



Lower Satsop Restoration & Protection Program Update/Discussion – Phase I, Phase II

Protect, Preserve, Restore

* Farmland * Essential Infrastructure * River/Floodplain Functions & Habitat

September 21, 2020



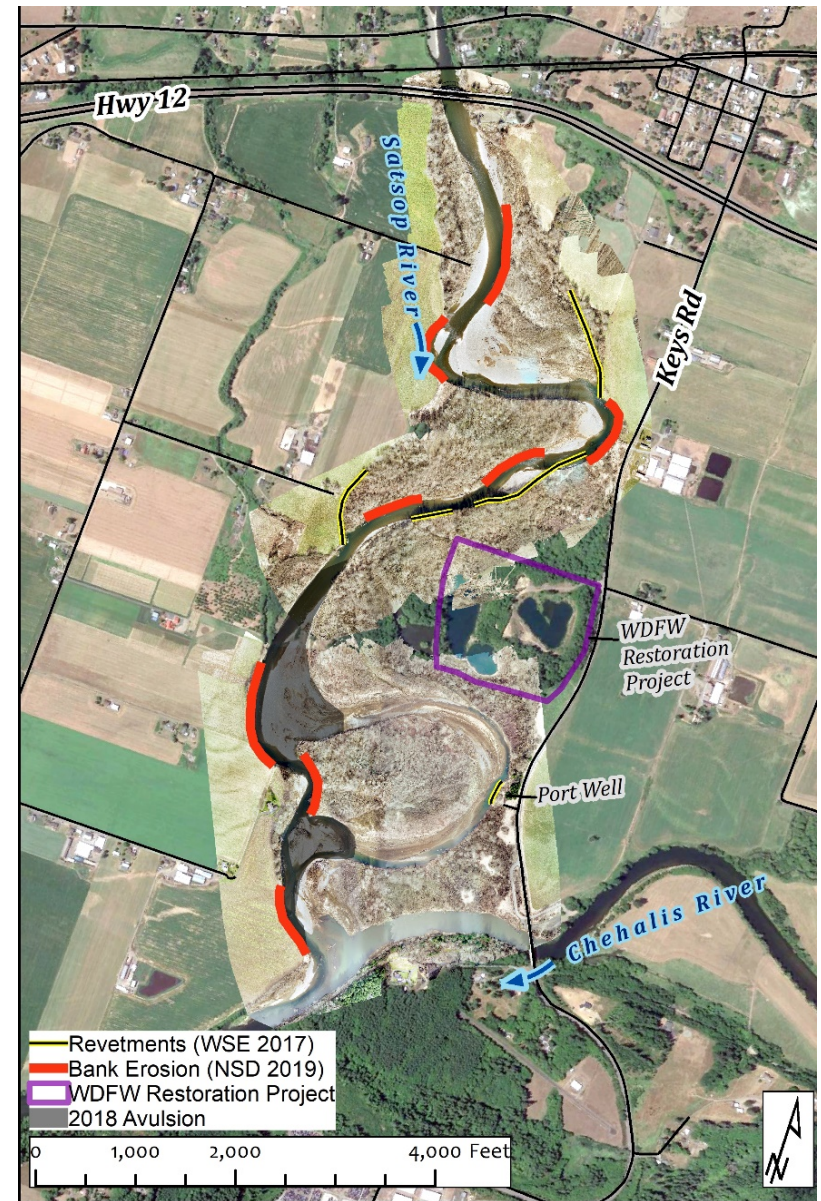
Grays Harbor
Conservation
District

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

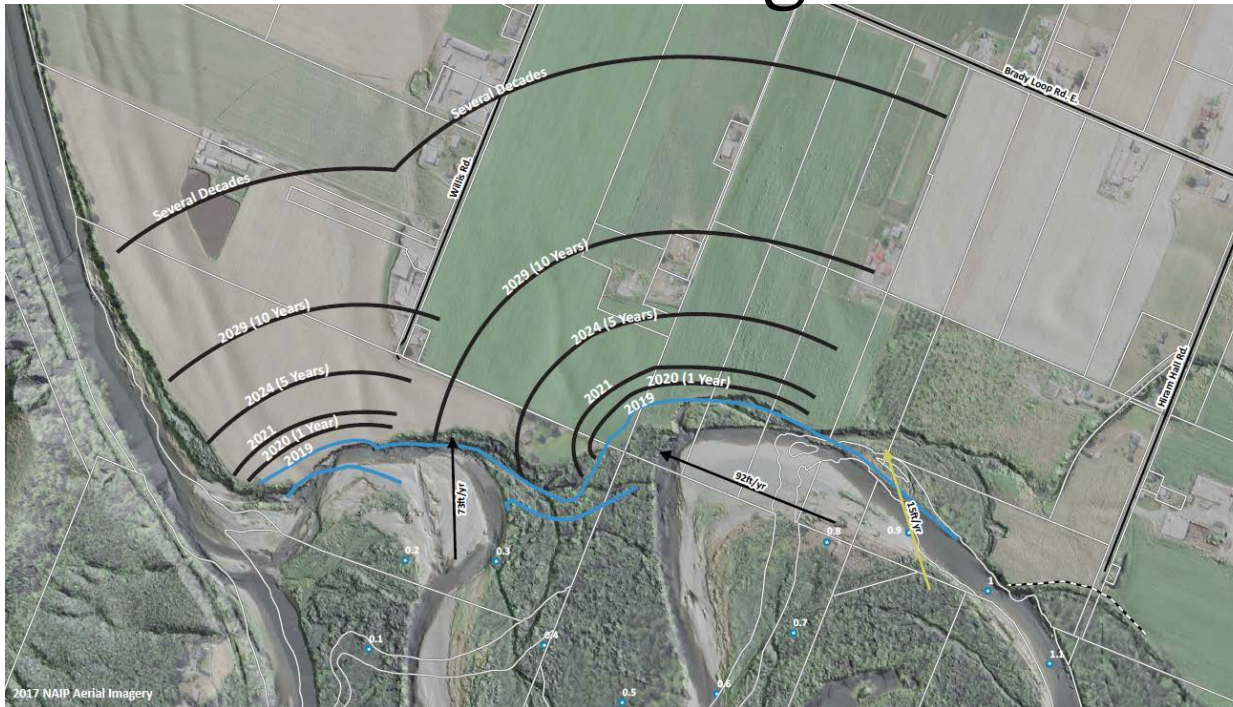


1953

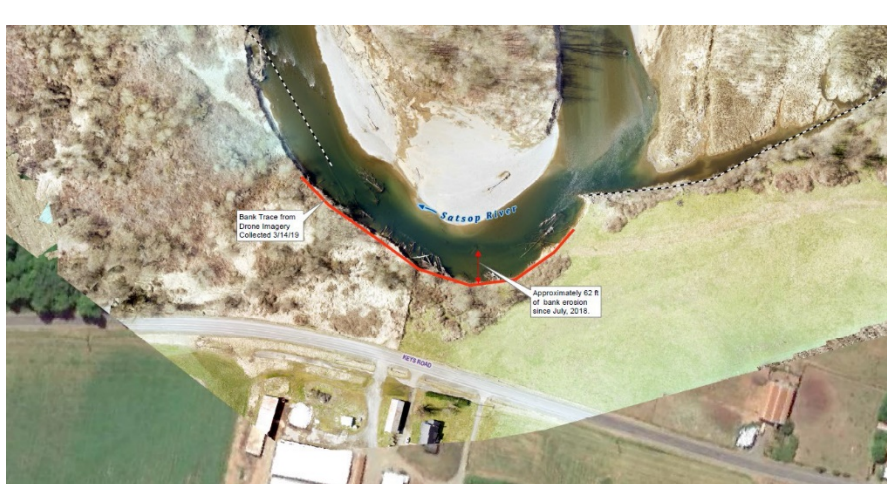


2019

Background



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](#).

NEW! 9/04/2020 GHC Drone Footage:

→ Video1 -- Click [here](#). → Video2 -- Click [here](#).

Background (Advisory Group)



Background

Lower Satsop Restoration & Protection Program



“Organizing Stage”

9/2017 10/2017 11/2017 12/2017 1/2018 2/2018 3/2018 4/2018

“Visioning Stage” -- Funded, \$40K State Cap Budget (*RCO 18-2118*)

4/2018 5/2018 6/2018 7/2018 8/2018 9/2018 10/2018 11/2018 12/2018 1/2019 2/2019



(Phase I)
Keys Road Corridor
Flood Protection
Project

“Planning/Design/Engineering/Permitting/Bid (Phase I)” -- Funded, \$175K State Cap Budget (*RCO 18-2118*)

6/2019 7/2019 8/2019 9/2019 10/2019 11/2019 12/2019 1/2020 2/2020 3/2020 4/2020 5/2020 6/2020 7/2020

“Construction (Phase I)” -- Funded, \$1,725,024 State Cap Budget (*RCO 20-*****)

7/2020 8/2020 9/2020 10/2020 11/2020

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

“Planning/Design/Engineering/Permitting/Bid (Phase II)” -- Funded, \$320K State ASRP \$ (*RCO 20-*****)

01/2020 11/2020 12/2020 1/2021 2/2021 3/2021 4/2021 5/2021 6/2021 7/2021 8/2021 9/2021 10/2021 11/2021 12/2021 1/2022 2/2022 3/2022 4/2022 5/2022

“Construction (Phase II)” -- Funding *Pending*, \$1,561,405 State Flood Authority \$ (*RCO 22-*****)

5/2022 6/2022 7/2022 8/2022 9/2022 10/2022 11/2022

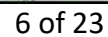


1953

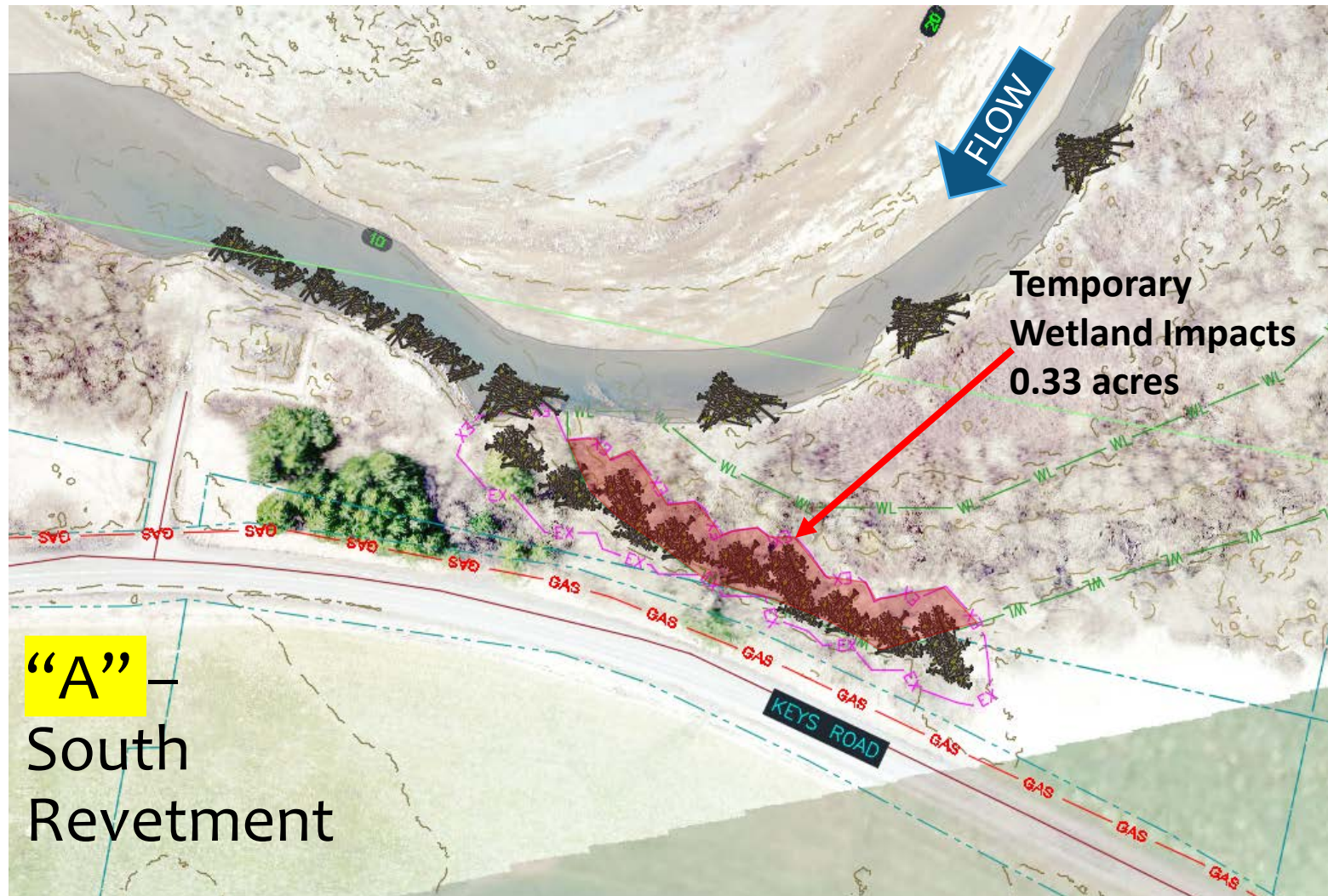


2019

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



Phase I (2020), Keys Road Corridor Flood Protection



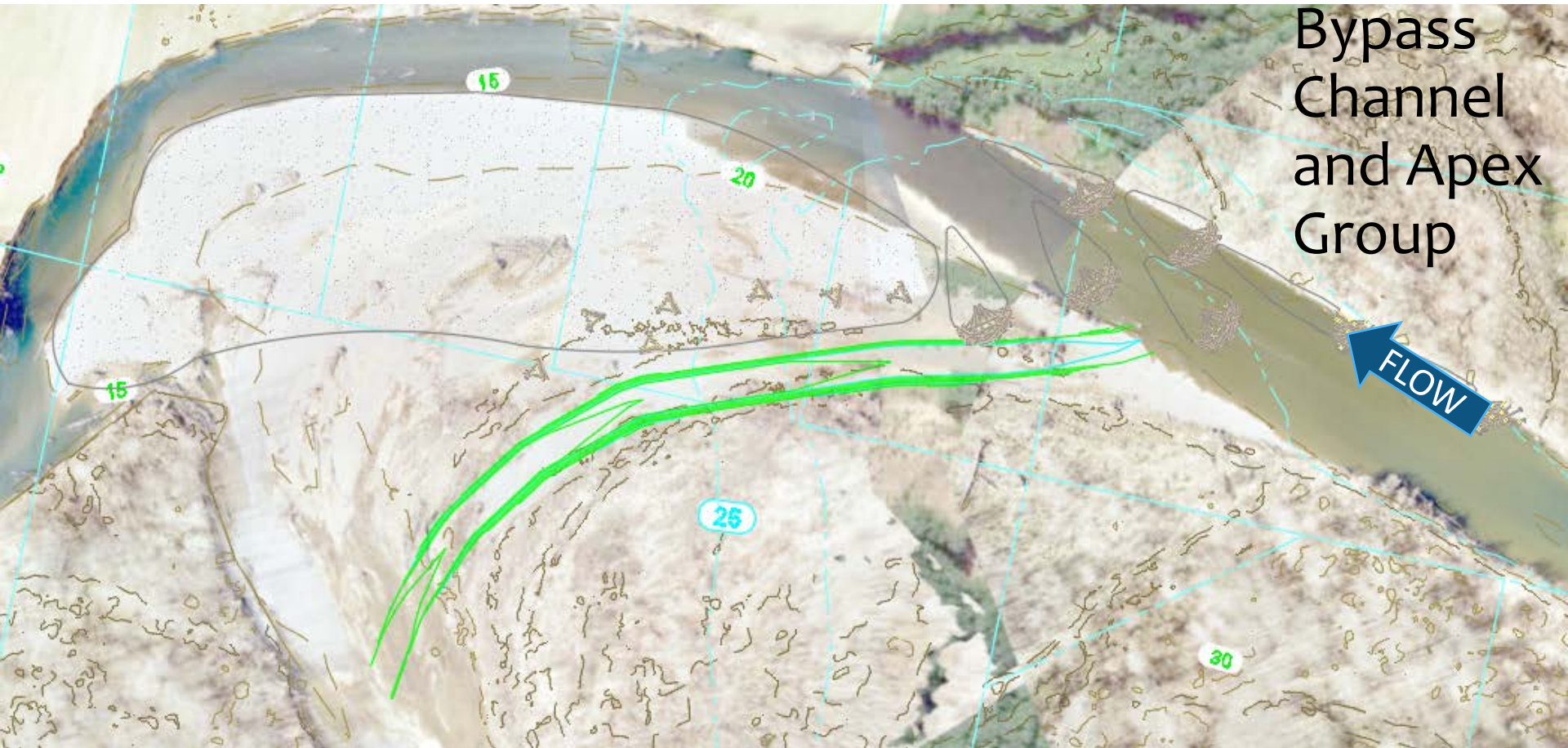
Phase I (2020), Keys Road Corridor Flood Protection

Aerial view of deflectors in side-channel



Phase I (2020), Keys Road Corridor Flood Protection

“B” --
Bypass
Channel and Apex
Group



Phase I (2020), Keys Road Corridor Flood Protection

Aerial view of apex jams


“B” --

Bypass
Channel
and Apex
Group



Phase I (2020), Keys Road Corridor Flood Protection

Floodplain roughness structures, bypass channel, apex jams, and deflectors.



An aerial photograph of a river restoration project. The image shows a main river channel on the right and a newly constructed bypass channel on the left. Several apex jams, made of wooden posts, are visible in the bypass channel to create roughness and control flow. The surrounding area is a mix of sand, gravel, and vegetation. The text "“B”-- Bypass Channel and Apex Group" is overlaid on the left side of the image.

“B”--
Bypass
Channel
and Apex
Group

Phase I (2020), Keys Road Corridor Flood Protection



Phase I (2020), Keys Road Corridor Flood Protection

Deflector structures looking downstream



Deflector structures looking upstream



“C” -- North
Revetment

Phase I (2020), Keys Road Corridor Flood Protection

North setback revetment pit and pile driving crane

“C” -- North
Revetment



Phase I (2020), Keys Road Corridor Flood Protection

Lessons Learned

- | | |
|------------------|--|
| 1. Construction | <ul style="list-style-type: none">a. Brumfield -- No mechanical breakdowns affecting August fish windowb. Brumfield -- Not shy to seek clarification/resources to do best jobc. WDFW -- Exceptionally helpful as on-the-ground regulatord. Public interest -- Very high |
| 2. Permitting | <ul style="list-style-type: none">a. 16 weeks! JARPA submittal 3/27/20; Pre-construction mtg 7/14/20b. Multi-Agency Advisory Group -- “Having so many interested and involved agencies, jurisdictions, departments was excellent in that it allowed for lots of ideas and didn’t leave anyone surprised as ideas and plans came about.” |
| 3. Coordination | <ul style="list-style-type: none">a. Right of Way/Property Access -- Complete sooner |
| 4. Leadership | <ul style="list-style-type: none">a. GHC -- “Coordinator/convener/momentum generator” 9/20/2017 |
| 5. Communication | <ul style="list-style-type: none">a. Frequent and Substantiveb. In-person, Email, Website, Zoom, Webcams, Dronec. News articles? |

Phase II (2021/22), Habitat Connectivity & Reach-Scale Aquatic, Riparian, and Floodplain Restoration

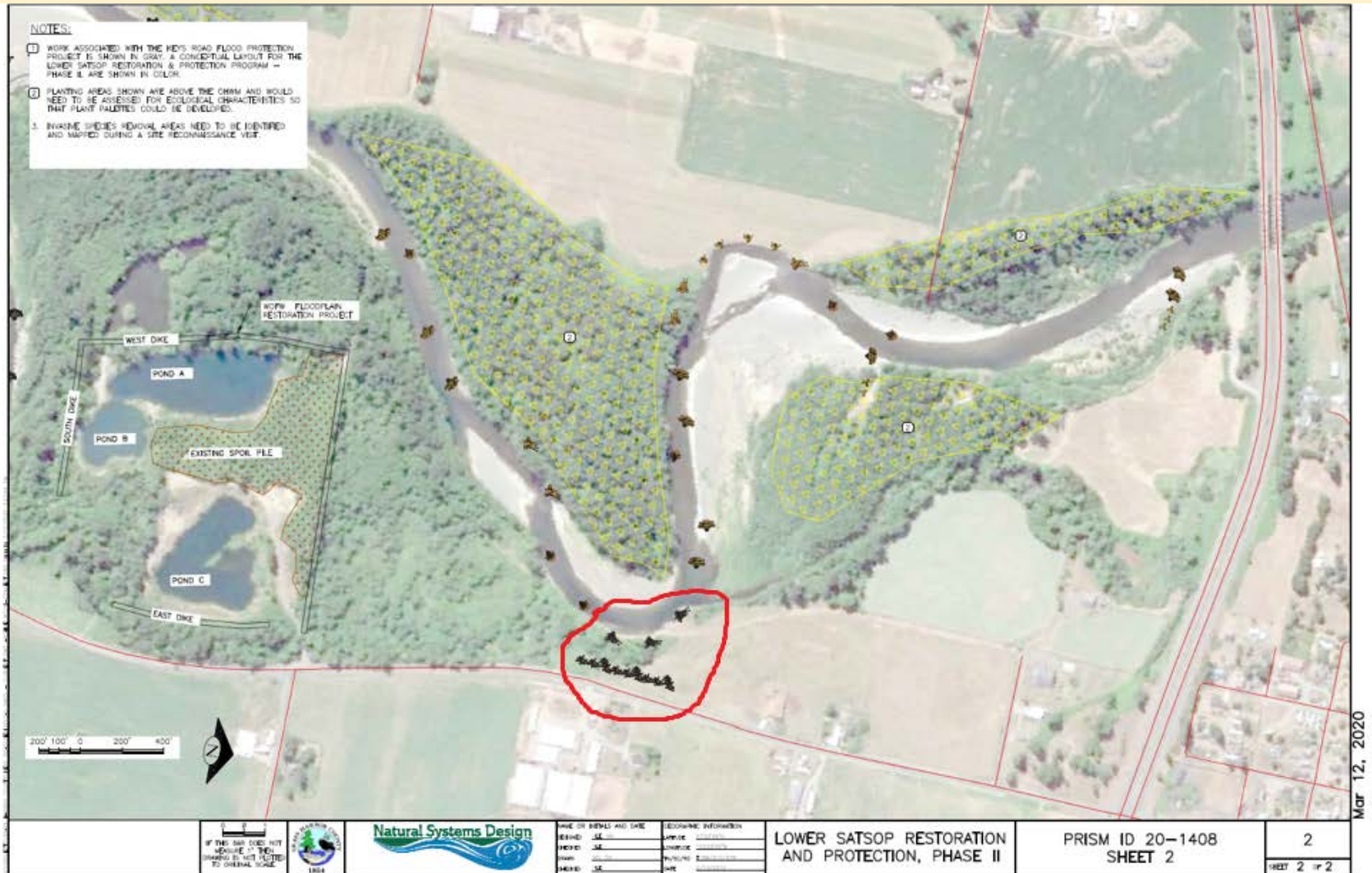
- Build on investment in East Fork Satsop (Early-Action ASRP) by improving connectivity between critical habitats.
- Achieve reach-scale effect on sediment and flow dynamics.
 - ▶ 35 in-channel structures
 - ▶ 130 acres of riparian planting
- Reduce invasive species (~10 acres invasive plant control).

Phase II (2021/22), Habitat Connectivity & Reach-Scale Aquatic, Riparian, and Floodplain Restoration



Red Outline = Phase I (2020)

Phase II (2021/22), Habitat Connectivity & Reach-Scale Aquatic, Riparian, and Floodplain Restoration



Red Outline = Phase I (2020)

Phase II (2021/22), Habitat Connectivity & Reach-Scale Aquatic, Riparian, and Floodplain Restoration

■ Design, Engineering, Permitting

- ▶ Funded -- \$320K
- ▶ Schedule -- 10/2020 to 5/2022

Next Steps

■ Construction

- ▶ Funding pending -- \$1.56M
- ▶ Schedule -- 5/2022 to 11/2022

■ Key Considerations

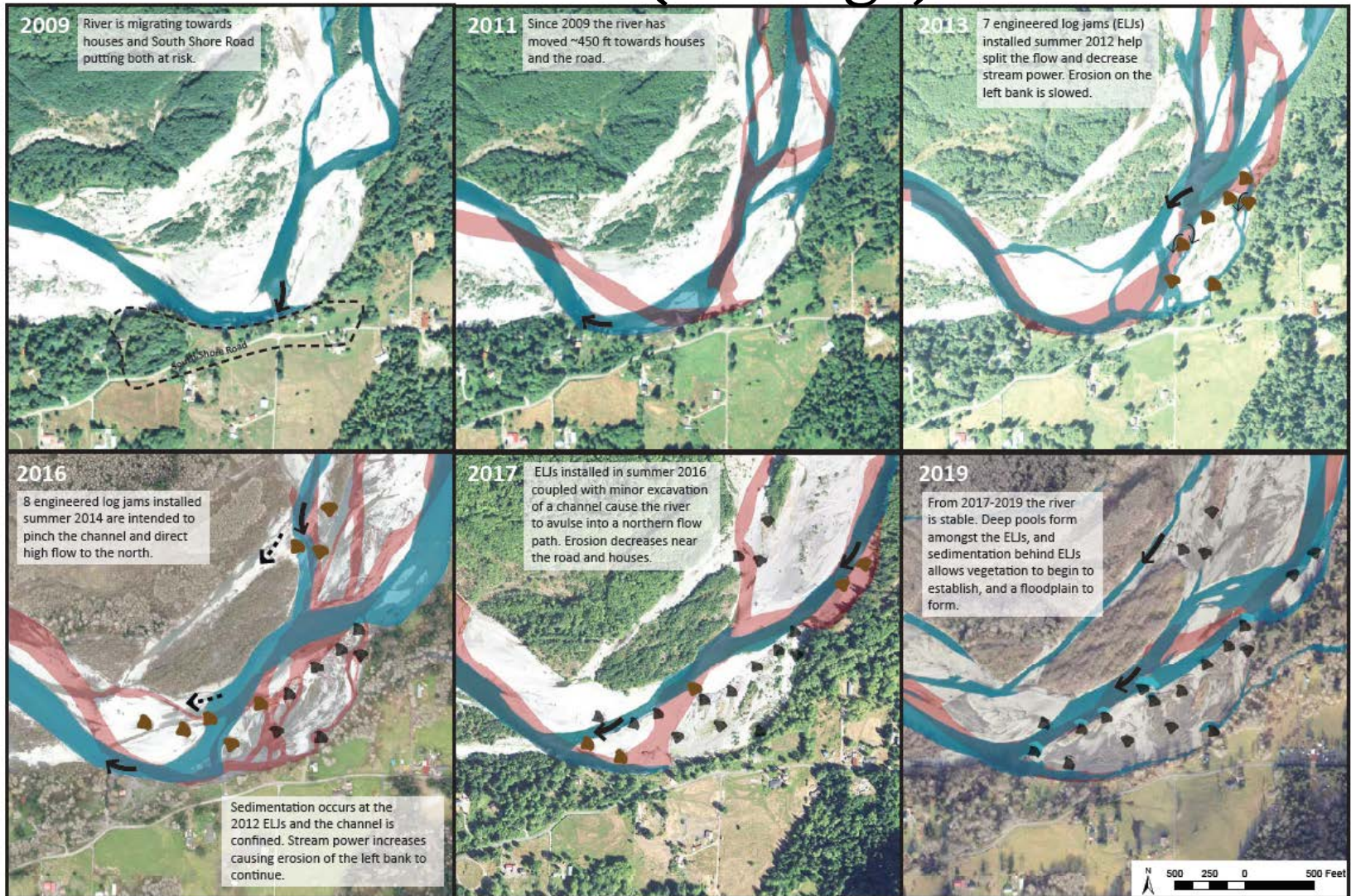
- ▶ In-water work window August 1 -31
- ▶ Right of way, property access
- ▶ Geomorphic changes (adaptive management)** -- 10/2020 to 5/2022

**Note: Considering relocating webcam and conducting routine drone flights to monitor and document river changes driven by Phase I.

■ Coming Up

- ▶ Community meeting – 9/23/2020, 4:30 p.m. to 6:30 p.m., Willis' property
- ▶ Agency Advisory Group Meeting – 9/25/2020 to kick-off Phase II design, engineering, permitting

Photos (Analog)



Key:

Existing Channel Location
Previous Channel Location

Design Intent
Actual Flow Path

Most Recently Built ELJs
Past Built ELJs



Photos (Analog)



Timber
complex →

← Upper
Quinault,
South
Shore Road



Deflector
structures,
Apex jam →



Questions/More Information

← → ↻ ezview.wa.gov/site/alias__1492/37609/Default.aspx


Project: Chehalis River Basin Flood Authority
UPR#: 1492

Search Documents Messages Project Members

Home | Local Projects | Meetings | Capital Budget 2015-18 | Outreach & Education | Copies & Submits | Documents | Contacts | Library | FAQ

Key Links

Lower Satsop Restoration & Protection Program



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

-- PHASE I --

JARPA Approvals → Click [here](#).

Construction Bid Package (advertised 6-04-2020) → Click [here](#)

JARPA (submittal 3-27-2020, supplement1 4-23-2020, supplement2 5-26-2020) → Click [here](#).

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

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

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

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

Overview/FAQ (12-16-2019) → Click [here](#).

Map → Click [here](#) (12-13-2019, All Phases), [here](#) (12-27-2019, Phase I)

Presentation (12-16-2019) → Click [here](#).

-- PHASE II --

2020-21 ASRP Funding Request:

- Request For Proposals (issued 11-15-2019) → Click [here](#).
- Funding Proposal (submitted 2-05-2020) → Click [here](#).
- Funding Award for Phase II Design (received 5-15-2020) → Click [here](#).

Organization

Grays Harbor
County

Rob Wilson
360/249-4222
RWilson@co.grays-harbor.wa.us

Natural Systems
Design

Miranda Smith
206/480-1127
miranda@naturaldes.com

Chehalis River
Basin Flood
Authority

Scott Boettcher
360/480-6600
scottb@sbgh-partners.com

https://www.ezview.wa.gov/site/alias__1492/37609/lower_satsop_restoration_and_protection_program.aspx

