



# Stillaguamish Big Trees Project

Rodney Pond & Scott Moore  
Snohomish County Surface Water  
Management



# Project Specifics

Two Ecology funded Centennial Clean Water grants targeted at reducing in-stream temperatures for Chinook salmon through riparian restoration

South Fork 2007 - \$443,000

27 acres/4.6 river-miles

204 trees/acre

North Fork 2008 - \$436,250

32 acres/5.2 river-miles

175 trees/acre

Minimum average 50 foot buffer width

Grant period four years





# Why Reforestation?

In-stream temperatures regularly exceed WA state WQ standard for core salmonid habitat during the summer

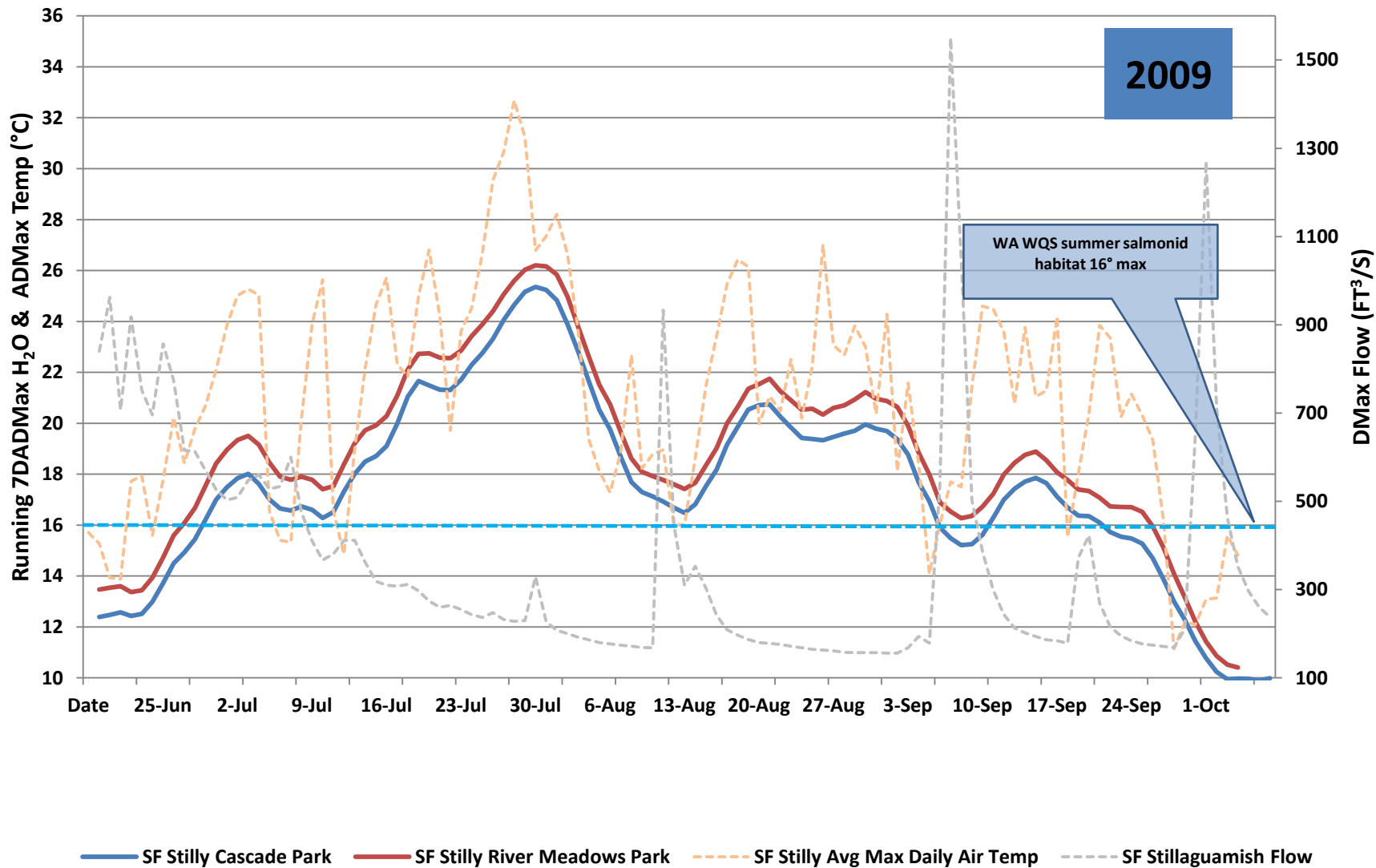
Lack of mature trees providing near stream shade - 32% forested, only 12% conifer

Natural regeneration hindered by land use and invasive species





## SF Stillaguamish Running 7DADMax H<sub>2</sub>O & ADMax Air Temp (°C) & DMax Flow (FT<sup>3</sup>/S)





# Big Trees Approach

Focus on establishing native conifers for long term ecosystem function and stability

Use larger stock size for faster establishment and greater survivorship

Raise stock in-house to ensure quality and availability

Aggressively control invasives

Under-plant deciduous floodplain forests to manage succession






# Knotweed Infestations

Almost all SBTP sites have some knotweed presence

Major infestations predominantly on the NF  
Stilly in floodplain forest understories, on  
banks and levees and in unmaintained fields



An aerial photograph showing a river winding through a valley. The river is dark and flows from the top right towards the bottom left. On the left bank, there is a large, irregularly shaped area of dense green forest. On the right bank, there is a large, rectangular area of green fields, possibly a farm or a park. Two orange arrows point from text labels to specific areas: one points from the 'Trafton River Ranch' label to a field on the right bank, and the other points from the 'Trafton Trailhead County Park' label to a large, light-colored area on the left bank.

Trafton River Ranch (private)

Trafton Trailhead County Park  
AKA Cloverdale





New bank March 2012



























# Planting

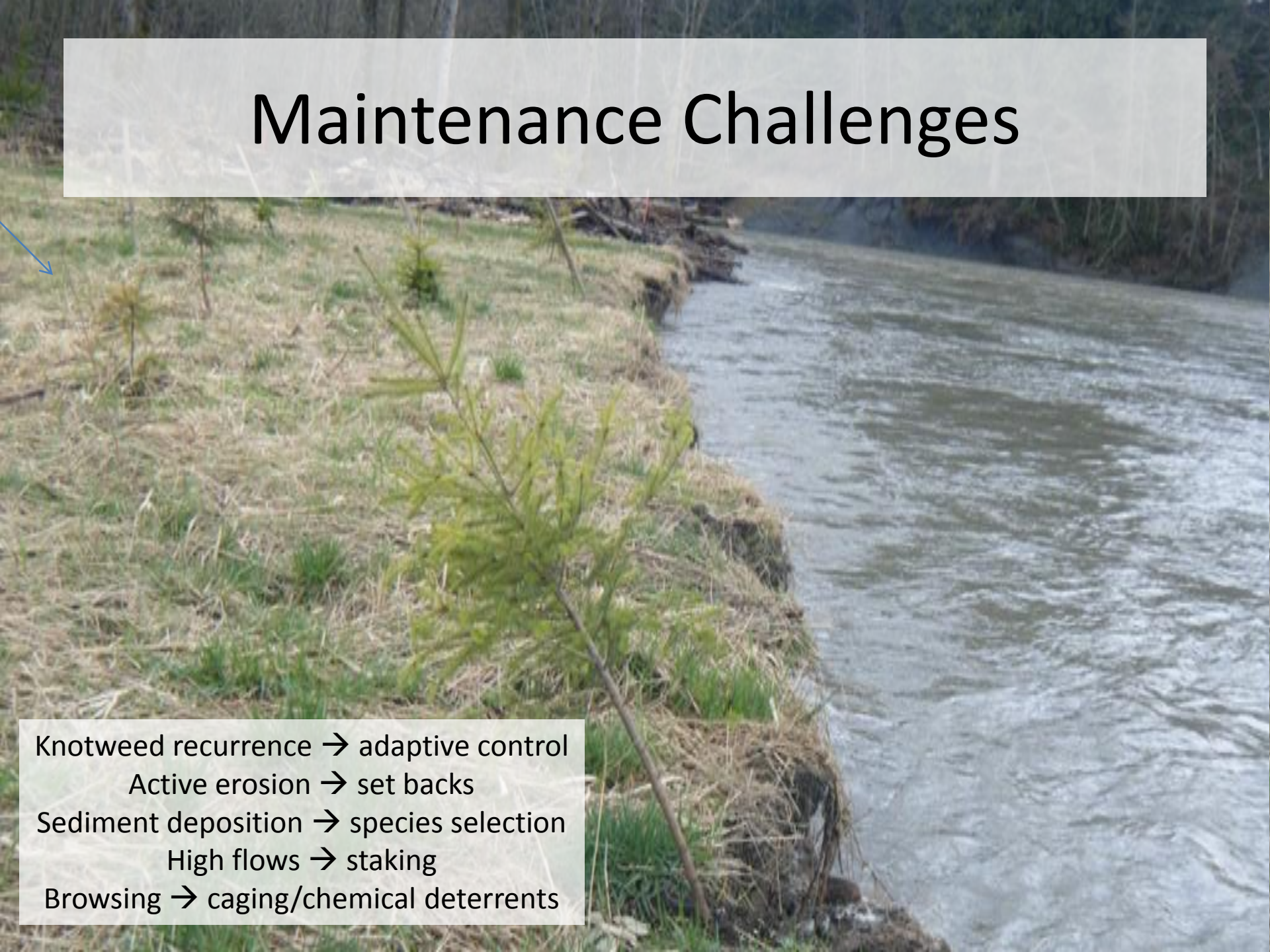
## *Planting*

Site conditions → species selection &  
Stock size

Shade, topography, soils, existing plant  
community, previous invasives, control  
effectiveness



# Maintenance Challenges



Knotweed recurrence → adaptive control  
Active erosion → set backs  
Sediment deposition → species selection  
High flows → staking  
Browsing → caging/chemical deterrents