Pearson Eddy WRP

Restoration Objectives

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Baseline Conditions

- ~267 acres protected by permanent conservation easement
- Floodplain-bottomland of Snoqualmie River and Pearson Eddy Slough
- Treen Lake; permanent wetland
- Network of drainage ditches (Deep Ditch & Long Lake)
- Water control structure across slough-4 culverts with flap gates
- Historic farmland, part of dairy operation; silage and grazing until 2003
- 55 acres of native trees and shrubs planted in 2007; ~4 ac natural shrubs
- Dominated by non-native plants (reed Canarygrass, blackberry)

Baseline Photos

Middle of easement looking NE

Deep Ditch-Looking from east to west

Looking West to slough

Baseline Photos

Scour channel

Proposed Action

- Restore floodplain connectivity.
- Restore fish passage from Pearson Eddy slough to floodplain.
- Restore surface hydrology and native vegetation on 267 acres in the floodplain.
- Increase diversity of plant communities
- The goals are to improve habitat for salmonids, amphibians and other aquatic organisms along with providing a diverse wildlife habitat for migratory birds.

Customer(s): FORTERRA NW

Pearson Eddy
WRP Restoration

Field Office: MOUNT VERNON SERVICE CENTER
Agency: USDA-NRCS
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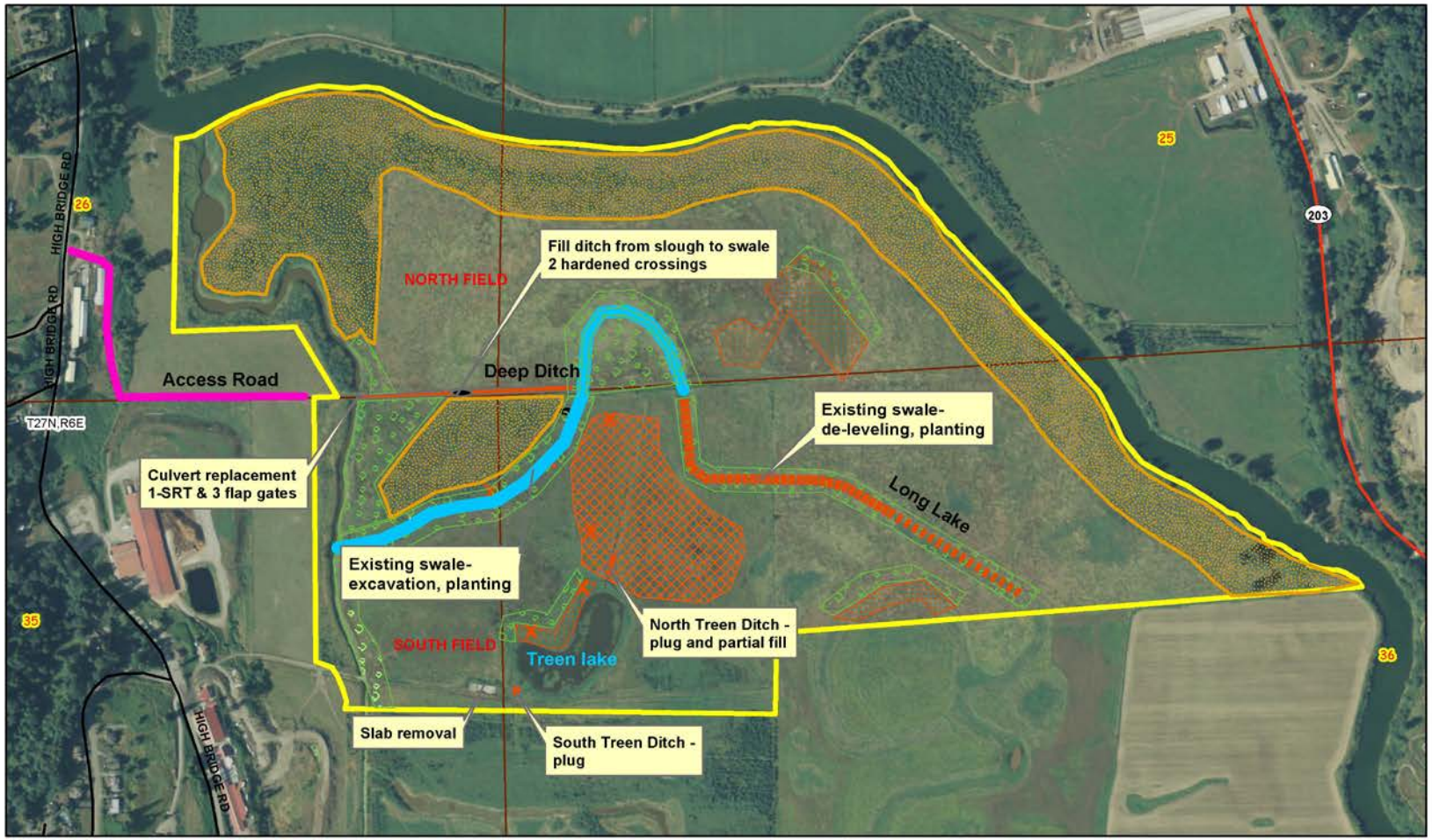


Legend

- Townships
- Sections
- Excavation
- Sod removal - site prep
- Log Structures
- Delevelling
- Tree/shrub planting
- Moist soil management - tilling
- 2007 tree/shrub planting

N

550 0 550 1,100 1,650 2,200 Feet

Need for Action

- Programmatic Requirement
- Existing water control structure is failing
- Each year the potential for serious damage to the habitat bank increases
- Existing habitat conditions are poor
  - Drainage Features
  - Reed Canarygrass
  - Limited fish access from slough to floodplain

Alternatives

#1 No Action

- Allow existing water control structure to fail
- Continued reduced fish access to floodplain
- Limited plant community diversity
- Greatly reduced habitat quality for fish, birds, amphibians

#2 Action-Restoration

- Replace water control structure to maintain flood control
- Increase fish passage from slough to floodplain with SRT
- Restore 3 plant communities
- Hydrology Restoration to habitat bank hydrology
- Improve habitat quality through planting, hydrology restoration, and moist soil management

Historic Plant Community

1948 Photo

1976 Photo

Current – 2016

Wetland Habitat Types

- Forested Wetland
- Scrub/Shrub Wetland
- Emergent Wetland
- Floodplain Channels

Floodplain Function

- Temporary storage space for floodwater
- Trap and store sediment
- Slows velocity of flood flows
- Subsurface storage of water
- Provide Nutrients (leaf litter, etc.)

Nov. 2015

Fish and Wildlife Habitat

- Refuge areas from high velocity flows and predatory fish, other predators
- Plant communities, insects, food sources; cover

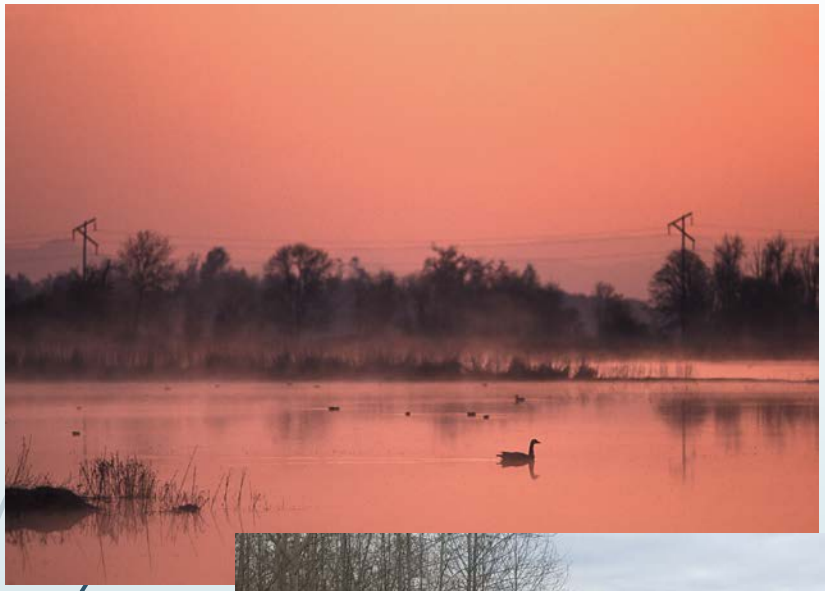
Salmon Recovery

Photo by WDFW

- ESA listed stocks
- Refuge during high river flow
- Rearing areas with cover from predators and high volume of food

Photo by V. Woodward

Birds



- Migratory Waterfowl
  - Swans
  - Grazers: geese and widgeon
  - Dabblers: Surface Feeding ducks (mallards, teal)
  - Fish eaters: Mergansers
- Shorebirds
- Songbirds
- Long legged Waders (heron, egret)
- Raptors (eagle, osprey, hawk)

Amphibians

Photos courtesy of USFWS

- Breeding/egg laying in shallow channels and depressions
- Forage sources
- Cover

Project Elements

- Replace failing water control structure with structure designed to increase the amount of water exchange from slough to floodplain
- Restore natural floodplain swale channel on floodplain
- Fill Deep Ditch
- Plant native trees and shrubs on 30 acres
- Fill portion of constructed drainage ditches associated with Treen Lake
- Sod removal/disking Reed canarygrass