



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

## **The Whole is Greater than the Sum of Its Parts: Engaging Communities for Flood Risk Reduction, Species Recovery and Other Community Priorities**

Jenny Lynn Baker  
*Nature Conservancy (U.S.), jlbaker@tnc.org*

Polly Hicks  
*United States. National Oceanic and Atmospheric Administration*

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Baker, Jenny Lynn and Hicks, Polly, "The Whole is Greater than the Sum of Its Parts: Engaging Communities for Flood Risk Reduction, Species Recovery and Other Community Priorities" (2014). *Salish Sea Ecosystem Conference*. 73.

<https://cedar.wvu.edu/ssec/2014ssec/Day2/73>

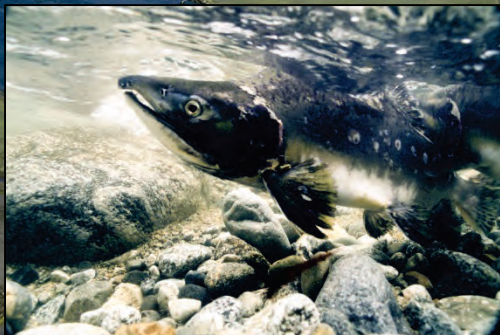
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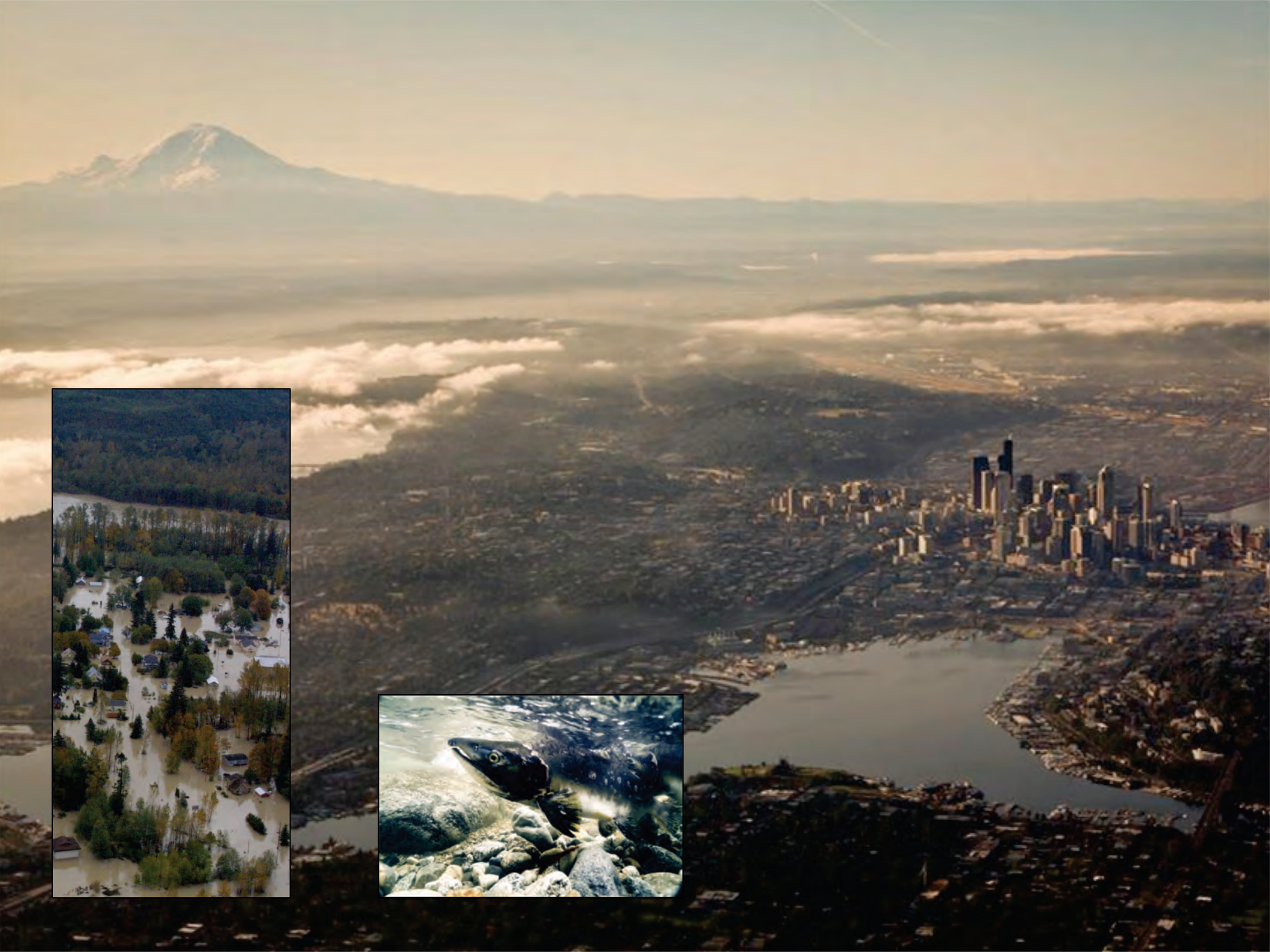


# The Whole is Greater Than the Sum of its Parts: Floodplain Restoration for Flood Risk Reduction, Species Recovery and Communities

Polly Hicks (NOAA) and Jenny Baker (TNC)







# Fisher Slough Tidal Marsh Restoration



South Fork Skagit River

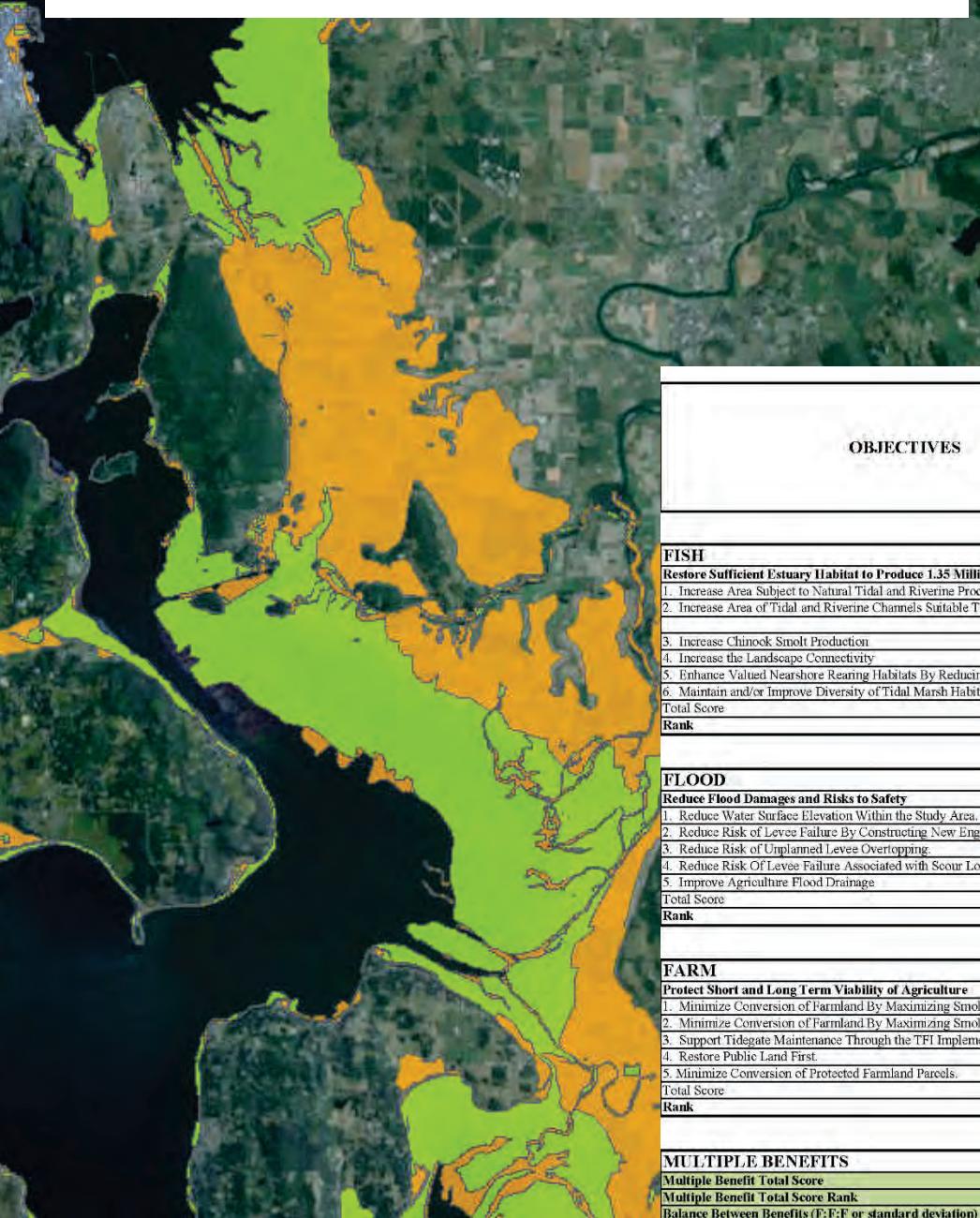
Fisher Slough restoration area



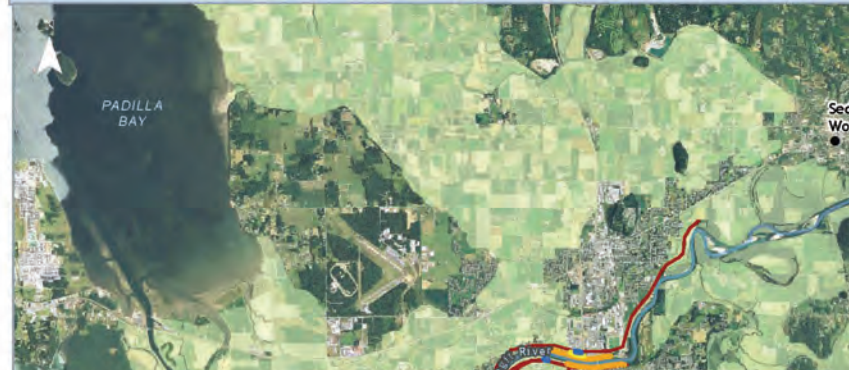
# Fisher Slough Tidal Marsh Restoration



# Farms, Fish and Flood Initiative



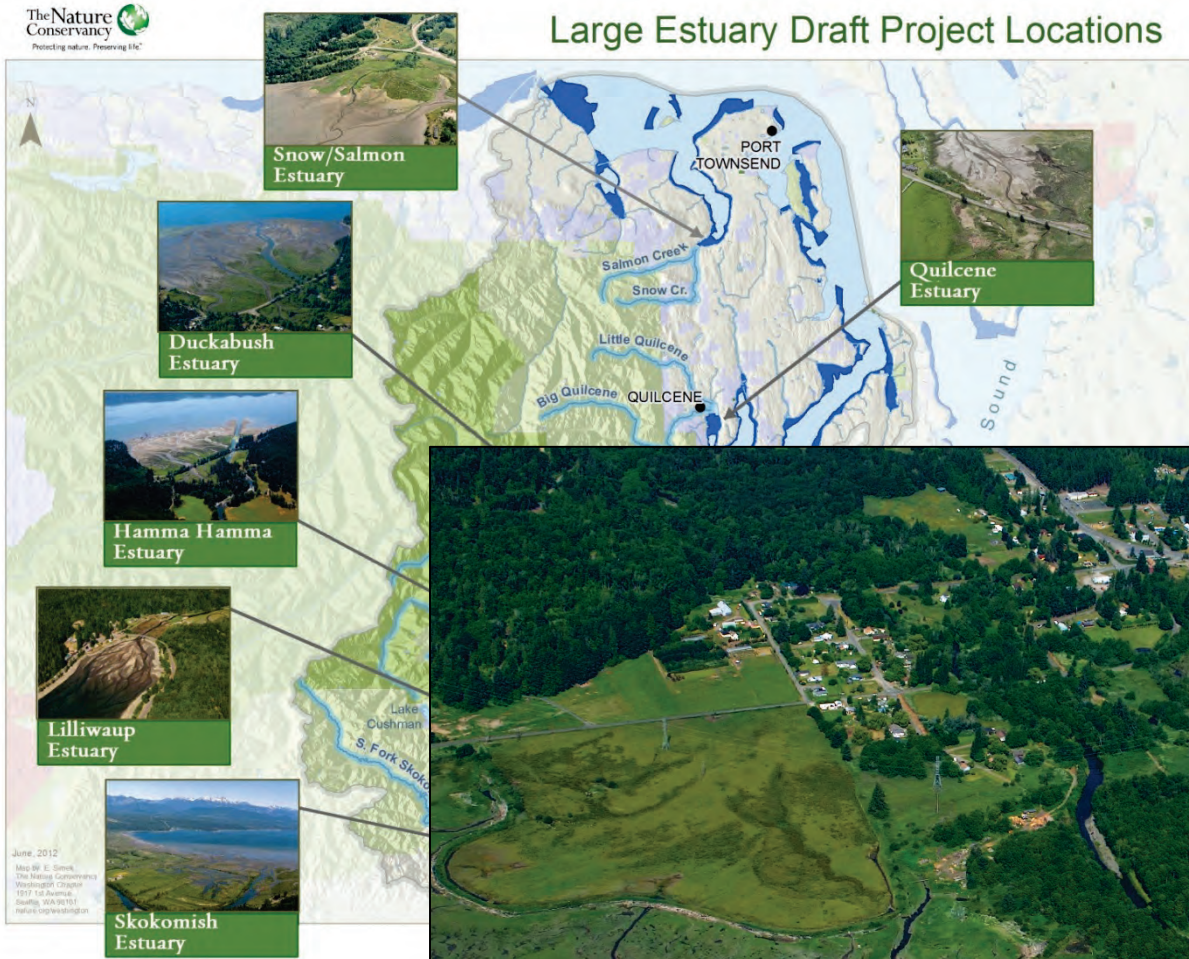
## New and Expanded Project Concepts with Levee Issue Locations



OBJECTIVES	INDICATORS	Project 1	Project 2
<b>FISH</b>			
<b>Restore Sufficient Estuary Habitat to Produce 1.35 Million Smolts</b>			
1. Increase Area Subject to Natural Tidal and Riverine Processes.	Total project area with restored processes	Data	Score
2. Increase Area of Tidal and Riverine Channels Suitable To Chinook Rearing Fry.	Total number of acre-hours suitable habitat predicted		Data
	Steady state predictions of channel area		
3. Increase Chinook Smolt Production	Estimated new smolts produced annually		
4. Increase the Landscape Connectivity	Index of connectivity summed across study area		
5. Enhance Valued Nearshore Rearing Habitats By Reducing Sediment Impacts.	H,M,L potential for increased sediment storage		
6. Maintain and/or Improve Diversity of Tidal Marsh Habitats.	Diversity metric of habitat types across elevation gradient		
Total Score			
<b>Rank</b>			
<b>FLOOD</b>			
<b>Reduce Flood Damages and Risks to Safety</b>			
1. Reduce Water Surface Elevation Within the Study Area.	Flood stage relative to existing conditions	Data	Score
2. Reduce Risk of Levee Failure By Constructing New Engineered Levees.	Linear foot of replaced or relocated levee in known risk locations		Data
3. Reduce Risk of Unplanned Levee Overtopping.	Replaced or relocated levee/sea dike in potential overtopping locations		
4. Reduce Risk of Levee Failure Associated with Scour Locations.	Includes a known scour site or site predicted by model		
5. Improve Agriculture Flood Drainage	Site includes a flood flow return site identified by CDD#22 & Skagit County		
Total Score			
<b>Rank</b>			
<b>FARM</b>			
<b>Protect Short and Long Term Viability of Agriculture</b>			
1. Minimize Conversion of Farmland By Maximizing Smolts Per Acre Restored.	Acres of converted farmland	Data	Score
2. Minimize Conversion of Farmland By Maximizing Smolts Per Acre Restored.	Predicted smolts/acre of converted farmland - Fish/Farm/		Data
3. Support Tidagate Maintenance Through the TFI Implementation Agreement.	Restoration acres that support TFI credits		
4. Restore Public Land First.	Landownership		
5. Minimize Conversion of Protected Farmland Parcels.	Yes or No whether restoration footprint overlaps existing farmland easement		
Total Score			
<b>Rank</b>			
<b>MULTIPLE BENEFITS</b>			
<b>Multiple Benefit Total Score</b>			
<b>Multiple Benefit Total Score Rank</b>			
<b>Balance Between Benefits (F:F:F or standard deviation)</b>			

# Hood Canal

## Large Estuary Draft Project Locations



*Humans benefit from and coexist sustainably with a healthy Hood Canal*



Photo by Tom Trethewey



# Identifying who to engage

- Future owners
- Potentially affected neighbors
- Potential detractors
- Technical resources
- Key community leaders
- Potential beneficiaries



## ***Big Quilcena Goals include...***

### ***Improve Public Access to Resources:***

- *Identify key access points and linkages*
- *Recreation access and support facilities*

# When and how do you engage the appropriate people?



It depends, but generally...

- Early and often
- With an open mind to others' needs
- With a willingness to be responsive
- Using a transparent process



## ***BIG QUILCENE PROJECT GOALS***

- *Benefit the Local Economy*
- *Improve Public Access to Resources*
- ***Assess Compatibility with Shellfish Resources***
- *Create Educational Opportunities*
- *Restore Habitat*
- *Reduce Flood Risk*

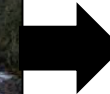
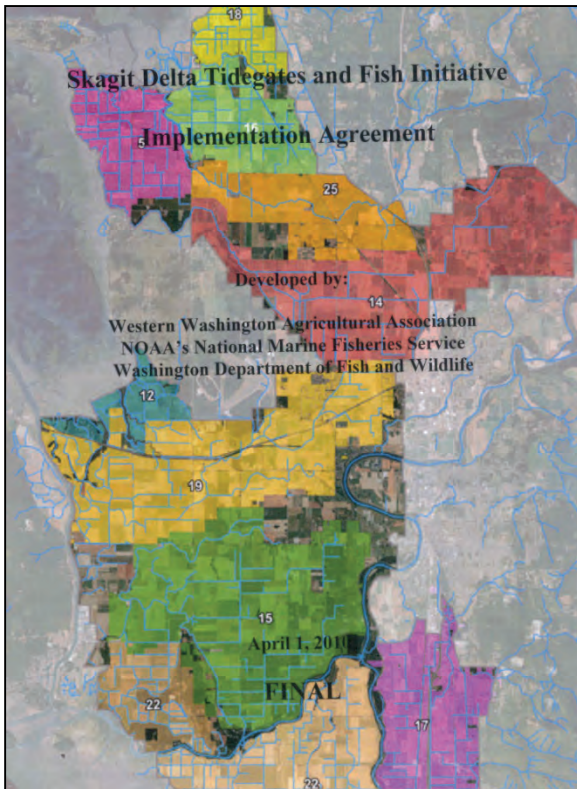
# Why do people stay engaged?

## Farms, Fish and Floods Goals:

- *Restore Estuary Habitats and Functions in the Tidal Delta*
- *Reduce the Risk of Destructive Flooding*
- *Protect and Improve the Agricultural Land Base and Infrastructure*

## Fisher Slough Goals:

- *restore freshwater tidal marsh*
- *improve fish passage*
- *improve flood storage capacity*



# What are the challenges of a multi-stakeholder approach?

- Time, time, time
- Maybe more expensive
- Lots of hard, but important discussions



# What are the benefits of a multi-stakeholder approach?

**WIN!**



**WIN!**



- More robust design
- Broader base of support
- Ability to access more funding sources
- Reduced risk and liability
- Long-term partnerships



**WIN!**



Polly Hicks: [polly.hicks@noaa.gov](mailto:polly.hicks@noaa.gov)

Jenny Baker: [jbaker@tnc.org](mailto:jbaker@tnc.org)

