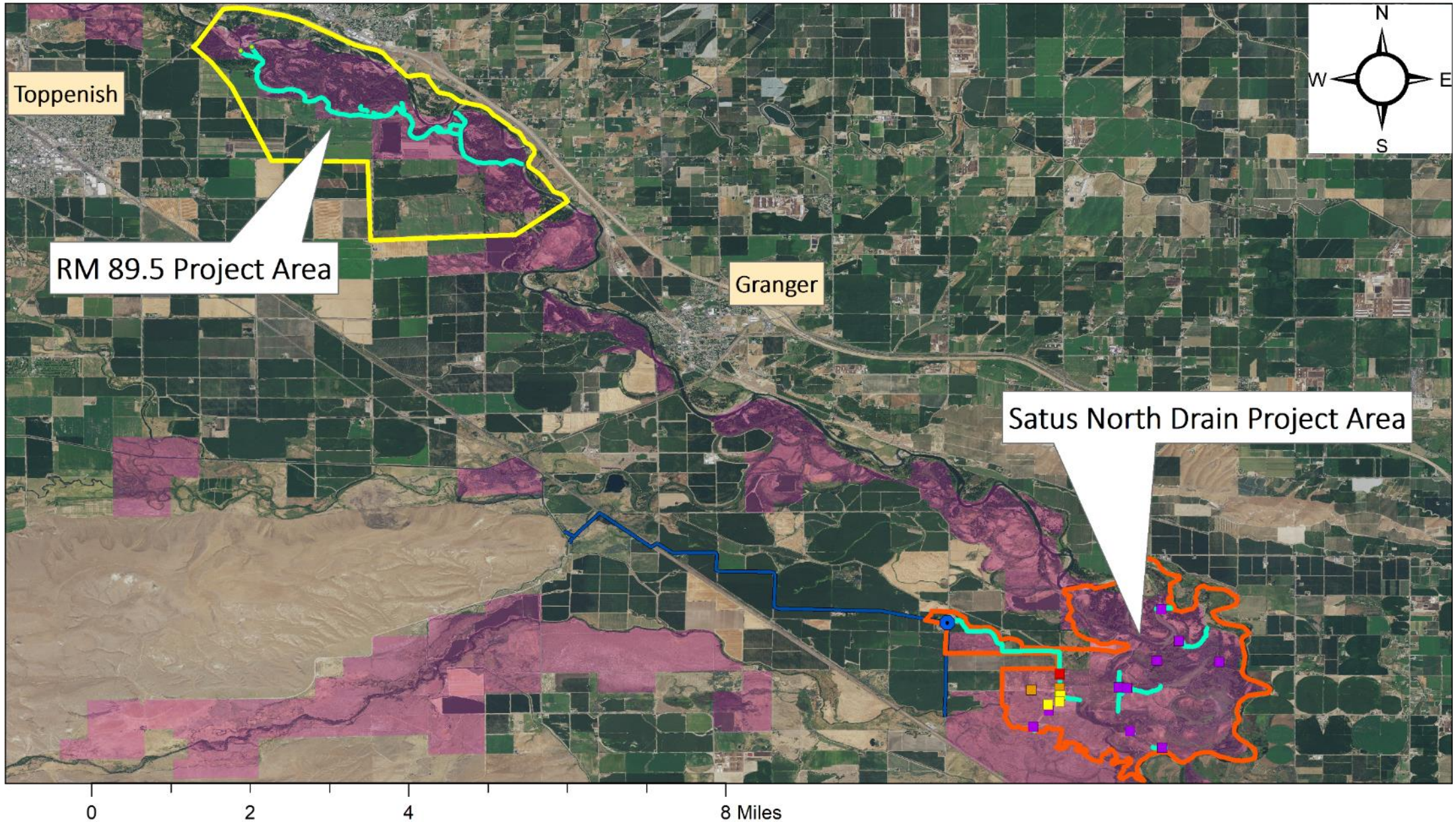
# Yakama Nation Wildlife, Range, & Vegetation Resources Management Program

## Update for Lower Yakima River Water Quality and Habitat Coordination Meeting

**Riparian and wetland habitat restoration on the Wapato Reach:**

- Satus North Drain project
- River Mile 89.5 side channel restoration project
- Riparian cottonwood forest trend assessment
- Future projects

# Yakama Nation Wildlife Program Restoration Projects



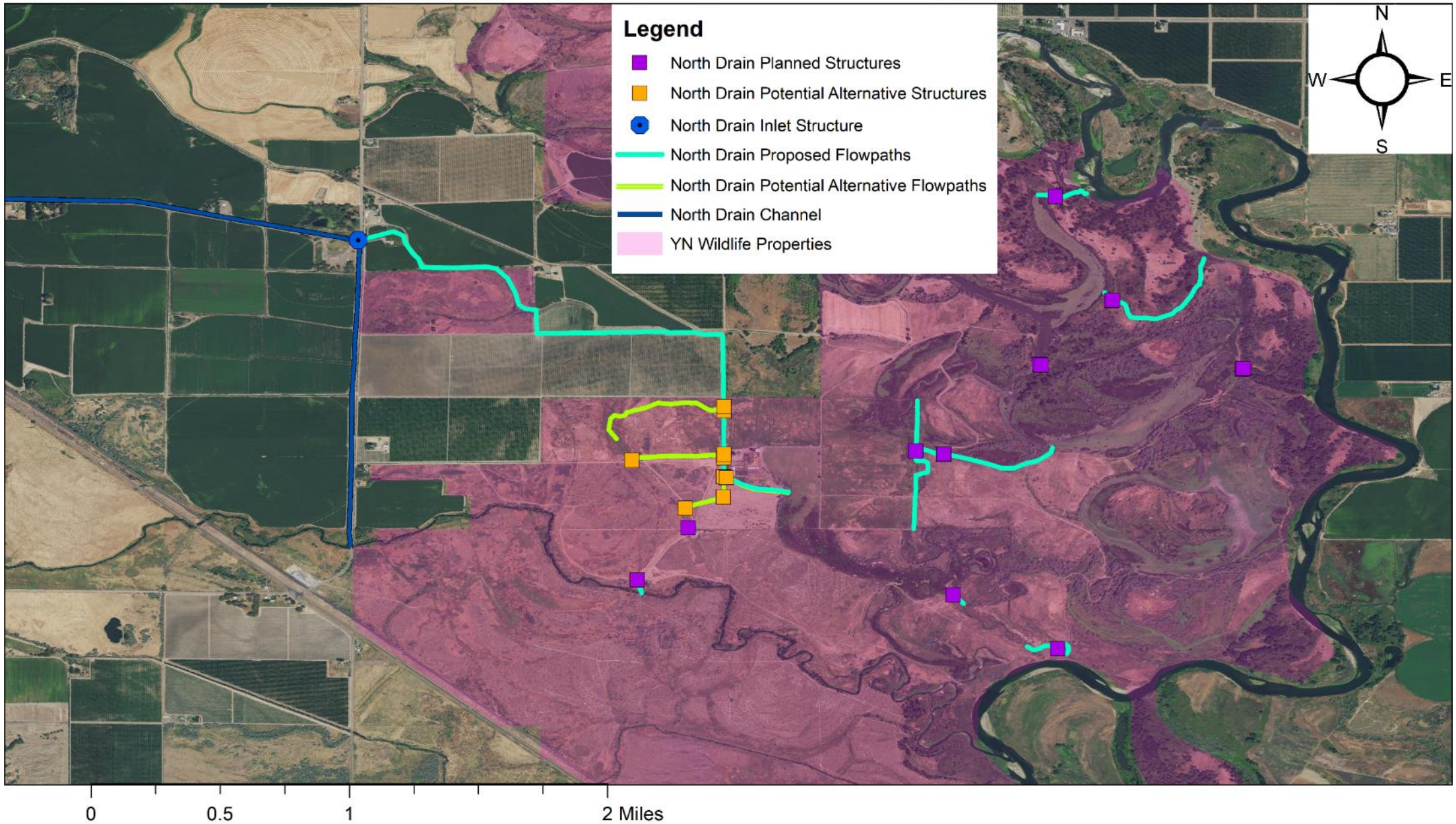
# Yakama Nation Wildlife, Range, & Vegetation Resources Management Program

## Satus North Drain Project

### Project Basics and Benefits:

- Redirect water from the Satus North Drain to degraded wetlands
- Repair water control infrastructure in the Satus Wildlife Area
- Restore wetlands, filter out sediment & pollutants currently flowing into Satus Creek

# Satus North Drain Project Plan



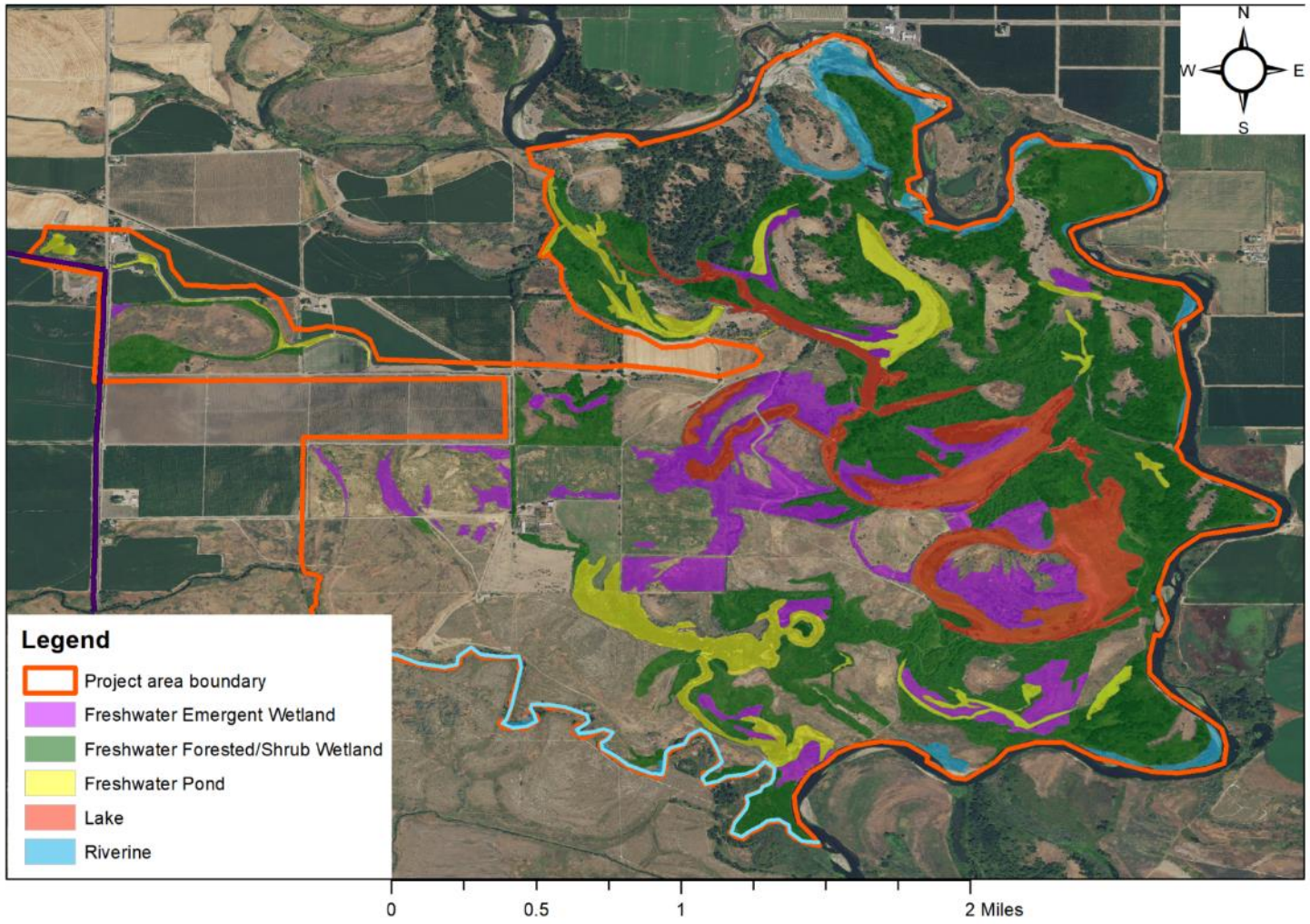
# Yakama Nation Wildlife, Range, & Vegetation Resources Management Program

## Satus North Drain Project

### Current Status:

- Permitting process with EPA and ACOE is underway
  - Collaborating with Ducks Unlimited
- Construction anticipated July 2021 – January 2022
  - Two phases: Wetland work, inlet structure construction

Fig. 3 - Satus North Drain Project Wetlands Map



# Yakama Nation Wildlife, Range, & Vegetation Resources Management Program

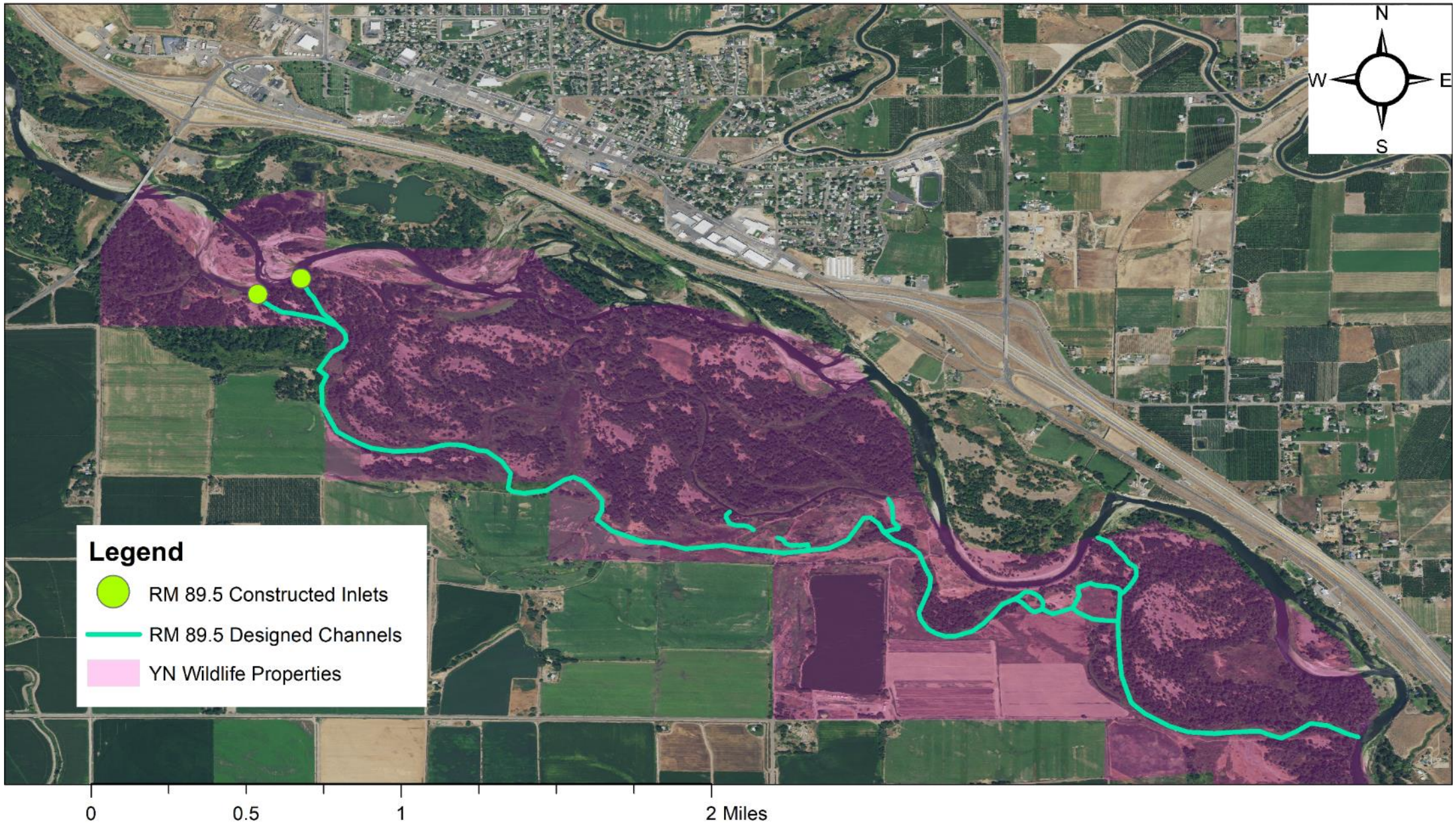
## River Mile 89.5 Project

### Project Basics and Benefits:

- Wooden inlet structures (Phase 1) and cleaning side channel blockages (Phase 2)

- Open up >4 miles of floodplain side channel habitat; Reduce inundation interval
  - Improve habitat
  - Restore natural processes –> benefit riparian forest

# River Mile 89.5 Project Plan



# Yakama Nation Wildlife, Range, & Vegetation Resources Management Program

## Satus North Drain Project

### Current Status:

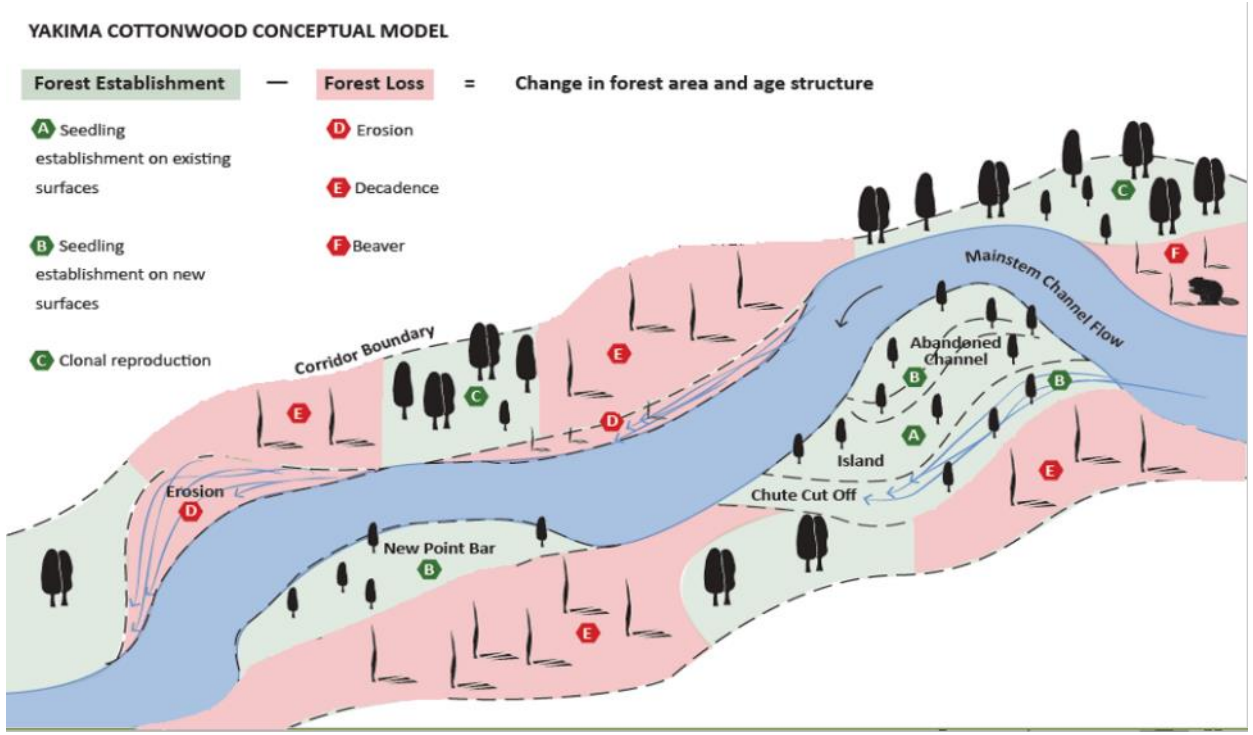
- Phase 1 completed in 2019 – Inlet structures installed, survived flooding
- Impacted areas from Phase 1 construction revegetated, some cottonwoods planted
- Permitting process with EPA and ACOE pending for Phase 2
  - Not likely to qualify for Nationwide Permit
  - Construction in late 2022?

# Yakama Nation Wildlife, Range, & Vegetation Resources Management Program

## Riparian Cottonwood Forest – Threats and Restoration

### Findings Summary:

- Cottonwood forest in the Wapato Reach is not regenerating at a sustainable level
  - Continued erosional loss, senescence
  - Seedling recruitment does not appear to be limiting
  - Limited recruitment to pole stage, primarily on high relative elevation flood deposits



# Yakama Nation Wildlife, Range, & Vegetation Resources Management Program

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- Under current conditions, by 2100 the Wapato Reach riparian forest will be generally lost
  - Fragmented patches of legacy cottonwood
  - Exotic, non-native trees and shrubs

# Yakama Nation Wildlife, Range, & Vegetation Resources Management Program

## Riparian Cottonwood Forest – Threats and Restoration

### Conclusions & Future Research Needs:

- Are these trends replicated in other reaches?
- What restoration methods are effective and can work at scale?
- Is management for environmental flows a possibility for the Yakima River?
  - Predictive modeling