Stillaguamish Big Trees Project

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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

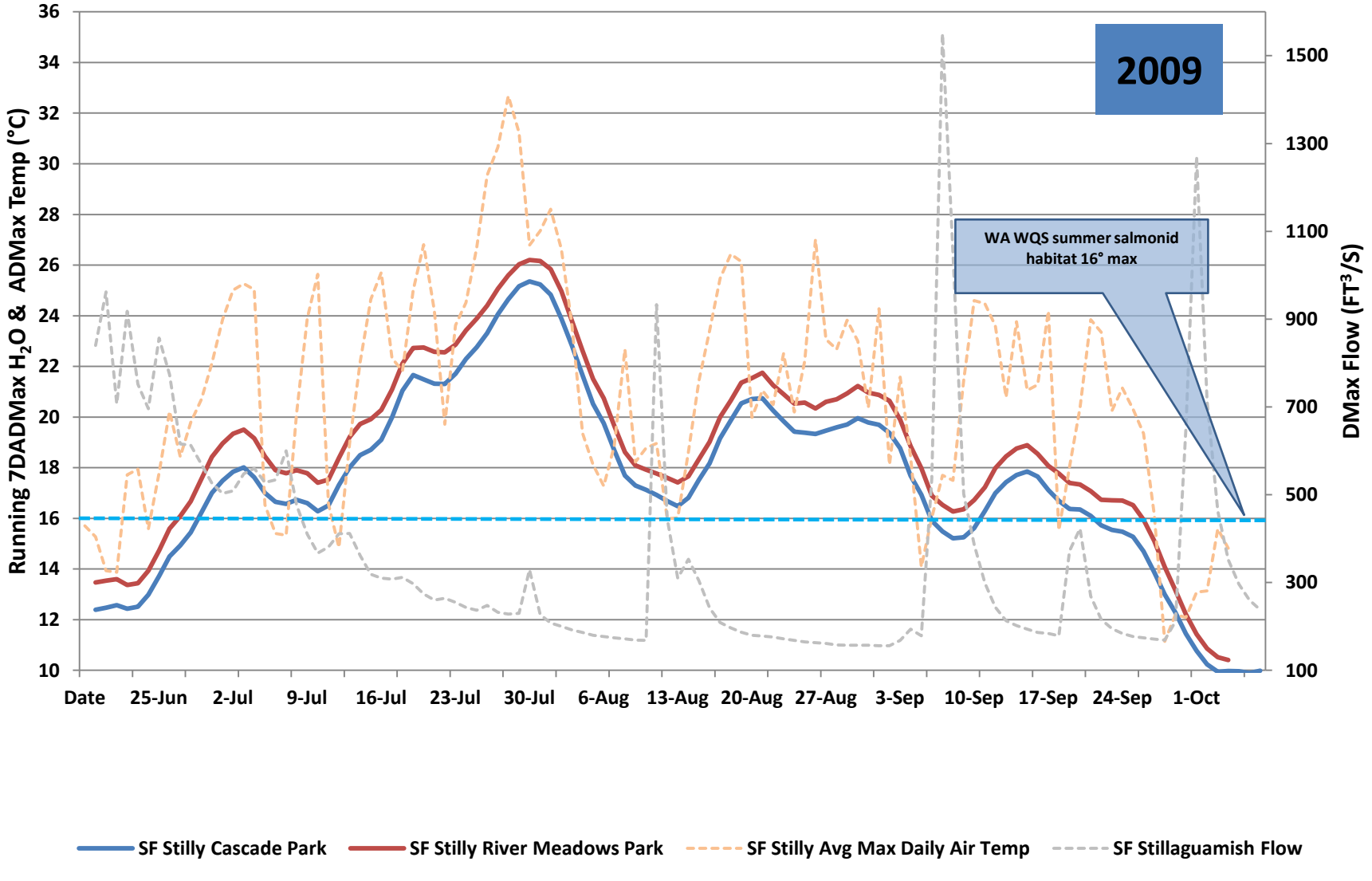
Why Reforestation?

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_2O & ADMax Air Temp (°C) & DMax Flow (FT^3/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

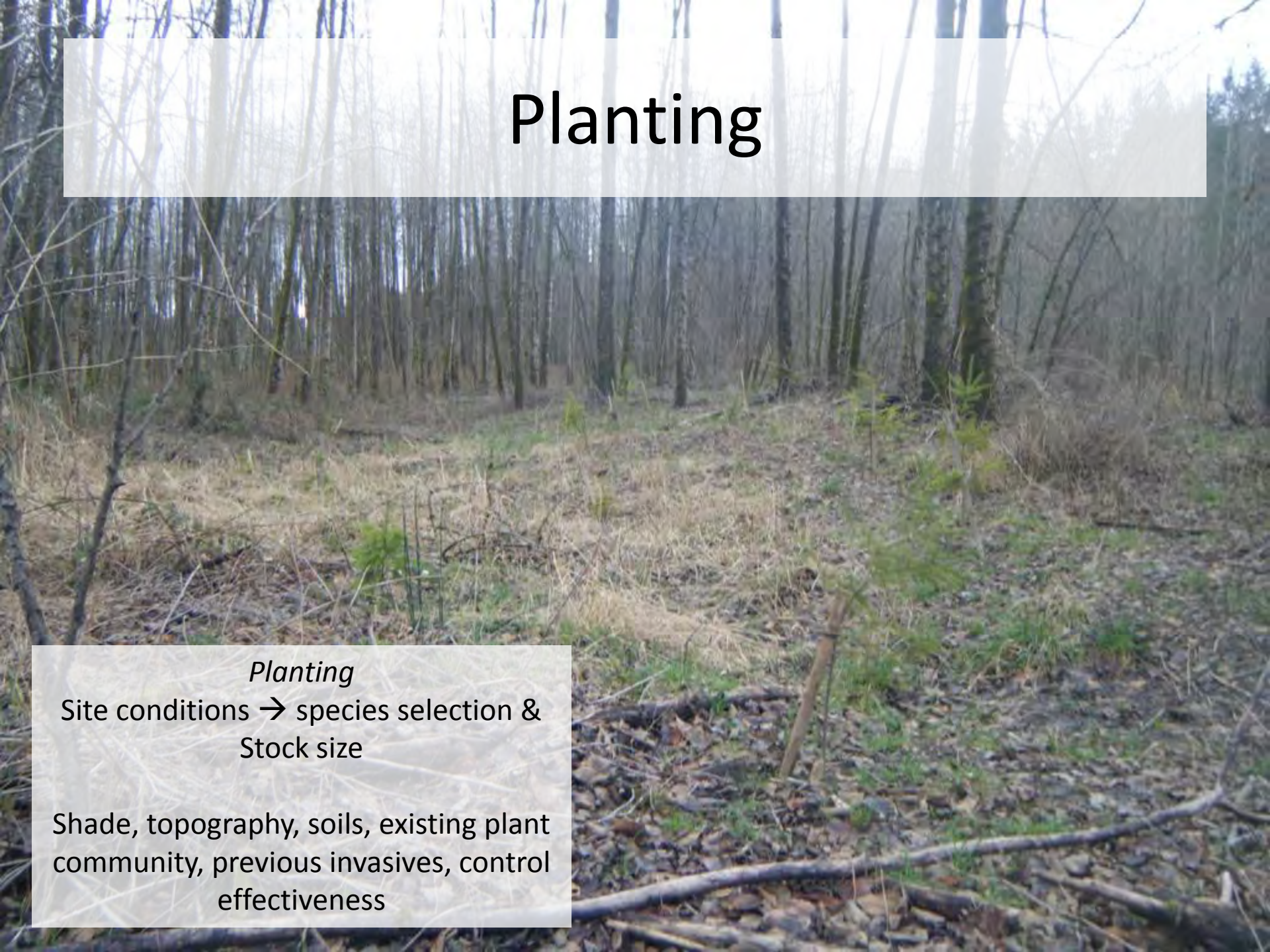
Almost all SBTP sites have some knotweed presence

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


Trafton River Ranch (private)
Trafton Trailhead County Park
AKA Cloverdale


New bank March 2012

Planting

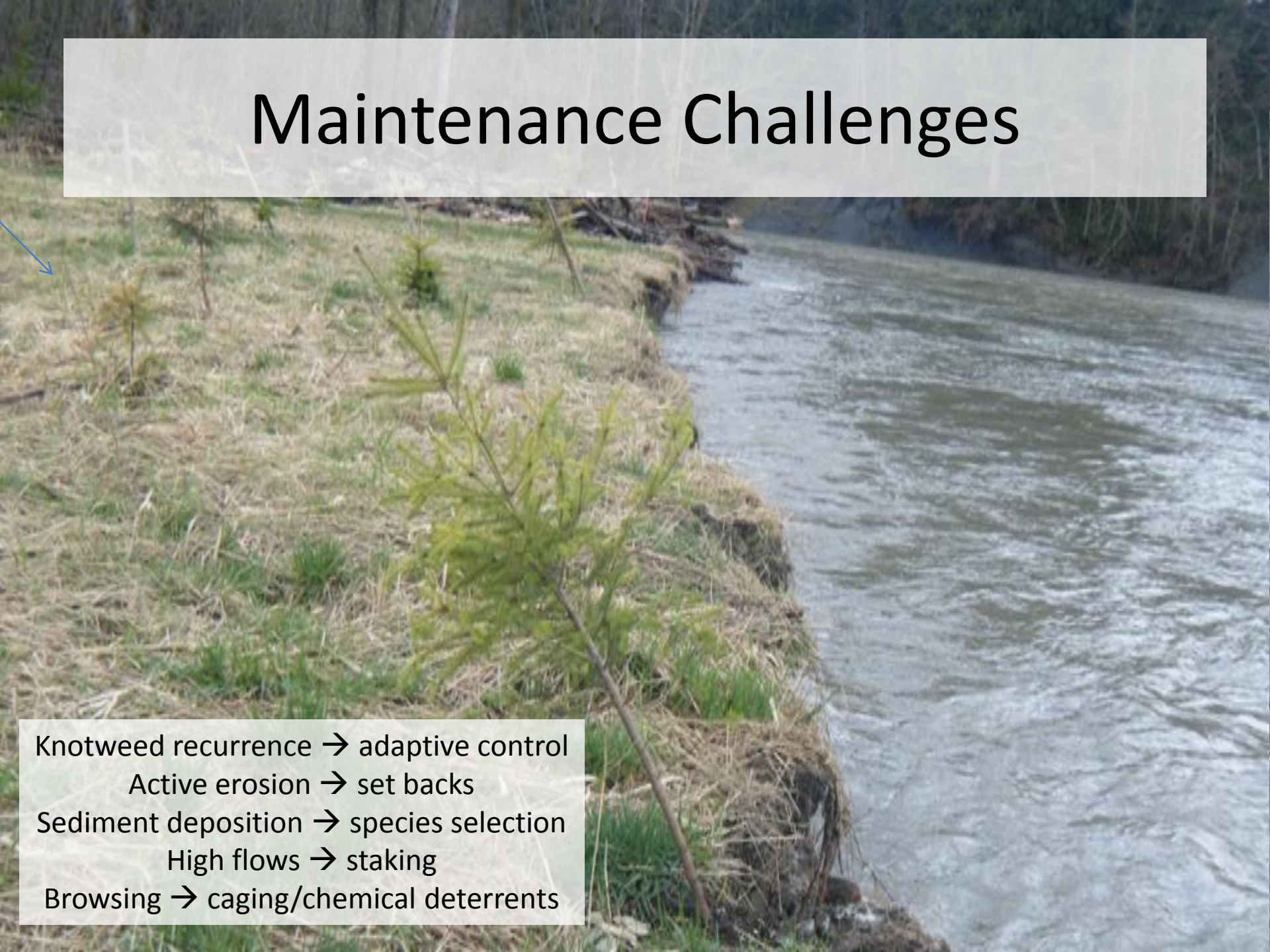


Planting

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