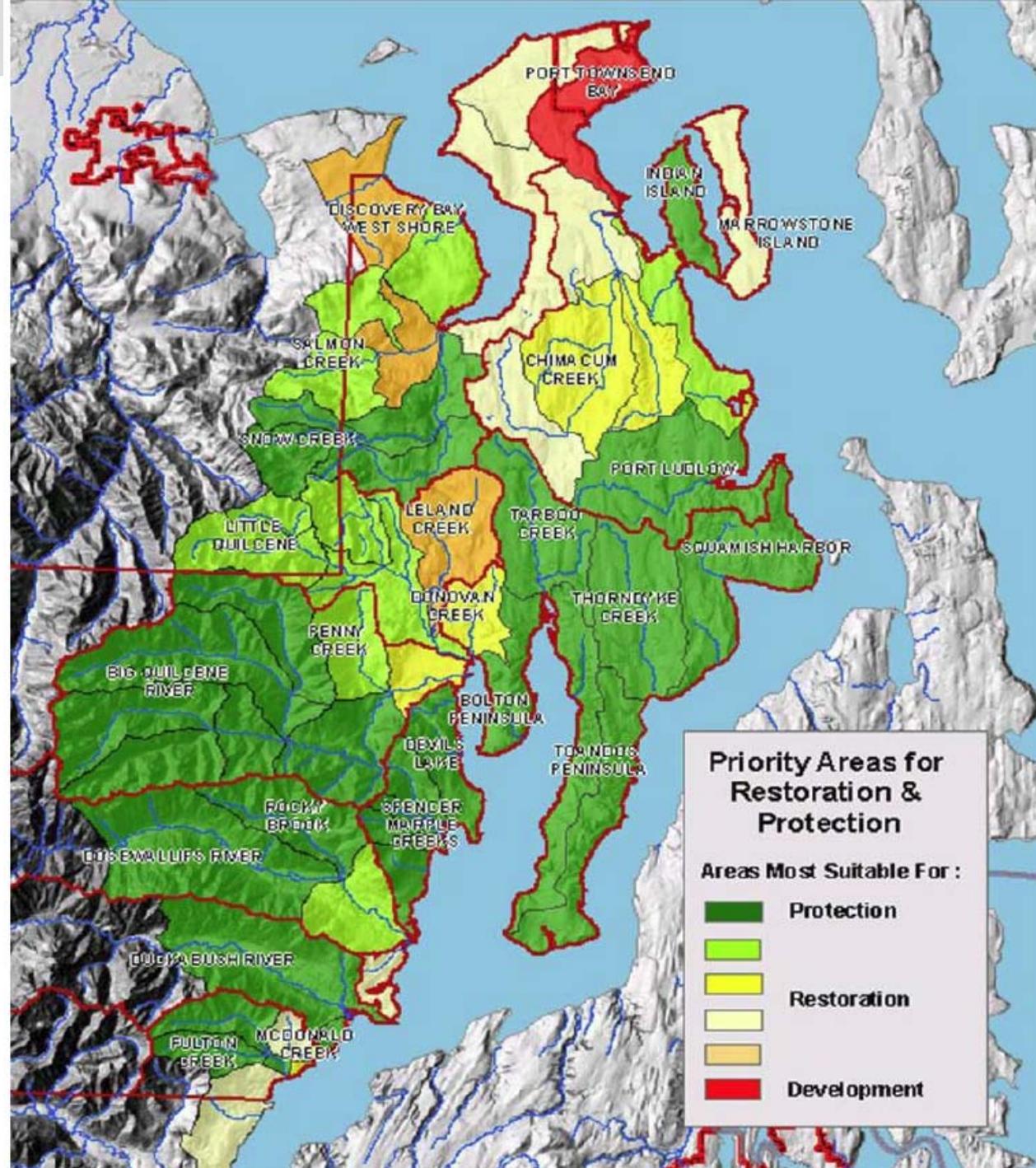
Planning at multiple scales

Watershed Scale
(ecosystem processes)



Reach Scale
(shoreline functions)

Watershed
Characterization:
Priority sub basins
for restoration



Restoration planning begins with the shoreline inventory

- Impairments & shoreline modifications = potential restoration opportunities
- Consider how restoration will fit in with future development
- Link restoration with public access opportunities
- Link restoration to water and non-water dependent uses



Photo – Pocket beach creation at Olympic Sculpture Park in Seattle (H. Shipman)

Incorporate information from:

- Watershed Management Plans
- Salmon Recovery Plans
- Basin management plans
- Limiting factors reports
- WDFW and MRC nearshore survey data
- PSNERP Change Analysis
- Citizens and Advisory Committees

Technical Report 2009-01

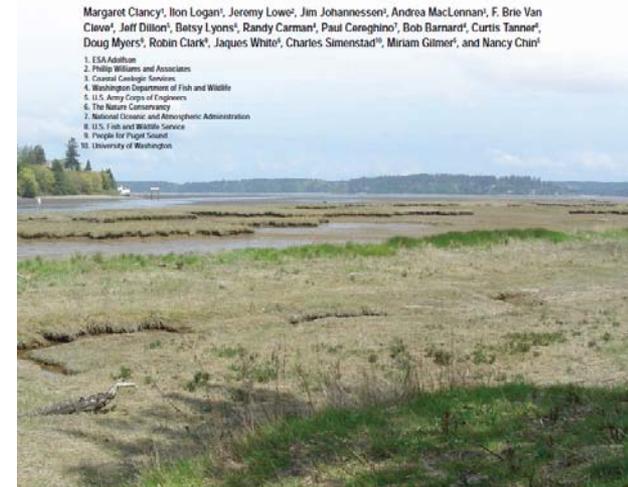


Management Measures for Protecting and Restoring the Puget Sound Nearshore

Prepared in support of the Puget Sound Nearshore Ecosystem Restoration Project

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1. ESA/Adolfson
2. Polko Williams and Associates
3. Coastal Ecology Services
4. Washington Department of Fish and Wildlife
5. U.S. Army Corps of Engineers
6. The Nature Conservancy
7. National Oceanic and Atmospheric Administration
8. U.S. Fish and Wildlife Service
9. Puget In-People Society
10. University of Washington



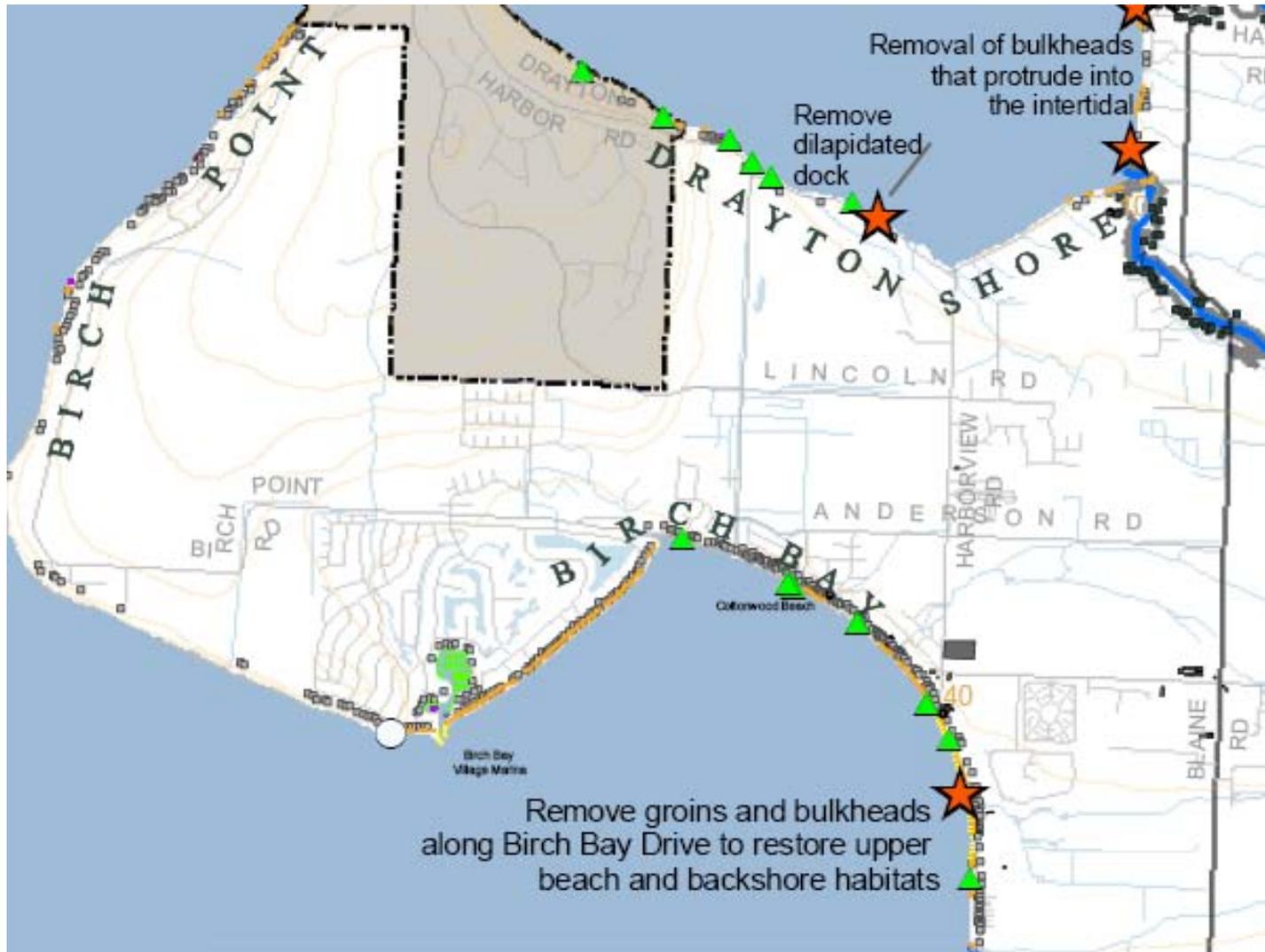
Work with stakeholders to set goals



Develop list of potential projects

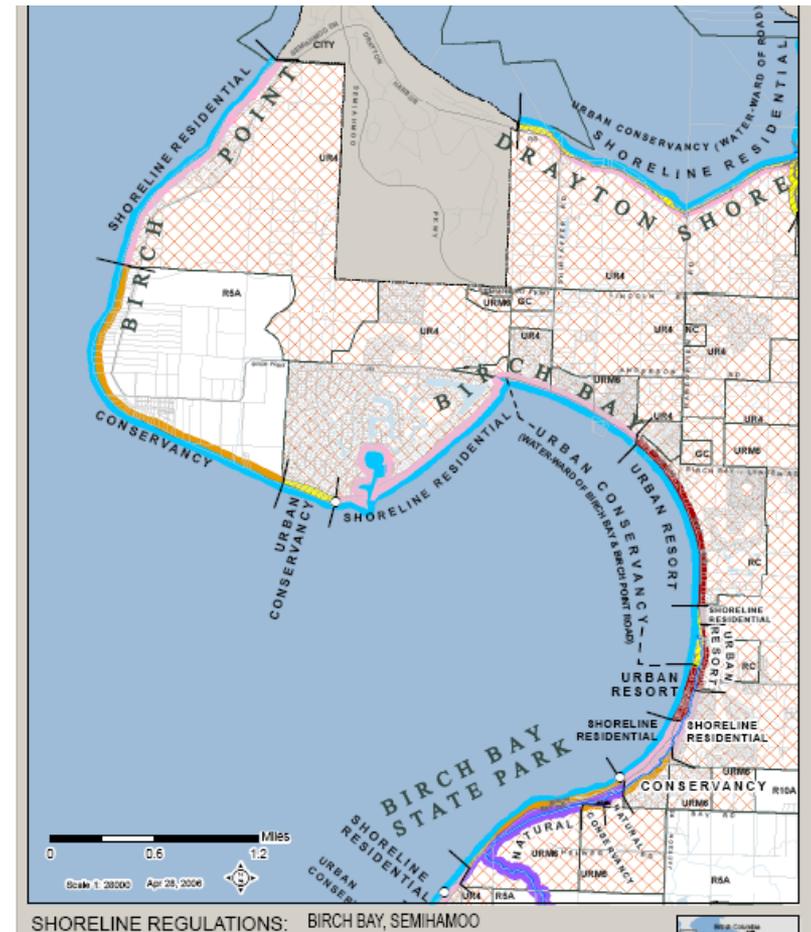
Squalicum Creek			
Restoration Opportunity	Restoration Objective	Restoration Activity	Monitoring Activities
30. Minimize bank erosion and down-cutting in Squalicum Cr from Meridian St. to the mouth.	Increase LWD placement and recruitment opportunities, restore native riparian vegetation, decrease peak flow events, improve stormwater detention, and increase use of LID in development in Squalicum watershed.	Ongoing riparian restoration, implementation of 2005 stormwater manual and LID techniques; Lower Squalicum log jam project, Squalicum Spring Creek project, Bug Lake and Sunset Pond reroutes, preserve and increase side channel connectivity.	Ongoing vegetation monitoring and photo monitoring.
31. Minimize predation on salmonids by introduced warm water fish in Bug lake and Sunset Pond.	Protect and restore habitat corridors including aquatic corridors.	Create side channels around Bug Lake and Sunset Pond.	Monitor fish use. (Surveys and counts)
32. Improve upstream passage for returning salmon, especially in the upper reaches of Squalicum Creek.	Remove or improve existing fish passage barriers. Ensure all new stream crossings are fish passable	Culvert retrofit through Stormwater Utility.	2002 City wide Culvert Survey.

Map potential projects



Integrate with other SMP elements

- Assigning of Environment Designations needs to consider restoration opportunities
- Cumulative Impacts Analysis should consider effects of proposed restoration
 - contribution to no net loss



Establish restoration policies

“Encourage projects that restore / rehabilitate /enhance shoreline resources. Strategies may include but are not limited to a simplified permit process, reduced or waiver of permit fees, public outreach, encouraging landowners to replant with native vegetation, tax relief.....”

Provide incentives for restoration

“Provide incentives to restoration by implementing tools which may include, but are not limited to: modifying the buffers that would apply to the restored areas or allowing a greater range of uses or flexible development standards (e.g., setbacks, height limits, lot coverage) on properties providing restoration and/or affected by restoration buffers.”

“The requirement of DR 5.10.4(c)(i) above, regarding dedication of no less than 25% of the total floor area to water-oriented uses, may be waived in whole or in part when the proposal provides restoration of ecological functions, habitat enhancement, and/or provisions of public access....”

Identify strategies for monitoring

- Metrics for success
- Roles and responsibilities
- Relationship to goals and objectives



Spartina removal in Willapa Bay (source: WDNR)

While approaches vary; results are what matters

- Every jurisdiction will have different needs and abilities for how to plan.

