



Western Washington University  
Western CEDAR

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Salish Sea Ecosystem Conference

2014 Salish Sea Ecosystem Conference  
(Seattle, Wash.)

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May 1st, 8:30 AM - 10:00 AM

## Floodplains by Design: Accelerating integrated floodplain management across Puget Sound

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*Puget Sound Partnership*

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Carey, Bob and St. John, David S. (David Stephen), "Floodplains by Design: Accelerating integrated floodplain management across Puget Sound" (2014). *Salish Sea Ecosystem Conference*. 75.  
<https://cedar.wvu.edu/ssec/2014ssec/Day2/75>

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# Floodplains by Design: *Accelerating integrated floodplain management*

Bob Carey, The Nature Conservancy



**Floodplains by Design**

• REDUCING RISK, RESTORING RIVERS •



# Themes

An aerial photograph of a wide river valley. The river is a light blue color and flows through the center of the frame. On either side of the river, there are lush green fields, some of which appear to be agricultural. There are also dense areas of dark green trees. In the background, a large body of water, possibly a lake or a wide river, stretches across the horizon under a blue sky with light clouds. The overall scene is a mix of natural and agricultural landscapes.

- Why a multiple benefit approach to floodplains?
- What are the most significant barriers and how are you overcoming them?
- What results have been attained?



# Floodplains by Design PARTNERSHIP



## Project Advisory Team

### **Federal Emergency Management Agency**

King County

Master Builders

### **National Oceanic and Atmospheric Administration**

Pierce County

Skokomish Tribe

Snohomish County

Snohomish County Sustainable Lands Strategy

Tulalip Tribes

United States Army Corps of Engineers

### **United States Environmental Protection Agency**

### **United States Geological Survey**

Washington Military Department Emergency

Management Division

Washington State Dairy Federation

Washington Department of Fish and Wildlife

## Project Proponents

City of Orting

City of Stanwood

Clallam Conservation District

Jamestown S'klallam Tribe

King County

Mason County Conservation District

North Olympic Lead Entity for Salmon

Pierce County

Skokomish Tribe

Snohomish Conservation District

Snohomish County Dike District 7

Snohomish County Surface Water Management

Stillaguamish Tribe

Washington Department of Fish and Wildlife

Whatcom County Flood Control Zone District

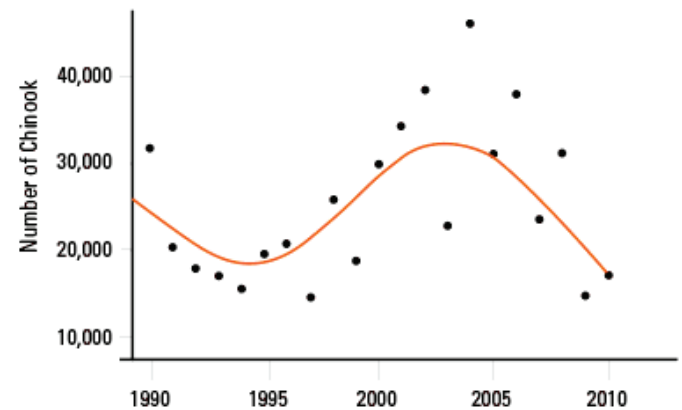








**Abundance of Chinook Natural-Origin Spawners in Puget Sound  
1990 – 2010**



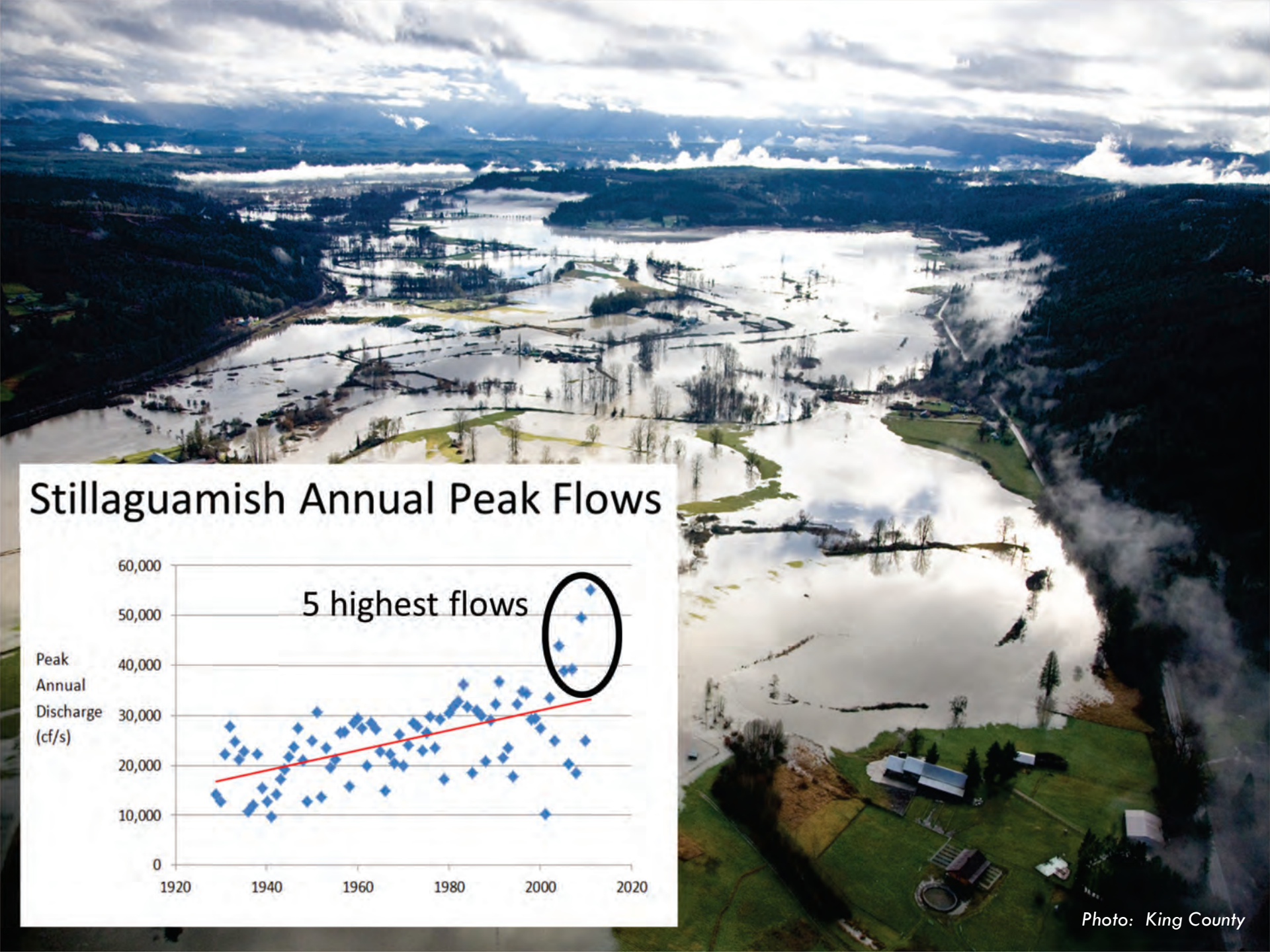
**Figure 1.** Number of natural-origin Chinook spawners observed in Puget Sound watersheds for 22 populations. Shown are total numbers of natural-origin spawners observed each year (points) and a fitted line derived from locally weighted scatterplot smoothing.

*Source: NWFSC Salmon Population Summary database*

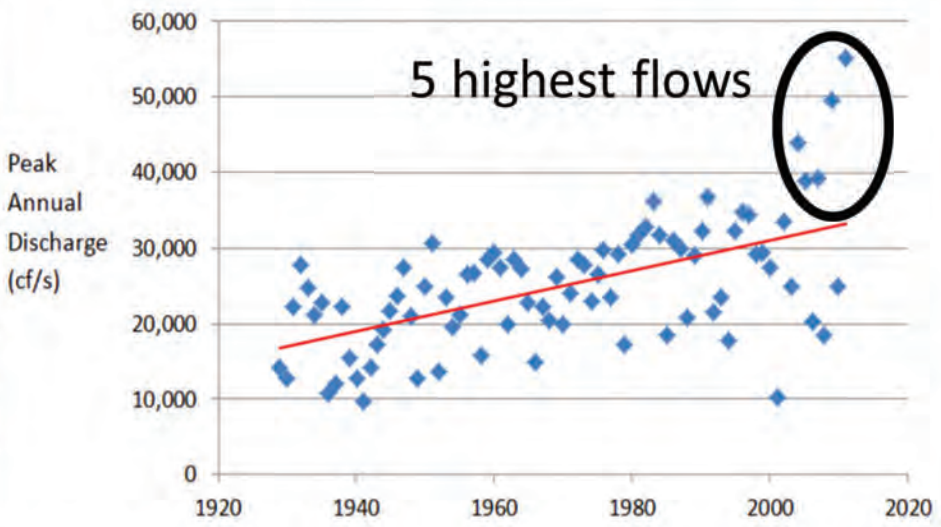
Well, ma'am, you can't drive around  
in 1st gear. You have to shift your  
paradigm sometimes.







# Stillaguamish Annual Peak Flows





# Goals

An aerial photograph showing a large-scale floodplain restoration project. The landscape is a mix of green agricultural fields, a winding waterway, and a large, irregularly shaped water body. In the background, there are rolling hills and mountains under a clear blue sky. The foreground shows a dense line of trees.

- Dramatically accelerate the rate of floodplain restoration in support of the Puget Sound floodplain recovery target and to improve salmon productivity.
- Significantly reduce flood risks to floodplain farms and communities through the restoration of natural processes and upgrading of critical infrastructure.



# Challenges

- Complex and time-consuming
- Capital funding
- Stovepiped programs
- Lack of political support





# FbD Priorities

- Support the development of integrated floodplain visions and project plans
- Enhance funding opportunities
- Align agency program and policies
- Build political support



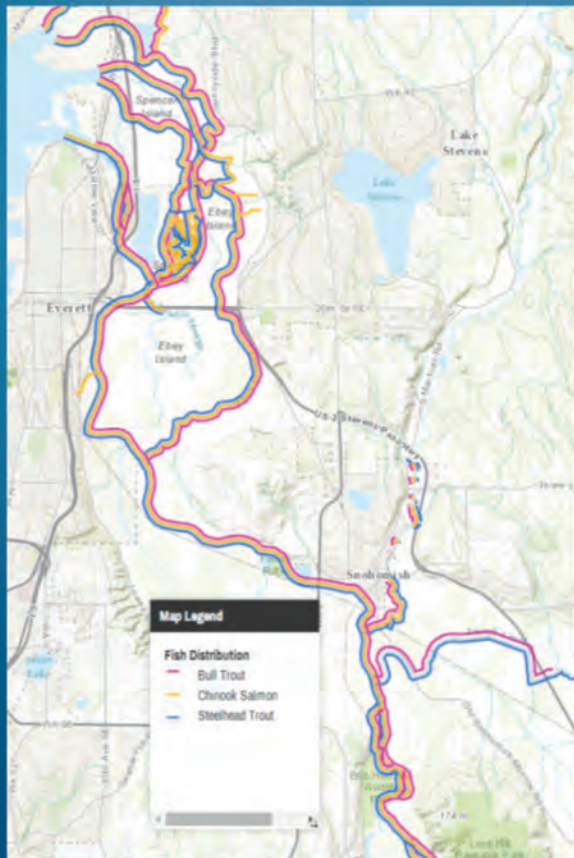


# Local Integration / Project Development

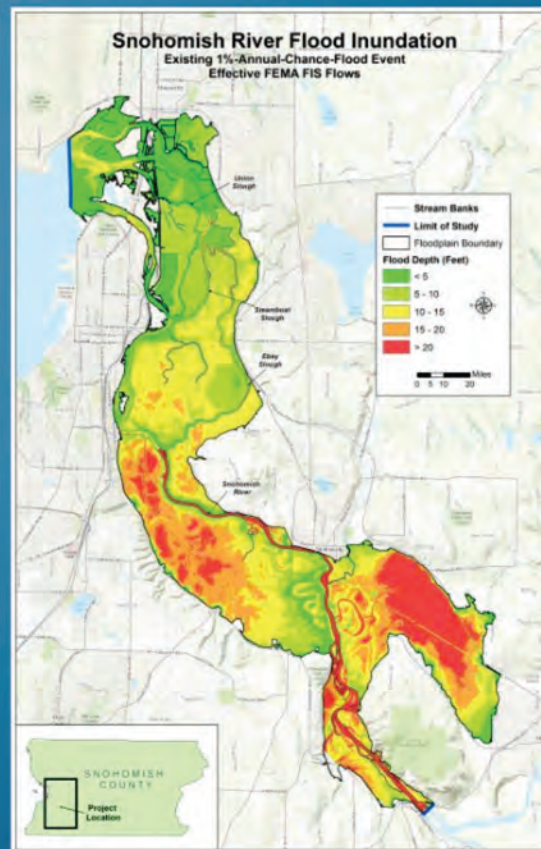
## Decision Support Tool

*Catalyze Conversations* ▪ *Assess Risk* ▪ *Identify Solutions*

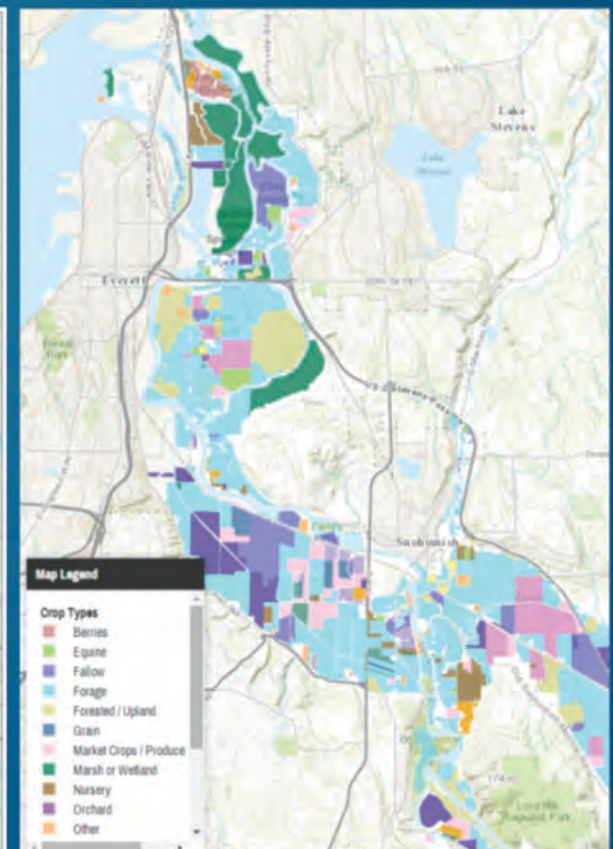
Fish



Flood



Farm





# Funding

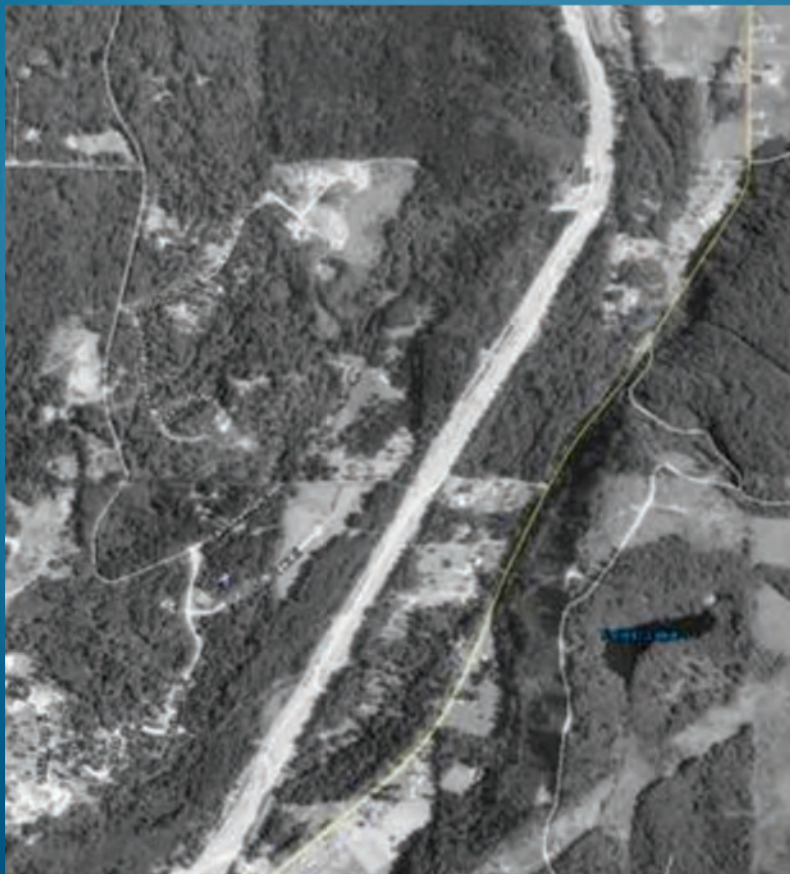


**Coordinated  
Investment  
for Floodplains  
Initiative**



# Align programs

- Coordinated Investment Plan
- Permit team



July 1990 - Before



May 2013 - After



# Political Support





*With Funding Support from:*

Washington Department of Ecology, U.S. Environmental Protection Agency, Puget Sound Partnership, Boeing Company, Russell Family Foundation



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