



Lower Satsop Restoration & Protection Program

Phase II -- Habitat Connectivity & Reach-Scale Aquatic, Riparian, and Floodplain Restoration Project

May 7, 2020



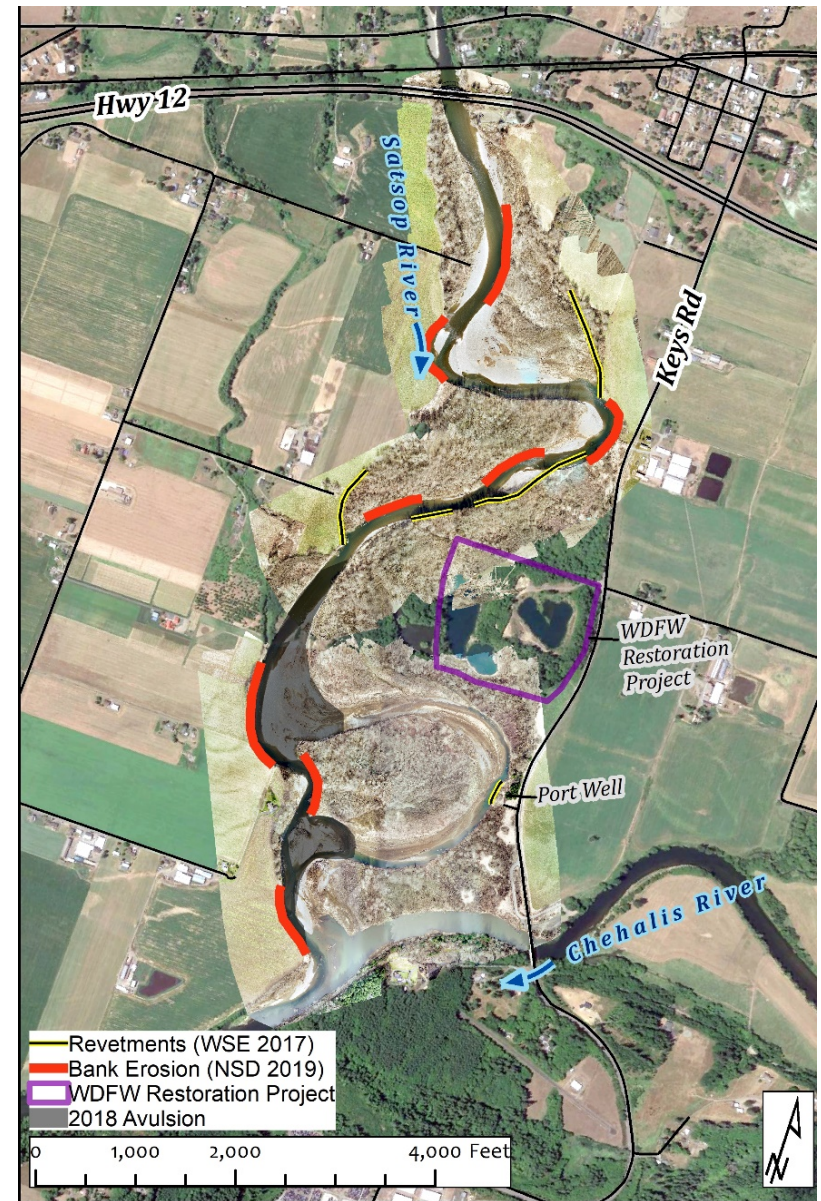
Grays Harbor
Conservation
District

your window to healthy lands



Background

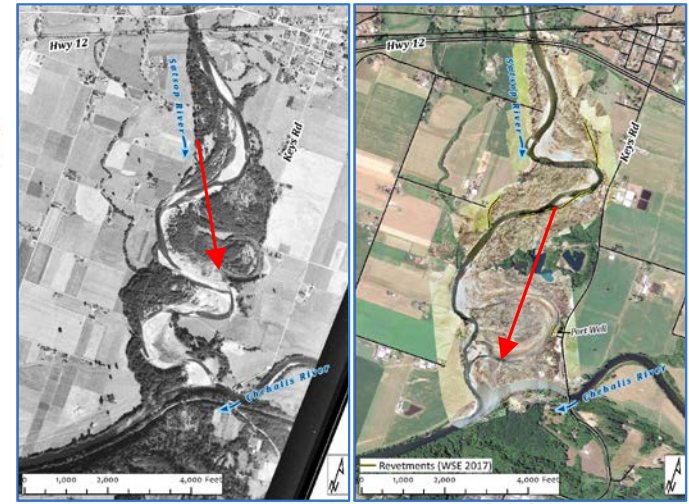
- Bank Erosion
- Revetments
- Keys Road
- Port Well
- WDFW Restoration Project
- 2018 Avulsion
- Habitat Loss
- Loss of Floodplain Access
- Community Frustration
- Lack of Momentum





Background

Lower Satsop Restoration & Protection Program



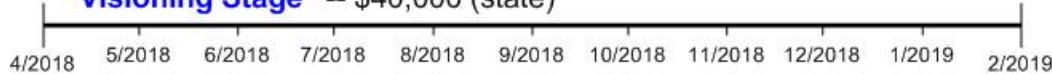
1953

2019

“Organizing Stage”



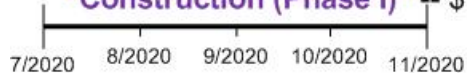
“Visioning Stage” -- \$40,000 (state)



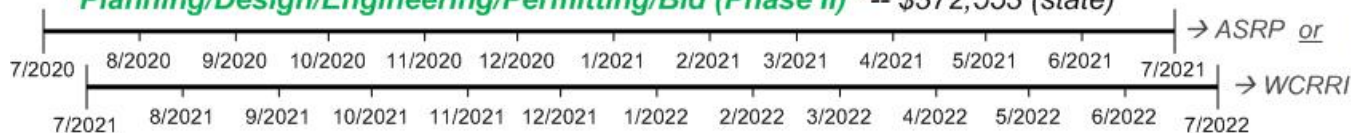
“Planning/Design/Engineering/Permitting/Bid (Phase I)” -- \$175,000 (state)



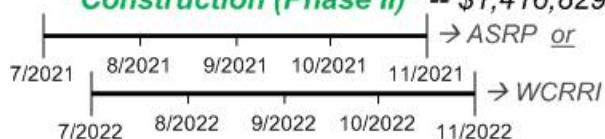
“Construction (Phase I)” -- \$1,725,024 (state), \$500K (local)



“Planning/Design/Engineering/Permitting/Bid (Phase II)” -- \$372,553 (state)



“Construction (Phase II)” -- \$1,416,829 (state)

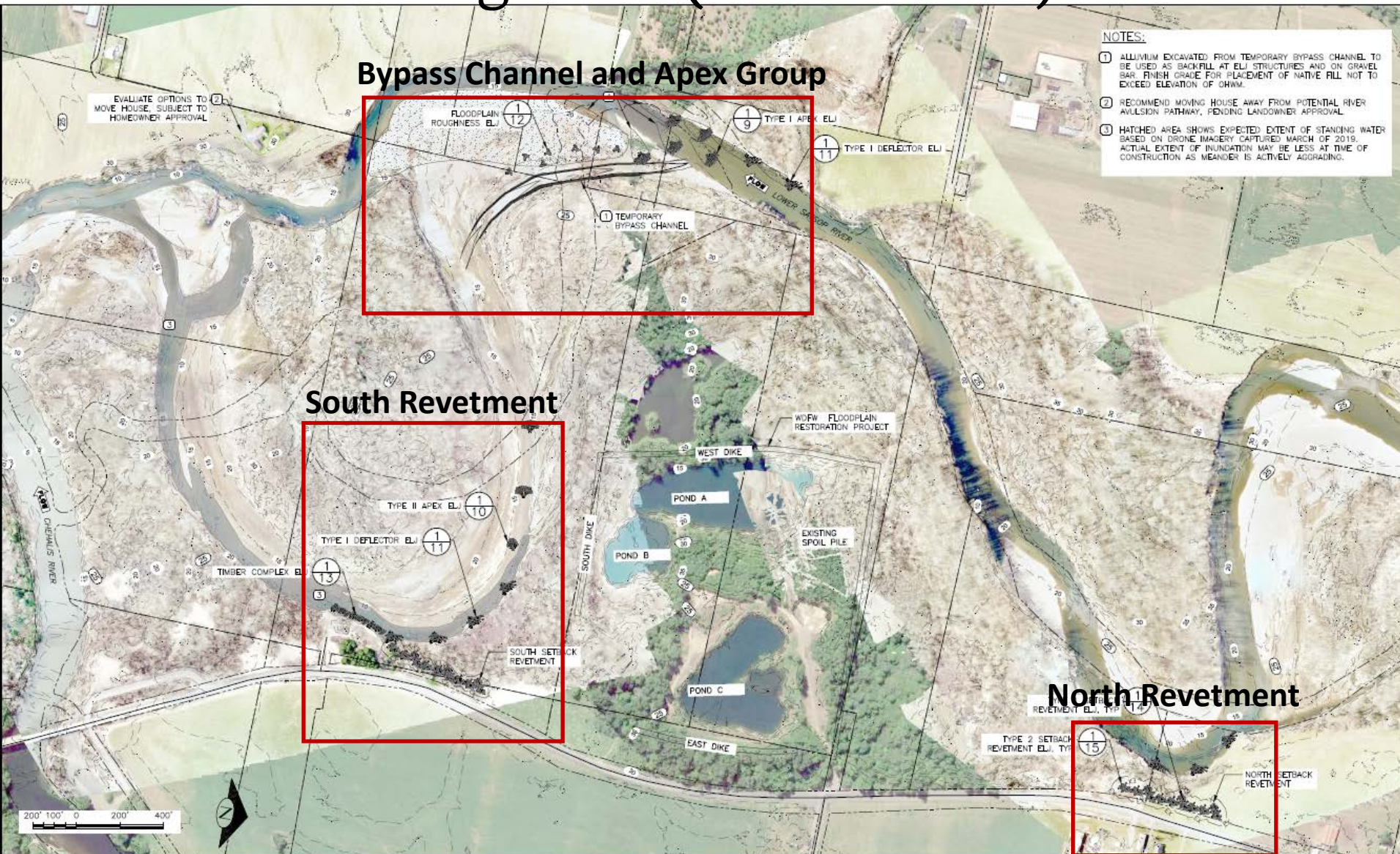


(Phase I)
Keys Road Corridor
Flood Protection
Project

(Phase II)
Habitat Connectivity
& Reach-Scale Aquatic,
Riparian and
Floodplain Restoration
Project

- ✓ Many Community Meetings.
- ✓ Many Individual Meetings/Presentations/Tours.
- ✓ Many Multi-Agency Advisory Group Meetings.

Background (Phase I 2020)



Background (Advisory Group)



WCRRI Proposal (Objectives)

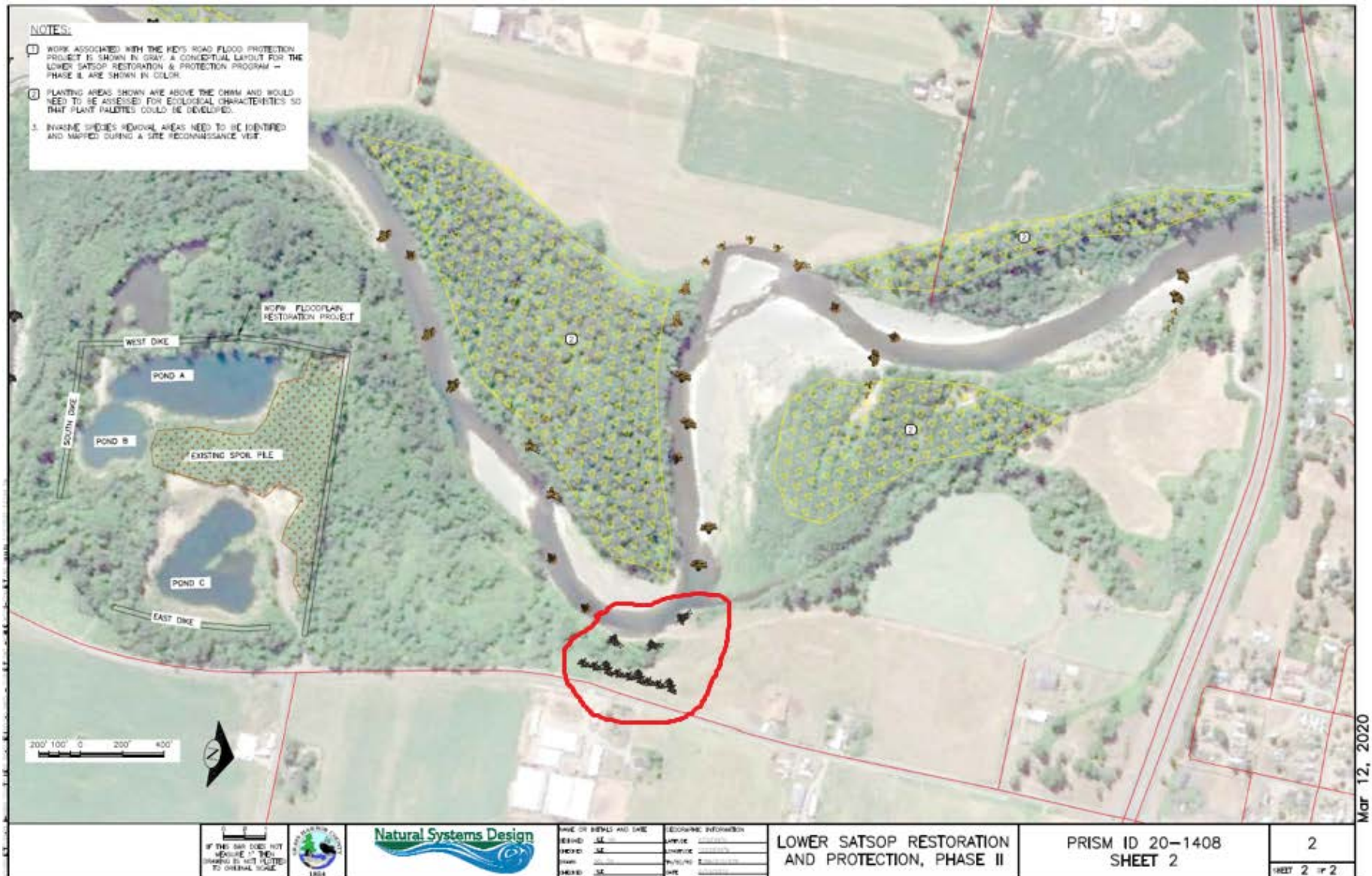
- Build on investment in East Fork Satsop (Early-Action ASRP) by improving connectivity between critical habitats.
- Achieve reach-scale effect on sediment and flow dynamics.
 - ▶ 35 in-channel structures
 - ▶ 130 acres of riparian planting
- Reduce invasive species (~10 acres invasive plant control).

WCRRI Proposal (Reach-Scale Design Concept)



Red Outline = Phase I (2020)

WCCRI Proposal (Reach-Scale Design Concept)



Red Outline = Phase I (2020)

Proposal (TRP Evaluation Criteria)

Restoration Benefit

1. Species	<ul style="list-style-type: none"> Provides reach-scale habitat benefit, connectivity to upper watershed. Winter-run Steelhead; Coho; Fall & Summer-run Chinook; Chum; Northern red-legged frog; Olympic mudminnow; Great blue heron; North American beaver; resident Coastal Cutthroat; resident char.
2. Physical Processes and Features	<ul style="list-style-type: none"> Engineered log jams and riparian plantings are designed, constructed as self-sustaining, self-regulating, process-based solutions. Adaptive management follows implementation of each Phase.
3. Quantity of Benefit	<ul style="list-style-type: none"> Example quantifiable benefit categories include: Stable gravels for spawning; Cool refugia; Shallow-water margins; Reduced stream power; Building/reengaging floodplain; Edge habitat complexity.

Community Benefit

4. Jobs	<ul style="list-style-type: none"> 2.5 FTEs created. 2 FTEs maintained.
5. Direct Community Impacts and Improvements	<ul style="list-style-type: none"> Protects irreplaceable, high value farmland and preserves local, state revenues; Reduces erosion pressure on Keys Road, Satsop Business Park potable water supply; Restores habitat for recreation, tourism.
6. Threat Reduction	<ul style="list-style-type: none"> Protects private property, Keys Rd., Satsop well from river migration.

Proposal (TRP Evaluation Criteria)

Likelihood to Succeed

7. Logical Approach and Schedule	<ul style="list-style-type: none"> Phase II is natural continuation of Phase I (2020); will be finalized through multi-agency advisory group and community meetings (like Phase I); and will draw on success achieved in analogous systems.
8. Appropriate Scope w/ Clear Goals, Objectives	<ul style="list-style-type: none"> Wood structures, extensive riparian planting, invasive plant control will improve ecosystem functions, resilience (will restore, improve sediment dynamics; create, connect habitat; protect community).
9. Sponsor, Participants Experience	<ul style="list-style-type: none"> Natural Systems Design specializes in this type of restoration; has prior experience in Satsop River watershed; and has seen through the highly-successful Upper Quinault river restoration effort.

Cost and Legal

10. Permits and Land Owners	<ul style="list-style-type: none"> Landowners, regulatory agencies have been actively engaged in development of Lower Satsop Restoration & Protection Program, as well community members. All have consistently voiced support.
11. Best Use of Public Funds	<ul style="list-style-type: none"> Funds continue a well-developed, thoughtful implementation plan. Watershed benefits will compound for earlier investments: East Fork early action reach; WDFW ponds; Phase I Keys Road.

Photos (Lower Satsop, Existing Condition)

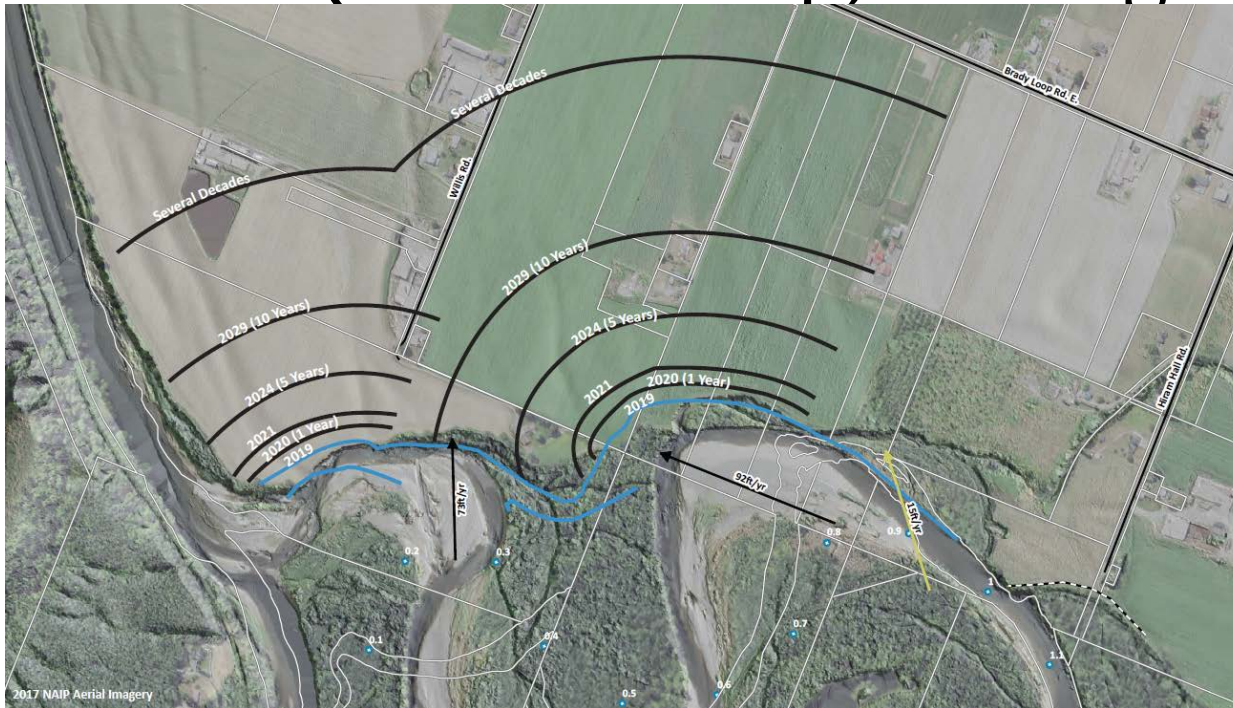


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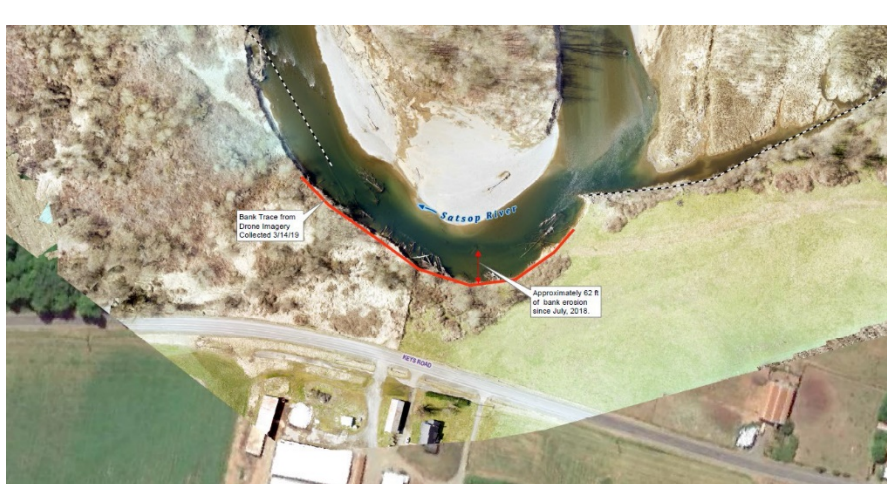


2019

Photos (Lower Satsop, Existing Condition)



Click below (and scroll to bottom of page)



12/04/2018 Drone Footage → Click [here](#).

01/06-09/2020 Flood (Webcam Video) → Click [here](#).

2/27/2020 WDFW Drone Footage:

→ Pictures -- Click [here](#).

→ Video1 -- Click [here](#).

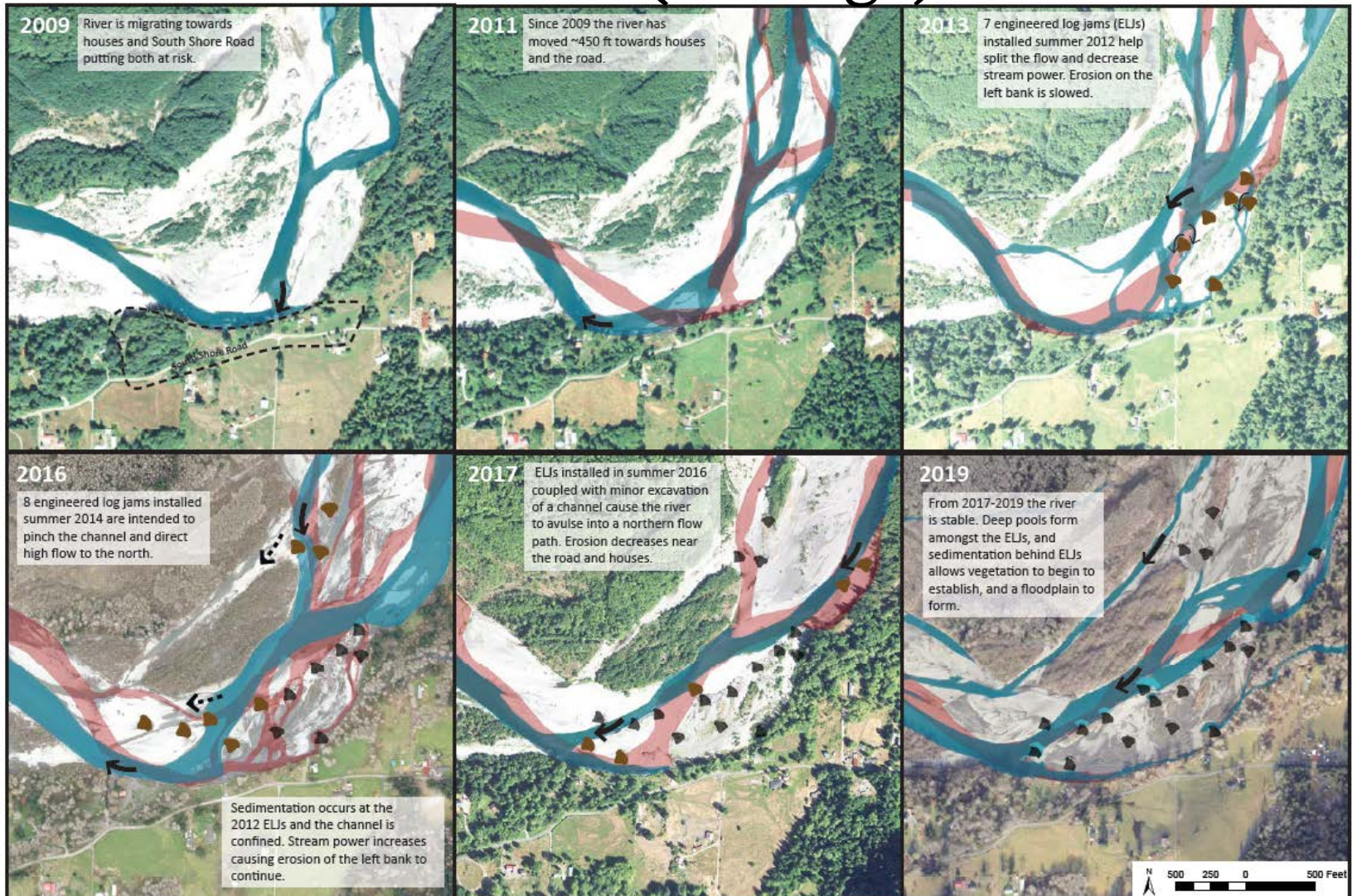
→ Video2 -- Click [here](#).

→ Video3 -- Click [here](#).

→ Video4 -- Click [here](#).

→ Video5 -- Click [here](#).

Photos (Analog)



Key:

 Existing Channel Location	 Design Intent	 Most Recently Built ELJs
 Previous Channel Location	 Actual Flow Path	 Past Built ELJs

Photos (Analog)



Timber
complex →



← Upper
Quinault,
South
Shore Road



Deflector
structures,
Apex jam →




Questions

Web:

Chehalis River Basin Flood Authc x +

ezview.wa.gov/site/alias_1492/37609/lower_satsop_restoration_and_protection_program.aspx

Lower Satsop Restoration & Protection Program



(Keys Road Flooding, 1-07-2020, Port of Grays Harbor Photo)

-- PHASE I --

2020 Legislative Funding Request → FUNDED! See [here](#) (pg. 77).

- Rep. Brian Blake & Rep. Jim Walsh (submitted 11-12-2019) → Click [here](#).
- Sen. Dean Takko & Sen. Van De Wege (submitted 12-26-2019) → Click [here](#).
- Letter of Support:
 - Washington State Dairy Federation (submitted 2-04-2020) → Click [here](#).
 - Grays Harbor Voluntary Stewardship Program (submitted 2-14-2020) → Click [here](#).
 - Grays Harbor/Pacific County Farm Bureau (submitted 2-20-2020) → Click [here](#).

JARPA Submittal (Phase I) (submitted 3-27-2020, **NEW! supplemented 4-23-2020**) → Click [here](#).

Lower Satsop Advisory Group Meeting (3-31-2020) → Click [here](#).

Lower Satsop Community Meeting (4-06-2020) → Click [here](#).

Contacts:

Organization	
Grays Harbor County	Rob Wilson 360/249-4222 RWilson@co.grays-harbor.wa.us
Natural Systems Design	Matt Tiedemann (through Aug) matt@naturaldes.com 206/462-1245 Miranda Smith (after Aug) 206/480-1127 miranda@naturaldes.com