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# Mitigation That Works

Watershed-based Mitigation

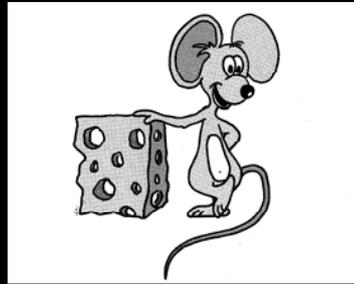
# Presentation Overview

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- What past efforts have said
- Existing and ongoing planning efforts
  - What are they?
  - What do they include?
- Can plans inform and improve mitigation?
- Implementation obstacles

# Statewide Wetland Integration Strategy

Agencies can best determine overall mitigation policies by considering a watershed approach. If state natural resource agencies could work toward a watershed-based management approach under a common policy for natural resource protection, consistency conflicts would be minimized. This watershed approach could then be coordinated with the usual case by case evaluations.



***Recommendation #13: The Governor should appoint an interagency task force to work with the general public and local, state, tribal, and federal governments to develop protocols for collecting, managing, and disseminating technical information in a watershed context.***

Technical Work Group

# National Academies of Sciences\*

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*A watershed approach would improve permit decision making:*

- Functions must be understood in a watershed framework.
- Preference for on-site / in-kind should not be automatic, but should reflect an analytical assessment of watershed needs.
- Proper placement in the landscape is necessary for wetland sustainability.

*\*National Research Council, 2001*

# NAS (cont)

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- Site selection should be done on a watershed scale.
- Watershed evaluation would enhance wetland protection and/or the creation of wetlands that mimic natural conditions.
- Mitigation sites should be designed and constructed to make an ongoing ecological contribution to the watershed; this contribution should be specified in advance.

# Mitigation Optimization\*

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- Maximize effectiveness by integrating permitting and watershed-based planning.
- Maximize benefits by ensuring mitigation reflects environmental constraints, limiting factors, and watershed priorities.
- Implementing actions from watershed plans compensates for development impacts and contributes more broadly to watershed systems and processes.

*\*WDFW in cooperation with Ecology, 2005*

# Mitigation Optimization (cont)

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- Can improve mitigation by anticipating mitigation obligations and mitigation options in advance of permitting.
- Characterization can be used to establish specific actions/projects that address multiple resource issues.
- Some watersheds have done excellent planning to prioritize restoration projects...that can mitigate development impacts.

# Shared Strategy\*

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- Encourage use of off-site mitigation before permitting process starts.
- Mitigation should draw on the scientific and political work of various watershed plans.
- Determination of environmental benefit should consider project, site, and management regime scales.

*\*Evergreen Funding, 2006*

# TPEAC\*

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- Support development of local restoration and recovery databases.
- Support interagency efforts that seek to match mitigation needs with watershed recovery and other priorities.
- Use characterization to monitor landscape-forming processes.
- Include tribal priorities and other information into regional restoration datasets.

*Watershed Status Report, TPEAC Watershed Subcommittee, 2006*

# TPEAC (cont)

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- Integrate watershed characterization tools and information into existing watershed planning efforts.
- Include the early identification of mitigation needs in land use and transportation planning.
- Facilitate and expedite the development and permitting of new innovative mitigation approaches through the use of watershed characterization results.

# TPEAC (cont)

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- Use characterization to identify a conceptual network of advanced mitigation sites.
- Identify ways to integrate watershed-based mitigation into WSDOT culture.
- Work with Ecology to pilot the use of wetland restoration as a stormwater flow control BMP.
- Work with Shared Strategy and regional entities to facilitate use restoration site lists for identifying candidate mitigation sites.

# Recurring Themes

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- Functions, limiting factors, and ecological contributions need to be understood in a watershed context.
- It's important to identify issues and opportunities in advance.
- Ability to match mitigation and recovery/restoration will improve results.

# Questions

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- What is hampering our ability to fully implement these recommendations?
- How can/should this Forum move these recommendations forward?

# Potential Obstacles

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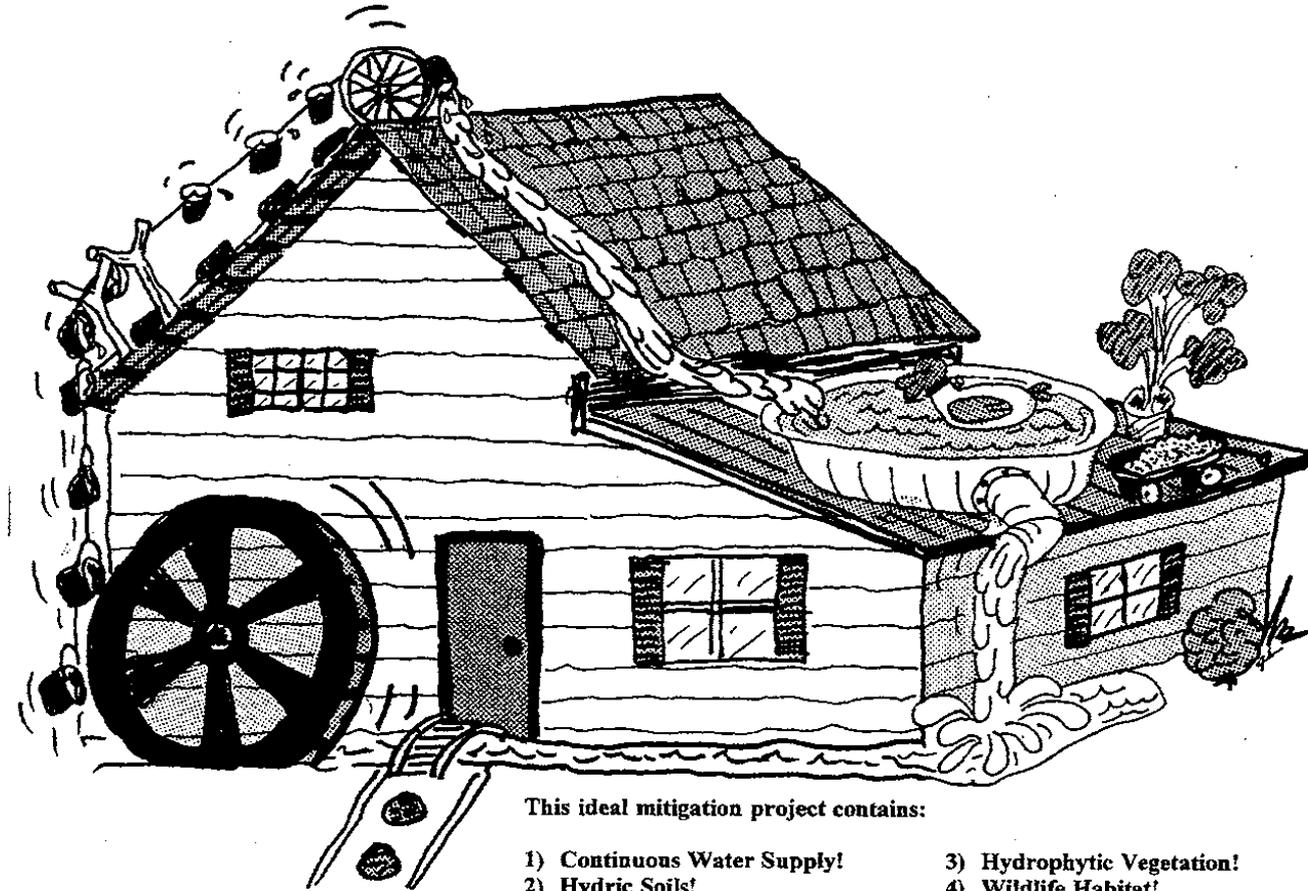
- Tendency to want start over from the beginning.
- Lack of funding/resources for follow up.
- Disconnect between agency management and field/permit review staff.
- Inability to let go of resource/regulatory 'silos'.
- Focus on no net loss of wetlands limits our view of the issues.

# More Obstacles

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- Agencies don't feel they have authority to direct where mitigation happens
- Lack of support for 'out-of-jurisdiction' mitigation at the local level.
- Expected benefits have not been proven.
- Characterization methods not fully vetted.

## CREATIVE MITIGATION PROJECT



This ideal mitigation project contains:

- 1) Continuous Water Supply!
- 2) Hydric Soils!
- 3) Hydrophytic Vegetation!
- 4) Wildlife Habitat!

Ecology, EPA and CTED, 1994

# 'Watershed' Plans

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- Watershed Management Plans (ESHB 2514)
- Salmon Recovery Plans (HB 2496)
- Shoreline Restoration Plans (RCW 90.58)
- Ecoregional Assessments
- Biodiversity Plans
- Comp. Irrigation District Management Plans

# Strikes Against

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- Intended to serve a specific (and single) resource need/regulatory requirement.
- Not developed for purposes of mitigating development impacts.
- Don't always define full suite of benefits.
- Unclear how implementing projects achieves no net loss.

# Other Considerations

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- Many projects identified as benefiting salmon production have other (additional) ecosystem benefits.
- Only a fraction of the identified projects are funded (no dedicated funding for SMP restoration projects).

# Comparison

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## Salmon recovery plans:

- Prepared by technical experts
- Publically funded
- Follow standard methods and protocols
- Take in account ecosystem processes, landscape context
- Respond to identified problems and threats
- Include public & stakeholder input
- **Goal: Improving ecosystem function**

## Traditional mitigation plans:

- Prepared by consultants
- Developer funded
- Wide range of methods and protocols
- Mostly site-scale
- Not responsive to watershed threats or problems
- Minimal public input
- **Goal: Get permit, minimize costs**

# Project Examples:

## *Restoration:*

### Nisqually Estuary:

Restore 700 acres of estuary west of mainstem,

removal of last dike on Nisqually Tribe property, eastern side Red Salmon Slough

### South Puget Sound nearshore (Nisqually Estuary – Point Defiance):

Identify priority projects and implement at least one project

### Mashel River Eatonville Reach:

Restore instream diversity: 1.5 miles

Restore off-channel wetlands: 5-10 acres

Restore/enhance riparian vegetation: 50 acres

### Lower Ohop Creek:

Restore 6.3 miles of instream habitat

Restore 800 acres of Lower Ohop Valley floor wetlands

Revegetate 150 acres of riparian habitat and 800 acres of wetlands

### Nisqually Mainstem:

Restore access to 15 acres of off-channel wetlands at Powell Creek mouth

2006 Watershed Work Plan Puget Sound Salmon Recovery Plan - Nisqually

**Table 6-5. Recommended improvement actions for Padilla/Samish Bay**

<b>Improvement Action</b>	<b>Benefit to Natal Chinook</b>	<b>Benefit to Other (non-natal) Chinook</b>	<b>Benefit to summer chum, bull trout, other fish</b>
Continue to mechanically remove <i>Spartina</i> colonies	May improve rearing of fish from independent spawning aggregations	Increase native cover and feeding support for Nooksack and Skagit migrants	
Improve connections between the Skagit delta and Padilla Bay to support two-way movement of fish	May improve rearing of fish from independent spawning aggregations	Support feeding and refuge functions of the Skagit such as fry and parr outmigrants, particularly of the delta fry life history type.	Would improve access/connectivity between the Skagit delta and neighboring deltas for bull trout feeding
Remove agricultural dikes along the south shoreline of Padilla and Samish Bays where feasible	May improve rearing of fish from independent spawning aggregations	Support feeding and refuge functions of the Skagit such as fry and parr outmigrants, particularly of the delta fry life history type.	Would improve access/connectivity between the Skagit delta and neighboring deltas for bull trout feeding

## Washington Freshwater Assessment: LAST BEST RIVERS AND WETLANDS



Figure 7. The river basins and lake areas shaded in gray provide the best opportunities for freshwater conservation activities. Rivers highlighted in yellow represent important systems with greater conservation challenges.



Landscape units: watershed; nearshore: 988 acres (400 hectares) grid.

Example: Washington  
Biodiversity  
Conservation Strategy  
(Biodiversity Council,  
2007)

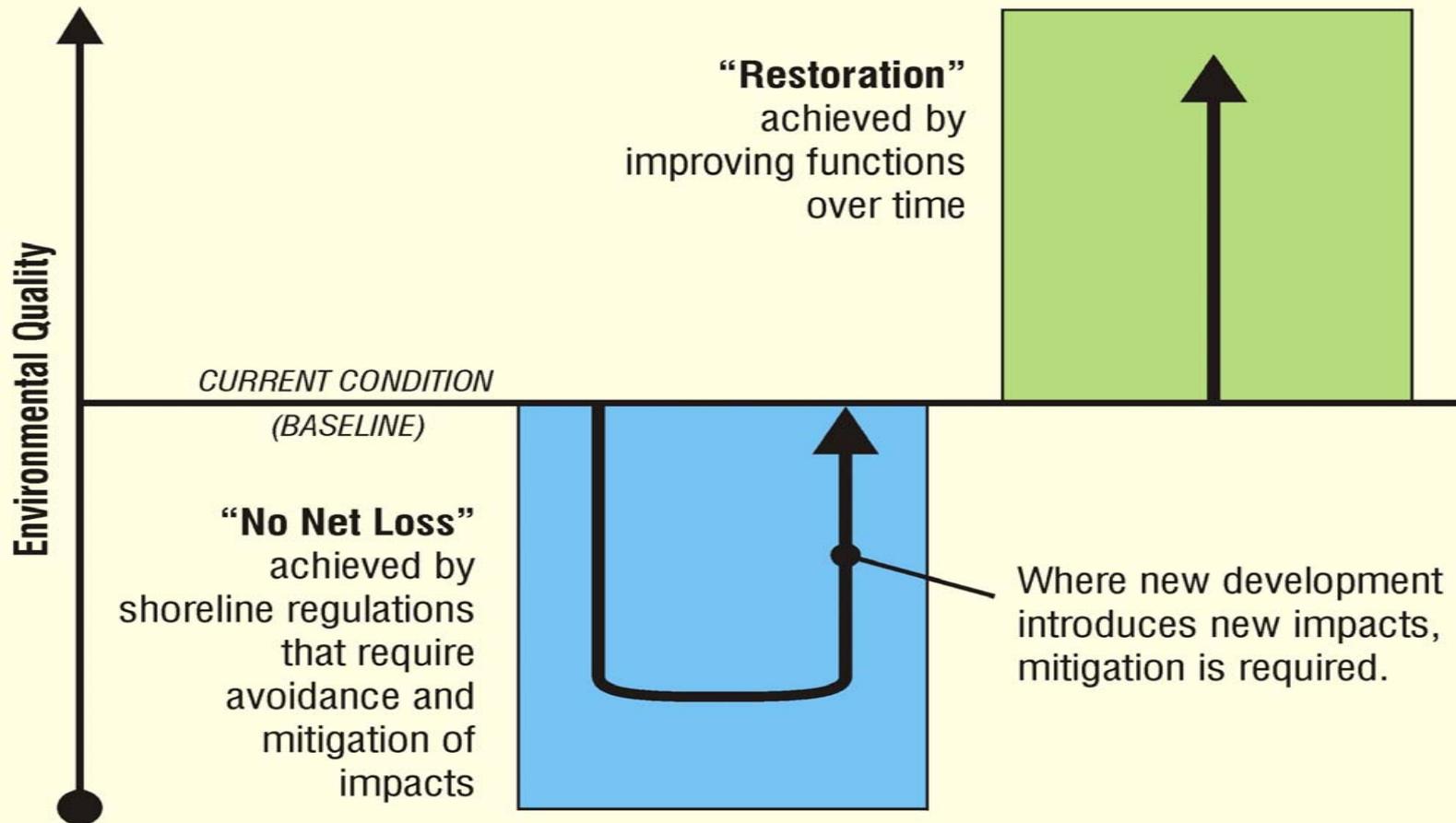


## Governor Gregoire, on SRB projects:

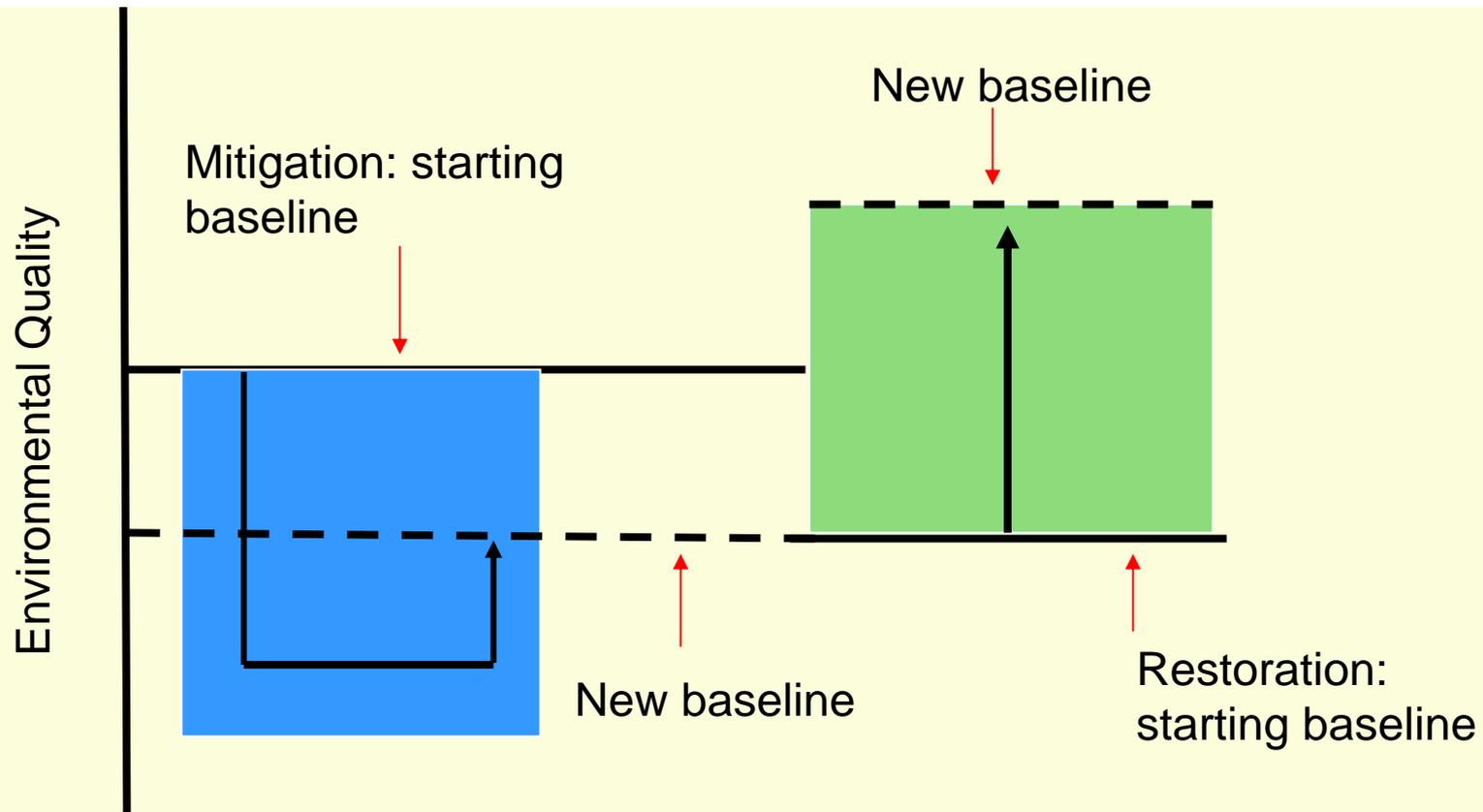
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*“The health of salmon populations is an indication of the health of our environment. Protecting and restoring our land and water is key to the quality of life in Washington and essential to the strength of our economy.”*

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



# Mitigation and Restoration Reality



# Questions

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- Is it possible and appropriate to consider using projects and plan information to satisfy mitigation needs?
- What evaluation tools and/or criteria would we need to know when and how to do so?