




FLOODPLAIN MANAGEMENT IN THE LOWER SNOHOMISH: CHALLENGES AND OPPORTUNITIES

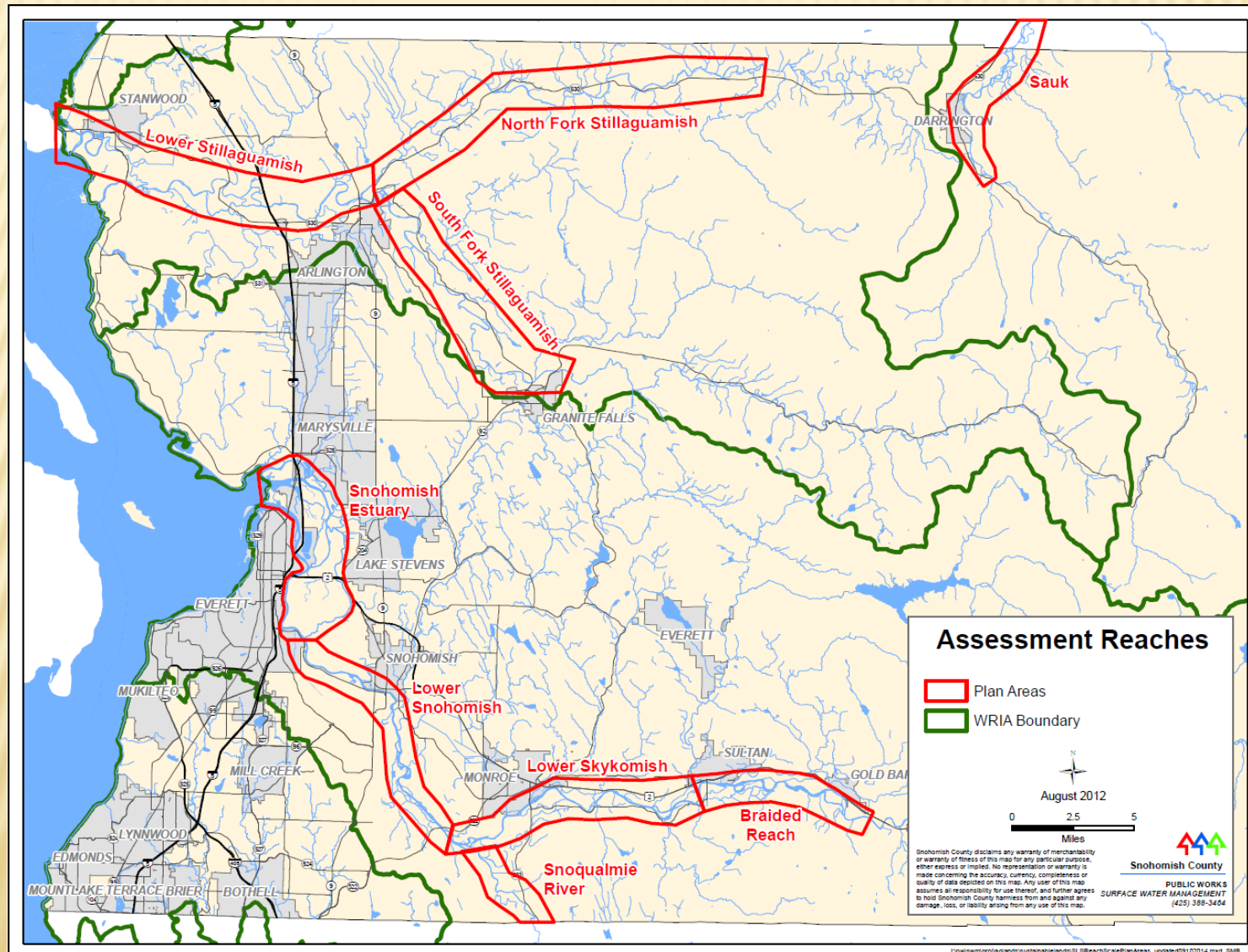
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PRESENTATION:

- **Floodplain Management Issues** in the Lower Snohomish River
- **Pathway to Consensus:** Long-term investment in people—Sustainable Lands Strategy (SLS)
- **Lessons Being Learned**



WHERE IS THE LOWER SNOHOMISH RIVER?



ISSUES IN THE LOWER SNOHOMISH RIVER

- **Critical basin for salmon recovery**
 - River process restoration for juvenile salmonid habitat
- **High value agriculture at risk**
 - Land subsidence = water quality drainage & productivity
 - Aging infrastructure and demographics
 - Increasingly complex regulatory requirements
- **Understanding and acceptance of changing hydrology**
 - Implications affect infrastructure, floodplain mgmt.

PATHWAY TO CONSENSUS: SLS

- **Start with common information base**
 - Reach scale quantitative assessments
 - Look for creative ways to solve challenging problems

- **Make a long-term investment in people**
 - Connect regularly with stakeholders
 - Reframe the issues for common understanding
 - Develop packages to support net gain

SIMPLIFIED RIVER PROCESS SCHEMATIC



creates



creates



River Process

- Flooding
- Erosion
- Deposition
- Channel-movement

Fish Habitat

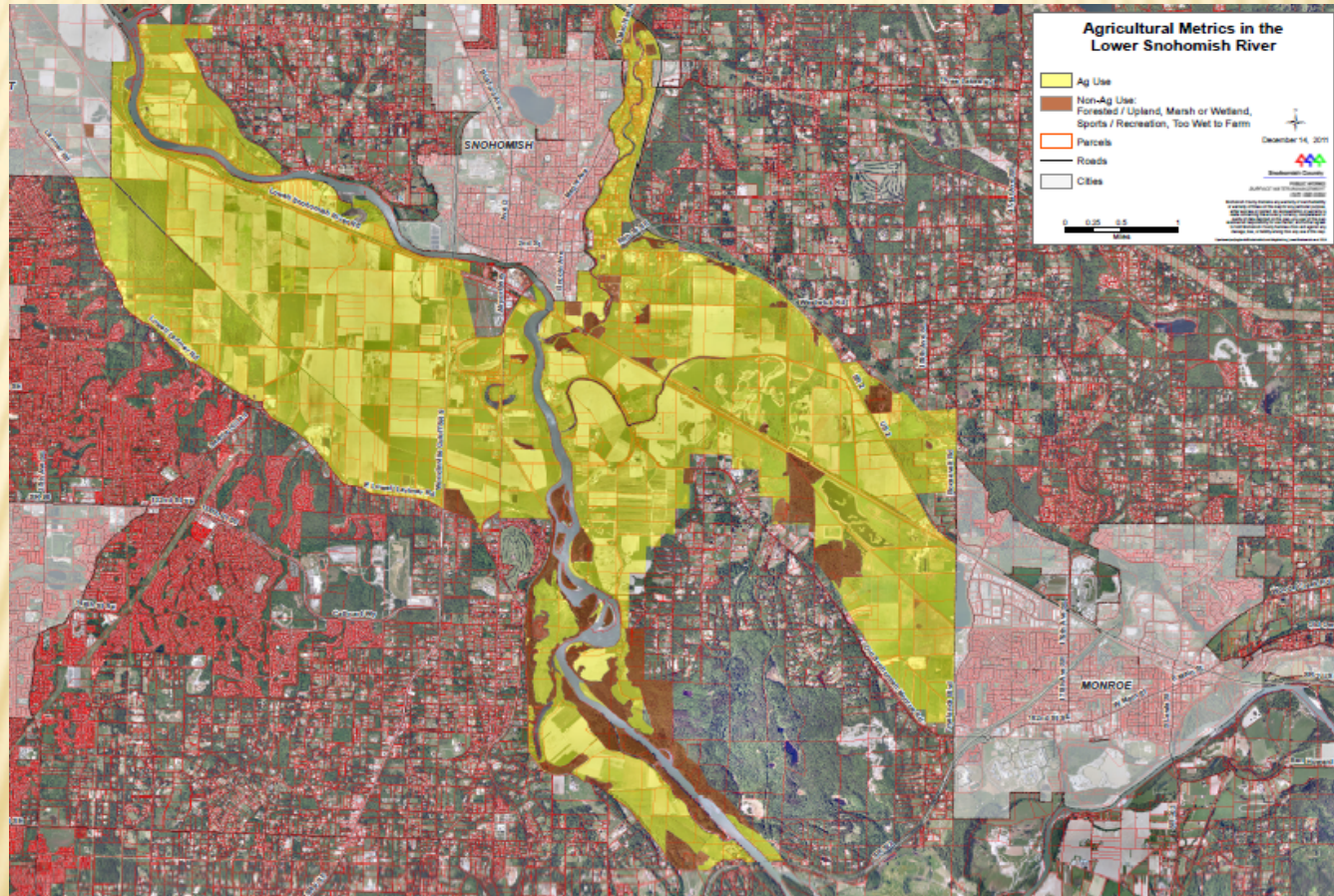
- Pools
- Edge Complexity
- LWD
- Gravels

Fish

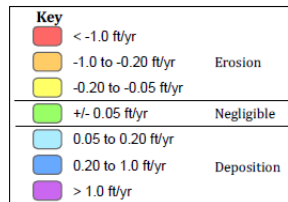
GENERAL ASSESSMENT GOALS/APPROACH

- **Identify risk/suitability of different floodplain management activities, e.g.:**
 - Channel (re)connections
 - Increase complexity
 - Large wood or rock structures
 - Process sediment
 - Infrastructure replacement
 - Allow for channel migration

COMMON INFORMATION BASE: REACH MGMT.



This aerial map displays the Snoqualmie and Skykomish River watersheds in Washington State. The map features a color-coded delineation of the watershed areas, with colors ranging from green to red. The City of Monroe is labeled in the upper left, and the City of Sultan is labeled in the upper right. The Snoqualmie River is labeled in the lower left, and the Skykomish River is labeled in the center. A scale bar in the bottom right corner indicates distances from 0 to 1.5 miles. A north arrow is also present in the bottom right corner. The map shows a mix of urban, agricultural, and forested land.



Spatial variation in erosional and depositional trends in the lower Skykomish River analysis reach below the Sultan River as suggested by sediment transport modeling using Parker's (1990) bedload transport equation; classifications are as defined in Table 2. Lateral extent depicted is based on the extent of historic channel delineation.

Snohomish County disclaims any warranty of merchantability or warranty of fitness of this map for any particular purpose, either express or implied. No representation or warranty is made concerning the accuracy, currency, completeness or quality of data depicted on this map. Any user of this map assumes all responsibility for use thereof, and further agrees to hold Snohomish County harmless from and against any damage, loss, or liability arising from any use of this map.

Aerial Photo: 2007 & 2009



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LONG-TERM INVESTMENT IN PEOPLE

SLS' Triple Bottom Line:

- Net gain fish restoration, water / environmental quality interests
- Protect, enhance agriculture, drainage, and flood control
- Respect tribal treaty rights and culture



WHAT IS “NET GAIN?”

- **Defining Net Gain for Agriculture:**
 - Improve agricultural productivity
 - Farmland protection
 - Streamlined permitting & funding
 - Infrastructure support
- **Defining Net Gain for Environment/Tribes:**
 - Salmon recovery, habitat progress
 - Improvements in water quality
 - Broad based community support for actions
 - Recognize changing watershed dynamics (climate, sea rise)



LESSONS BEING LEARNED

- **Reach scale** provides context for multiple issues
- **Quantitative assessments** allow for creative problem-solving
- Behind every concern is a **value**
- **Reframe issues** to promote understanding
- **Common values = common goals**
- **Trust and good relationships** required



QUESTIONS AND COMMENTS?

