

# No Net Loss Guidance



Shoreline Planners Meeting  
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- SMP Handbook Chapter 4
- No net loss indicators



## Overview

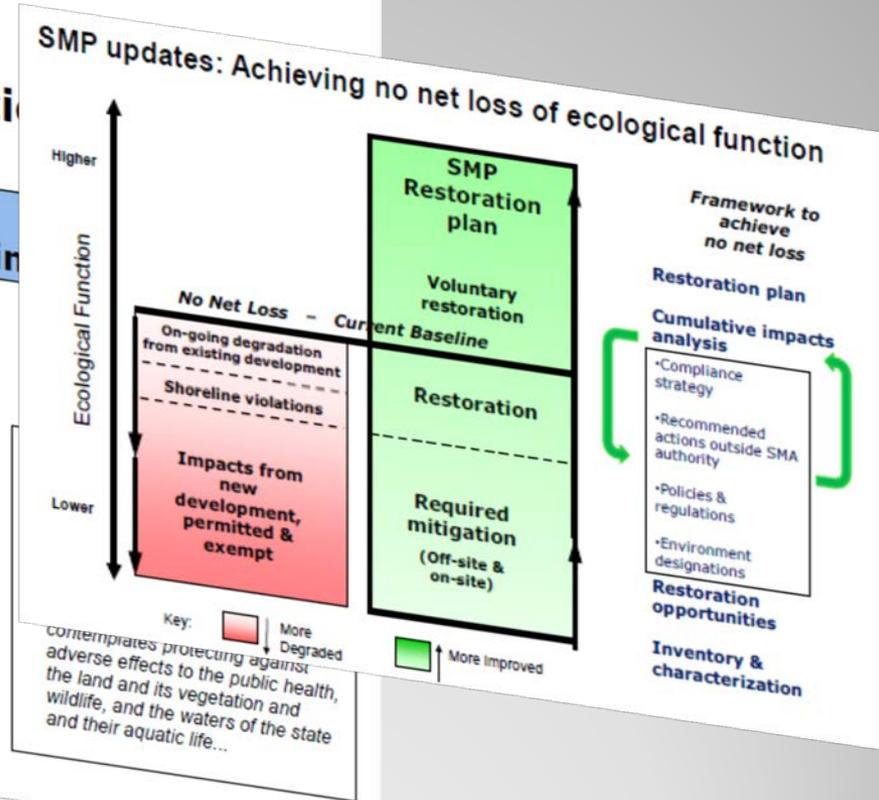
# Chapter 4 No Net Loss of Shoreline Ecological Function

All phases  
Shoreline Master Program Planning

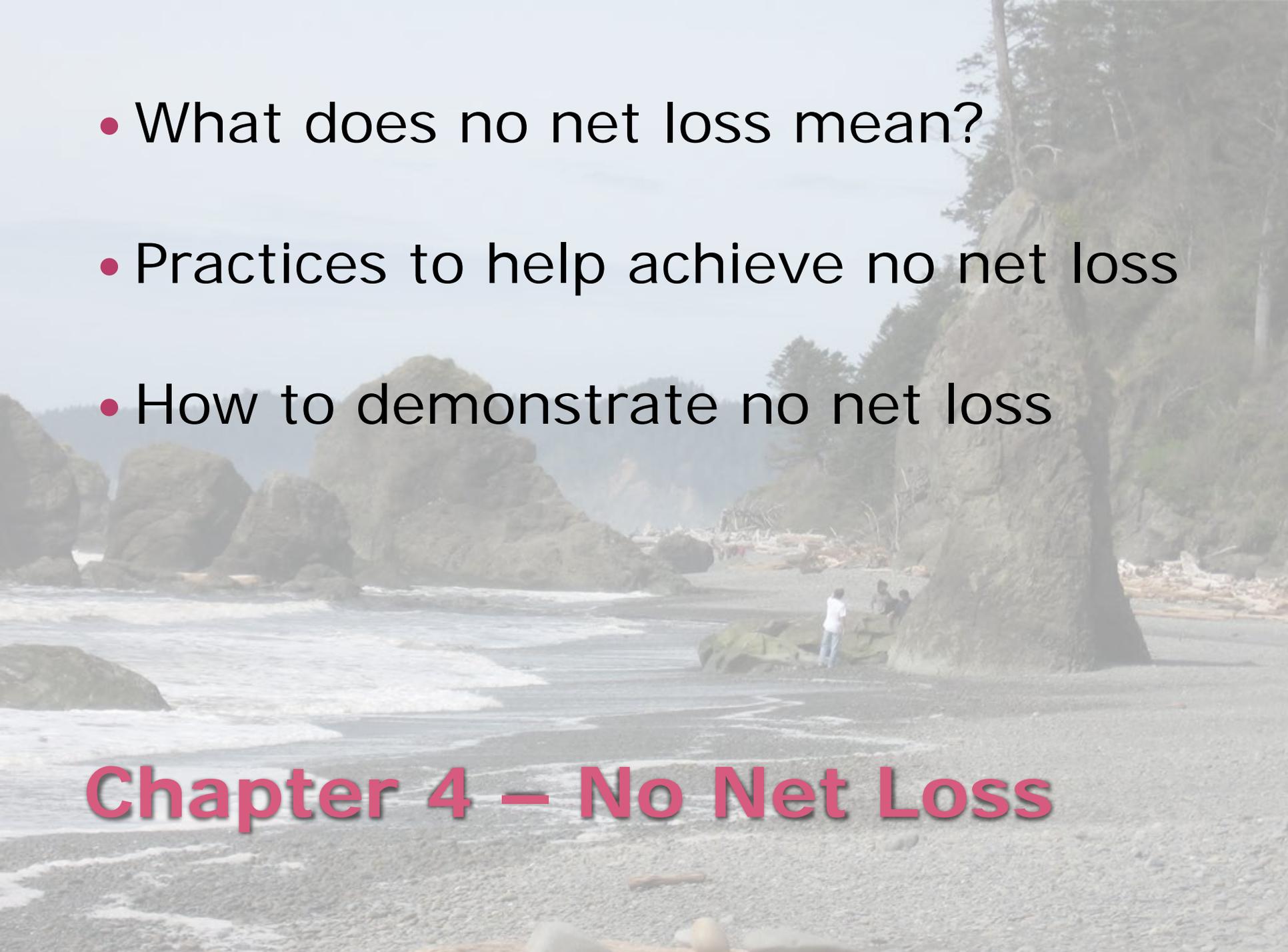
## Introduction

The Shoreline Management Act (SMA) provides a broad policy framework for protecting the natural resources and ecology of the shoreline environment. The SMP Guidelines establish the standard of "no net loss" of shoreline ecological functions as the means of implementing that framework through shoreline master programs. WAC 173-26-186(8) directs that master programs "include policies and regulations designed to achieve no net loss of those ecological functions." (The specific sections of the Guidelines addressing the NNL requirement are included at the end of this chapter.)

## SMP updates: Achieving no net loss of ecological function



# SMP Handbook Chapter 4

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- A coastal landscape featuring a beach, waves, and large rock formations. The scene is slightly hazy, suggesting an overcast day. In the foreground, there's a dark, pebbly beach. The ocean waves are breaking onto the shore. Large, moss-covered rock formations are scattered along the coast. In the background, there are more rocks and some trees. A few people are visible near the water's edge, providing a sense of scale.
- What does no net loss mean?
  - Practices to help achieve no net loss
  - How to demonstrate no net loss

## **Chapter 4 – No Net Loss**

# Assumptions

- Data are available
- Variables can be readily measured
- Indicator will provide a measure of condition within shoreline jurisdiction

**Potential indicators**

# Criteria

- What will indicator tell you?
  - Relevant to policies and goals
- Are data available and easy to obtain?
- Are data reliable and consistent?
- Can data show change over relatively short time period (8 years)?

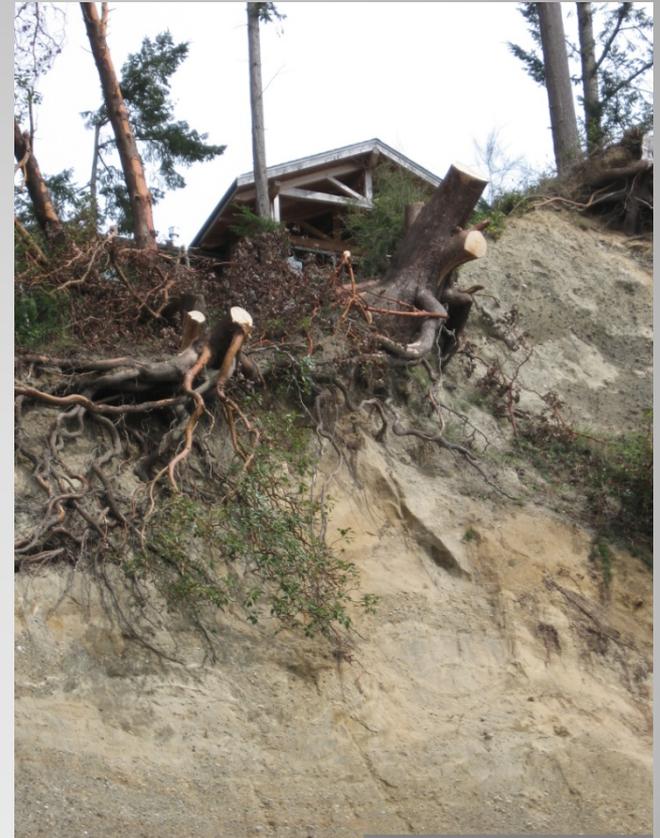
**Potential indicators**

# Some caveats

- Activities outside shoreline jurisdiction affect shoreline
- Indicators only part of NNL story
- Limitations for each indicator
- How capture positive impacts – e.g. bulkhead removal

**Potential indicators**

- Loss of forest cover (acres converted)
- Riparian vegetation (linear feet/width)
- Protected areas (acres)



**Potential indicators**

- Road lengths (within 200 ft of shoreline)
- Road crossings (number)
- Water quality
  - 303 (d) listing
  - Shellfish closures
- Flood control structures (linear feet)
- Connected floodplain area (acres)

**Potential indicators**

- Shoreline stabilization (linear feet)
- Overwater structures (square feet)



**Potential indicators**

**TABLE 4-1: POTENTIAL NO NET LOSS INDICATORS for SHORELINE MASTER PROGRAMS**

Indicator (all in shoreline jurisdiction)	Functions affected - key categories - water quality, water quantity and habitat	Type of Impairment**	Limitations of indicator	Where	Is data available or reasonable to obtain
<p>Forest cover: <u>Acres</u> converted from forest land to other land uses.</p>	<p>Water quality-sediment, nutrients &amp; toxic filtration, conversion, and/or retention; temperature regulation.</p> <p>Water quantity-flow regulation.</p> <p>Habitat-structure for habitat life needs; input of organics &amp; LWM*.</p>	<p>Reduces forest buffers and decreases filtering, conversion, and/or retention of pollutants from surface &amp; subsurface flow; increases quantity of pollutants to aquatic habitats.</p> <p>Alters the delivery and timing of water to aquatic areas, increasing quantity of water delivered to aquatic habitats during high and low flows, which affects habitat structures.</p> <p>Increases water temperature.</p> <p>Loss of nesting sites, rearing, refuge &amp; foraging areas.</p>	<p>Doesn't identify future land use. May be difficult to determine acres in shoreline jurisdiction without finer scale analysis.</p>	<p>Rural.***</p>	<p>Details of application available from DNR and local government. Class IV forest practice applications. CCAP data.</p>
<p>Shoreline stabilization: <u>Linear length</u> or area of bulkheads, revetments, bioengineering, seawalls, groins, retaining walls, gabions. (Includes decrease in length, change to soft structure.)</p>	<p>Habitat-Riparian and aquatic habitat, sediment supply. Input of organics, prey base, &amp; LWM.</p> <p>Structure for habitat life needs.</p>	<p>Interrupts habitat-forming processes, such as beaches &amp; channel migration, by impacting sediment supply and transport. Loss of nesting sites, rearing, refuge &amp; foraging areas.</p> <p>Loss of prey base with associated loss of riparian vegetation.</p>	<p>Combines different types of stabilization measures into one general category; impacts may vary.</p>	<p>Rural, urban.</p>	<p>Is data available from local government, including permits &amp; SDP exempt projects? Can locals track over time? HPA information can supplement other data, but is not sufficient on its own. Detailed aerial photos may also show stabilization changes.</p>

- Flood control applications
- Number of wells
- Population growth
- Construction permits

**Some we eliminated....**



- Other indicators?
  - Species that can be tracked in short time periods
  - Built environment



WDFW photos.

# Suggestions?

- Decide which to use as part of SMP update
- Project how indicators help to achieve NNL
  - How offset impacts?
- Track during 8 years prior to next update
- Measure and analyze
- Creates awareness

## Using indicators in SMP