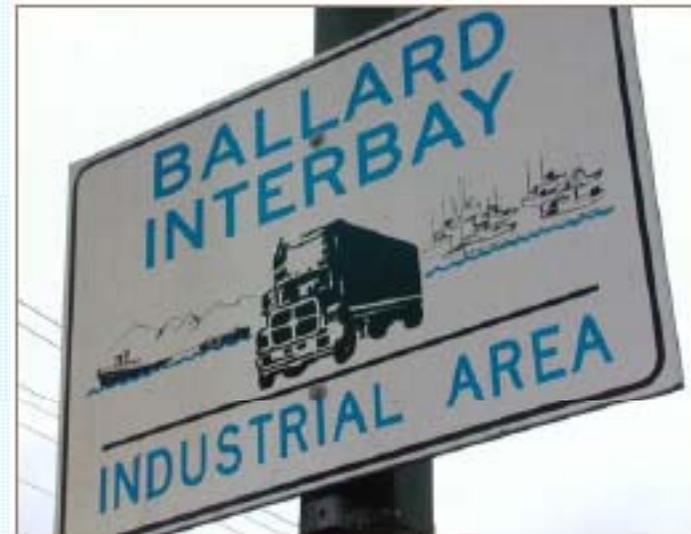


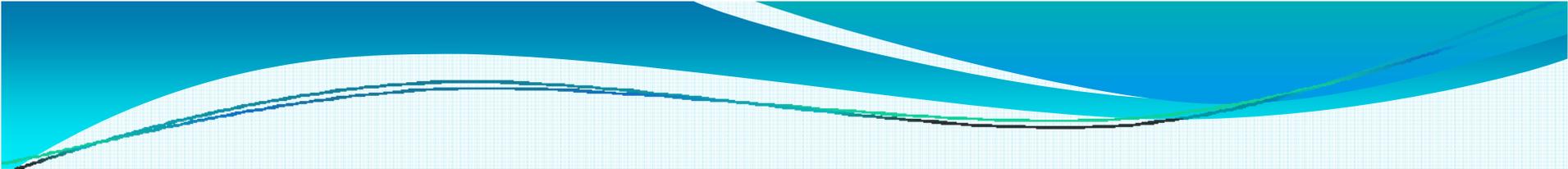
SHORELINE  
*Alternative*  
MITIGATION PLAN



# Origin

- Maintain economic vitality of maritime industrial economic sector
- Predictability and transparency in permitting process
- Flexibility in application of mitigation requirements
- Enhance quality of project mitigation



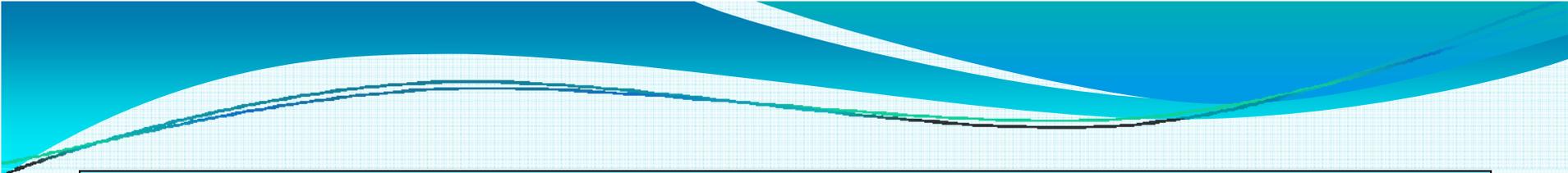


# What is the Shoreline Alternative Mitigation Plan?

- Two parts to SAMP
- 1<sup>st</sup> - Standardized approach to evaluating shoreline project impacts and determining mitigation requirements.
- 2<sup>nd</sup> - Optional off-site program for water-dependent and water-related land uses.
- May extend to SR 520 project and sites that are too small to accommodate required mitigation

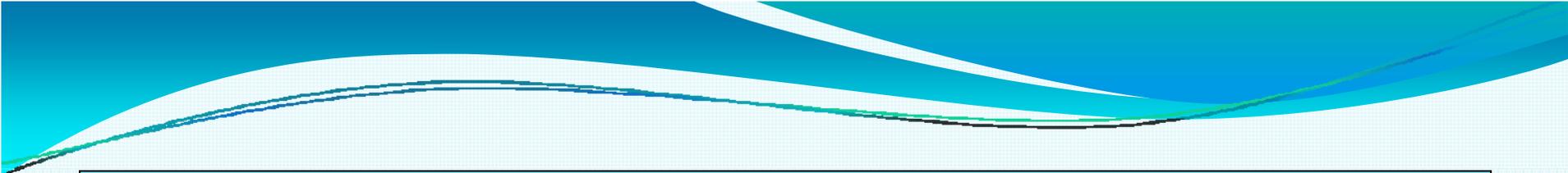


Lake Union / Ship Canal  
Shoreline Alternative Mitigation Plan



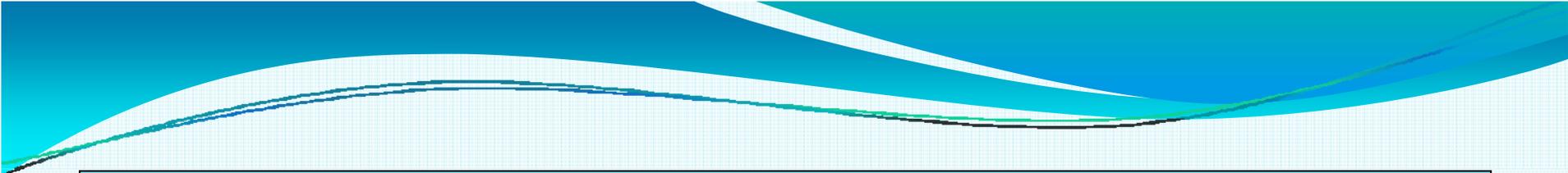
# Challenges

- Determining appropriate methodology for measuring impacts/mitigation
- Determining equivalency across sites
- High property values in Seattle



# Current Practice

- Apply development standards
- Minimize Impacts through changes in project design.
- Mitigate remaining impacts.
- Public Review

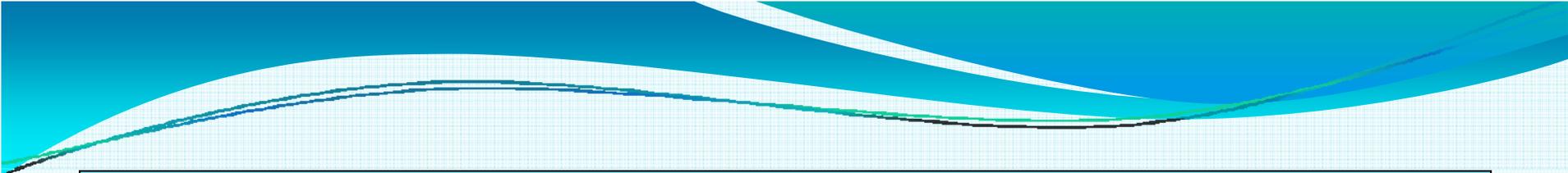


# What Will Change?

- Standardize project review by quantifying impacts and mitigation.
- Transparency and predictability in review of project proposals.
- Enhance shoreline mitigation.

# SAMP Equivalency

- Relative value of different types of impacts and mitigation activities.
- Captures the range of typical project impacts.
- Views ecological function through lens of juvenile Chinook salmon habitat requirements.
- Based on US Fish and Wildlife Services Habitat Evaluation Procedures.
- Review and revise as new information becomes available.



# Habitat Suitability Index

- Overall score measuring ecological function.
- Compares actual conditions to ideal conditions.
- Used to measure changes that result from shoreline projects.

Habitat Supporting  
Shoreline Conditions

Habitat Function

Habitat Suitability Index (HSI)  
Score

Riparian Vegetation - Within 10-ft of the Shoreline

Shoreline Condition (Armored, unarmored and slope)

**Refuge & Migration:**

Shoreline conditions are sufficient to provide protection to shoreline species using the shoreline environment for migration and rearing.

**Shoreline  
Ecological  
Function  
(upland)**

Substrate Composition

Shallow Water – up to 12 feet deep

Invasive Aquatic Macrophytes

Overhead Cover

Shoreline Slope

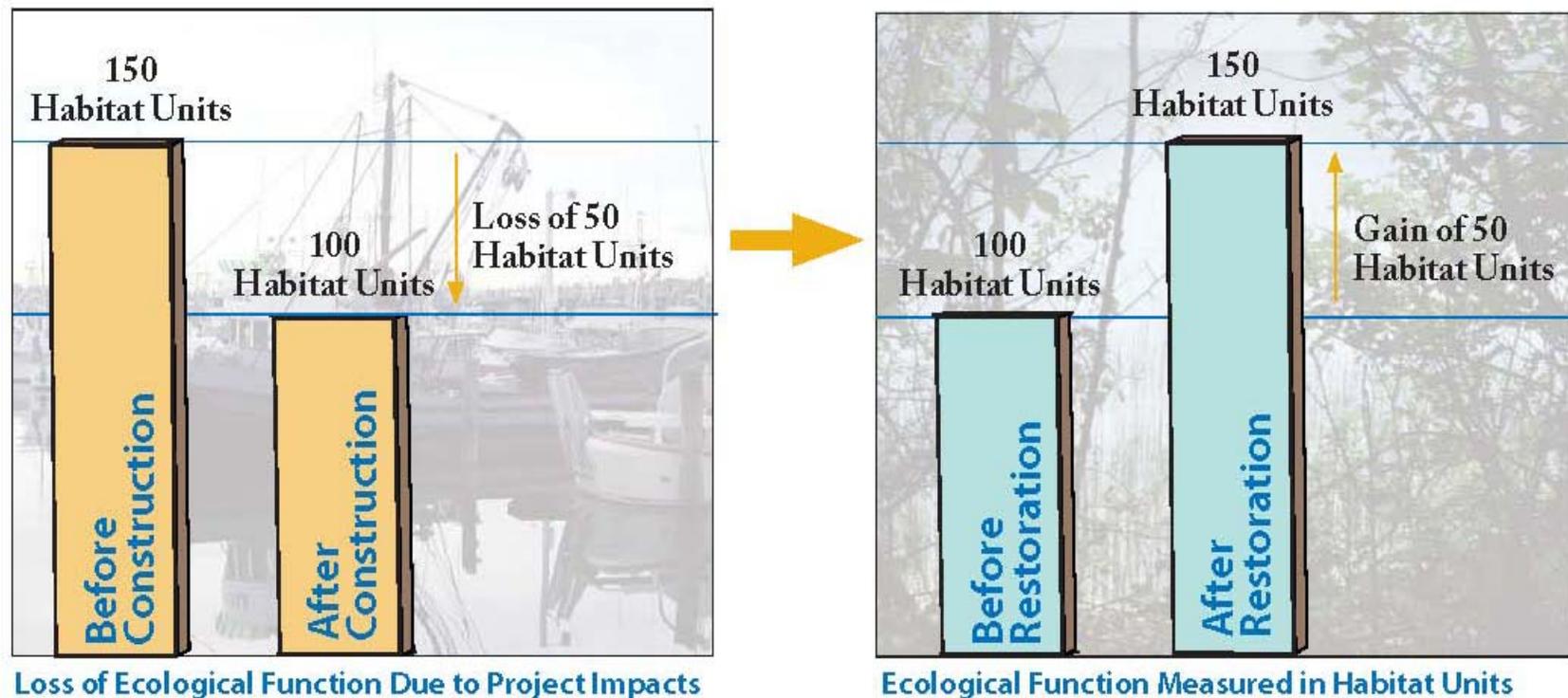
**Refuge & Migration:**

Shoreline conditions are sufficient to provide protection to shoreline species using the shoreline environment for migration and rearing.

**Shoreline  
Ecological  
Function  
(in-water)**

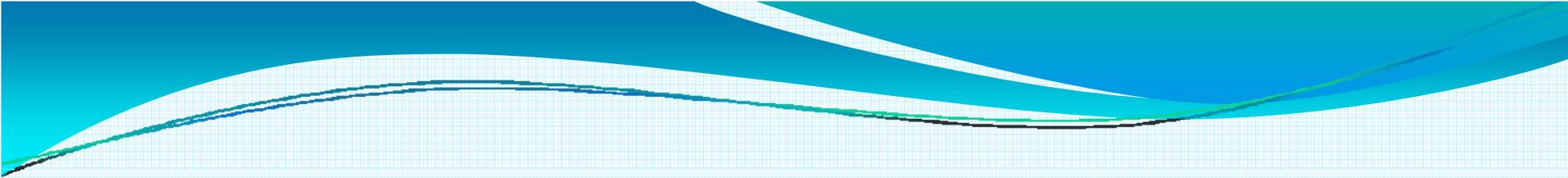
# SAMP Approach To Mitigation

Figure Two



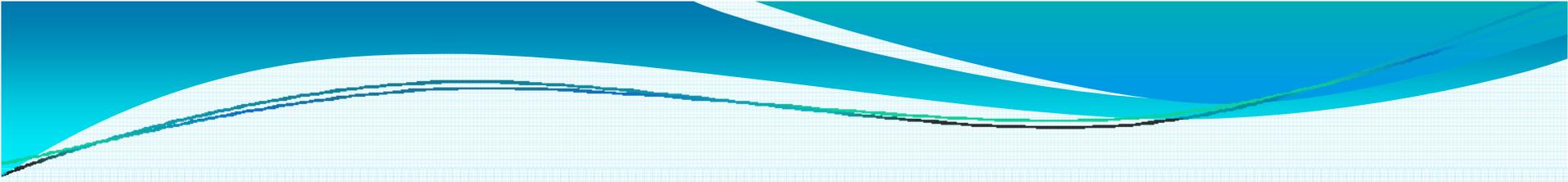
# Onsite Mitigation

- SAMP equivalency table
- Onsite, in-kind mitigation, 1:1
- Onsite, out-of-kind mitigation, 1.5:1.



# Offsite Mitigation

- Water-dependent/water-related land uses.
- May combine offsite and onsite mitigation.
- Offsite provided at a ratio of 2:1

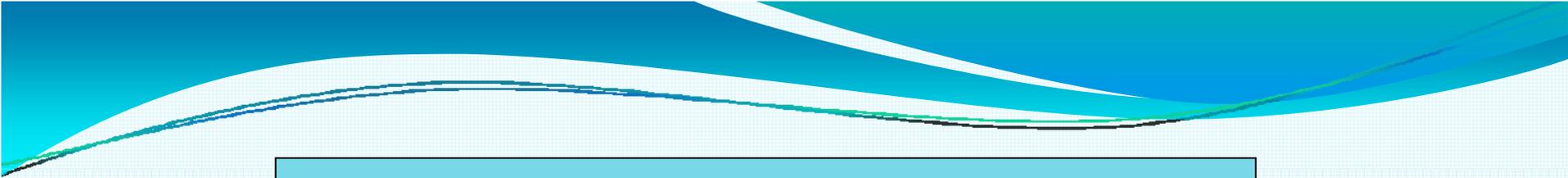


# Where will offsite mitigation occur?

- Within Lake Washington/Lake Union Ship Canal system.
- The City will develop shoreline mitigation projects.

# Next Steps

- Apply to Army Corps for Compensatory Mitigation for Losses of Aquatic Resources – in-lieu fee program (33 CFR Parts 325 & 332)
- Apply HEP to determine Habitat Units for other Seattle shorelines – Duwamish River, Elliott Bay, Puget Sound, Lake Washington
- Apply to Army Corps for remaining areas of Seattle's shorelines



# Key Questions

- Is the Shoreline Alternative Mitigation Plan a good method to achieve the mitigation requirements for long term impacts?
- If not, is there another method that could be used to meet the mitigation requirements?
- What specific BMPs/mitigation requirements do your agencies use for construction/short term impacts?