

# No Net Loss and the Shoreline Master Program

Conversation with Dungeness River Management Team

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## Today's discussion

1. Brief overview of No Net Loss

2. Questions for you:

What types of development changes do you see along your shorelines?

How best to track changes in shoreline ecological function?



I hope to answer these questions:

1. Why do we care about 'No Net Loss of ecological function' in the SMP?
2. What is 'No Net Loss' anyway?
3. How do we track 'No Net Loss'?

I want to ask these questions:

1. What shoreline changes do you see where you live?
2. How would you track changes in shoreline function?

No Net Loss is required to be considered in Shoreline Master Program Update:

Adopted in 2003, WAC 173-26-186(8) directs that master programs “include policies and regulations designed to achieve no net loss of those ecological functions.”

This standard is to be accomplished through:

- ❖ SMP regulations, including evaluation of reasonably foreseeable “cumulative impacts” to shoreline functions resulting from development allowed by the SMP, and
- ❖ individual permit decisions over time.

## What does 'no net loss' mean?

Over time, the existing condition of shoreline ecological functions should not degrade as the SMP is implemented:

- designed to halt the introduction of new impacts to shoreline ecological functions as new development occurs
- protection *and* restoration are needed to achieve no net loss
- restoration activities also may result in *improvements* to shoreline ecological functions over time

## Why Focus on No Net Loss?

- Shoreline resources are important
- Concern that functions will be lost over time
- State requirements create opportunity to focus attention on NNL
- County received EPA grant to develop a new approach –  
No Net Loss Workgroup convened

The questions we're trying to answer:

What types of development changes do we see along our shorelines?

How best to track changes in shoreline ecological function?



## Aspiration for developing appropriate NNL indicators:

- Spatially explicit, informs decision-making and improves accountability
- Property owners/businesses invested and connected to healthy shorelines
- Confidence in no net loss strategy
- Clear, logical, & fair policies and regulations
- Healthy shorelines supporting residential, commercial and recreational use



What are the most important functions to track?

- What are the best indicators for those functions (4-6)?
- Would assessing those indicators:
  - Improve ability to develop NNL policies & regulations?
  - Allow for tracking SMP success over time?
- What limitations do you see in using performance indicators?

# Functions and Indicators - Marine

## Functions

Sediment supply  
Sediment transport  
Water quality  
Tidal hydrology  
Freshwater input  
LWD/organic inputs  
Fish/Wildlife habitat  
Species movement

## Quality Indicators

Feeder bluff  
Landslide/erosion hazard  
Closed canopy riparian forest

## Alteration Indicators

Modified shoreline  
Feeder bluff with armoring  
Armoring (non feeder bluff)  
OW structures  
OW structures in sediment transport zones

## Feeder bluffs with / without armoring

### **SMP Decision (s)**

Where/when to allow bulkheads  
Size of setbacks in erosion-prone areas

### **Function**

- Sediment supply & transport
- Beach erosion and accretion



## Amount of beach with/without forest cover

### **SMP Decision(s)**

Where to focus vegetation retention requirements

### **Function**

- Organic inputs
  - Wildlife habitat
  - Water quality(shade/temp)
- Size of setbacks and buffers
- Slope stability



Photo by Bob Bokelheide

## Public tidelands with/without shellfish harvest closures

### **SMP Decision(s)**

Type and density of development near harvest

### **Function**

- Water quality (bacteria, DO)



# Functions and Indicators - Freshwater

## Functions

Fish/Wildlife habitat  
Hydrology  
Water quality  
Floodplain  
connectivity  
LWD/organic inputs  
Species movement

## Quality Indicators

Salmon stock  
status  
Closed canopy  
riparian forest

## Alteration Indicators

Impervious surface  
Presence of  
levee/revetment

## Submerged aquatic vegetation with/ without overwater structures

### **SMP Decision(s)**

Where to allow/not allow docks, buoys, marinas, etc

### **Function**

- Food webs
- Primary productivity



## Sediment transport zones with/without overwater structures

### **SMP Decisions**

Where to allow/not allow docks, piers, etc

### **Function**

- Sediment transport
- Beach erosion and accretion



## Amount of 100-year floodplain with/without forest cover

### **SMP Decisions**

Buffer requirements

Vegetation retention standards

### **Function**

- Hydrologic function
- Water quality
- LWD recruitment
- Wildlife habitat



Length of stream channel with/without dams or levees

**SMP Decision(s)**

*Type of allowed use*

Stream bank armoring

**Function**

- Floodplain connectivity
- Exchange of organisms
- Salmon rearing, spawning



Now it's your turn:

- What types of development changes do you see along your shorelines?
- How best to track changes in shoreline ecological function?

Thank you

