



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

Protect, Preserve, Restore

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

September 21, 2020



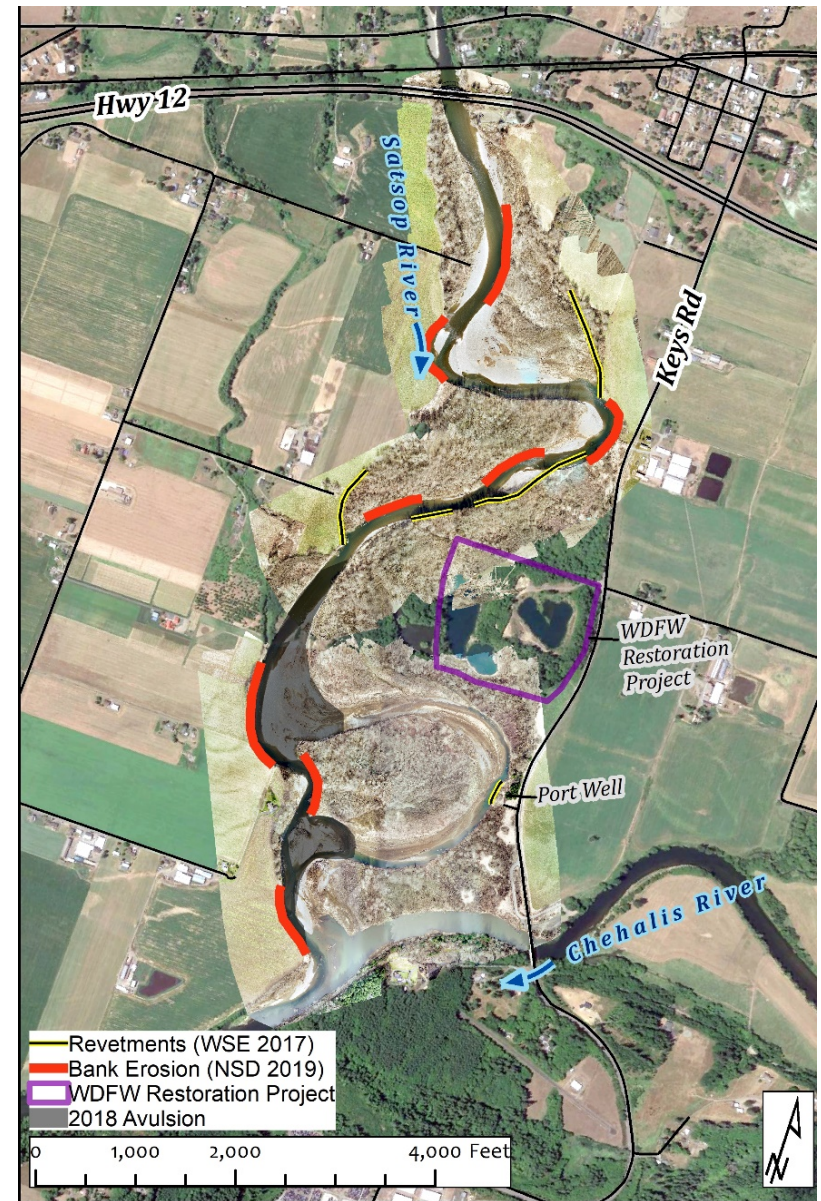
Grays Harbor
Conservation
District

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

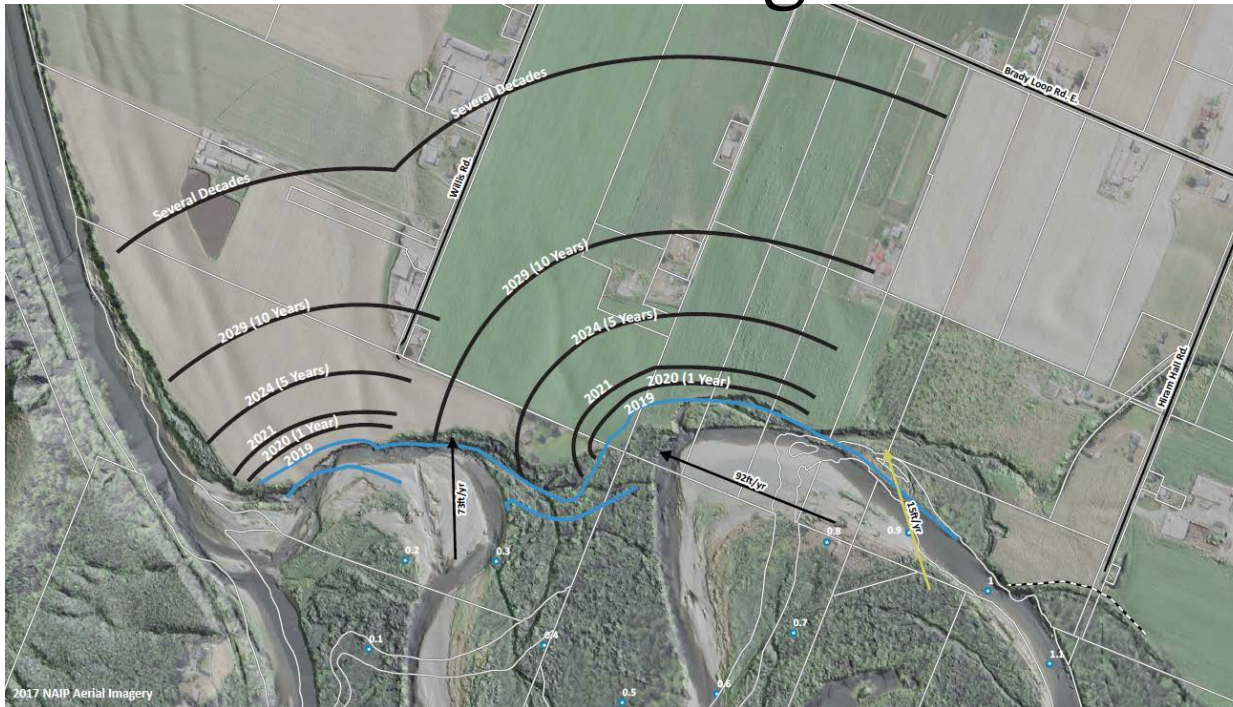


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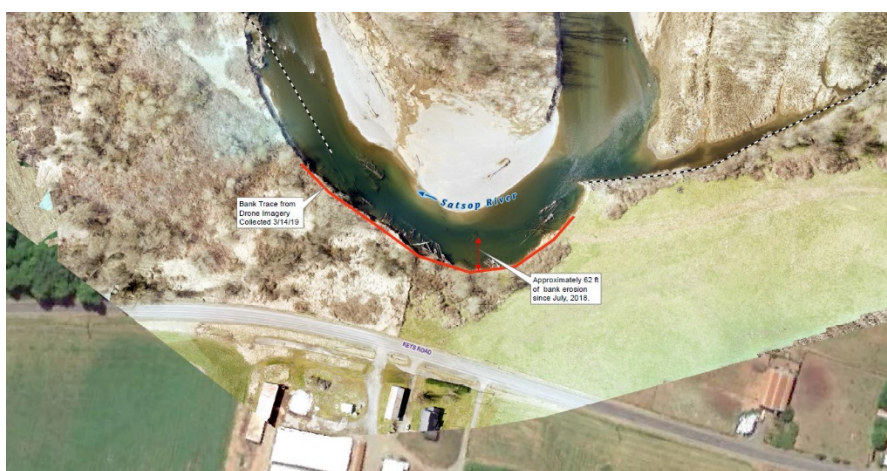


2019

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



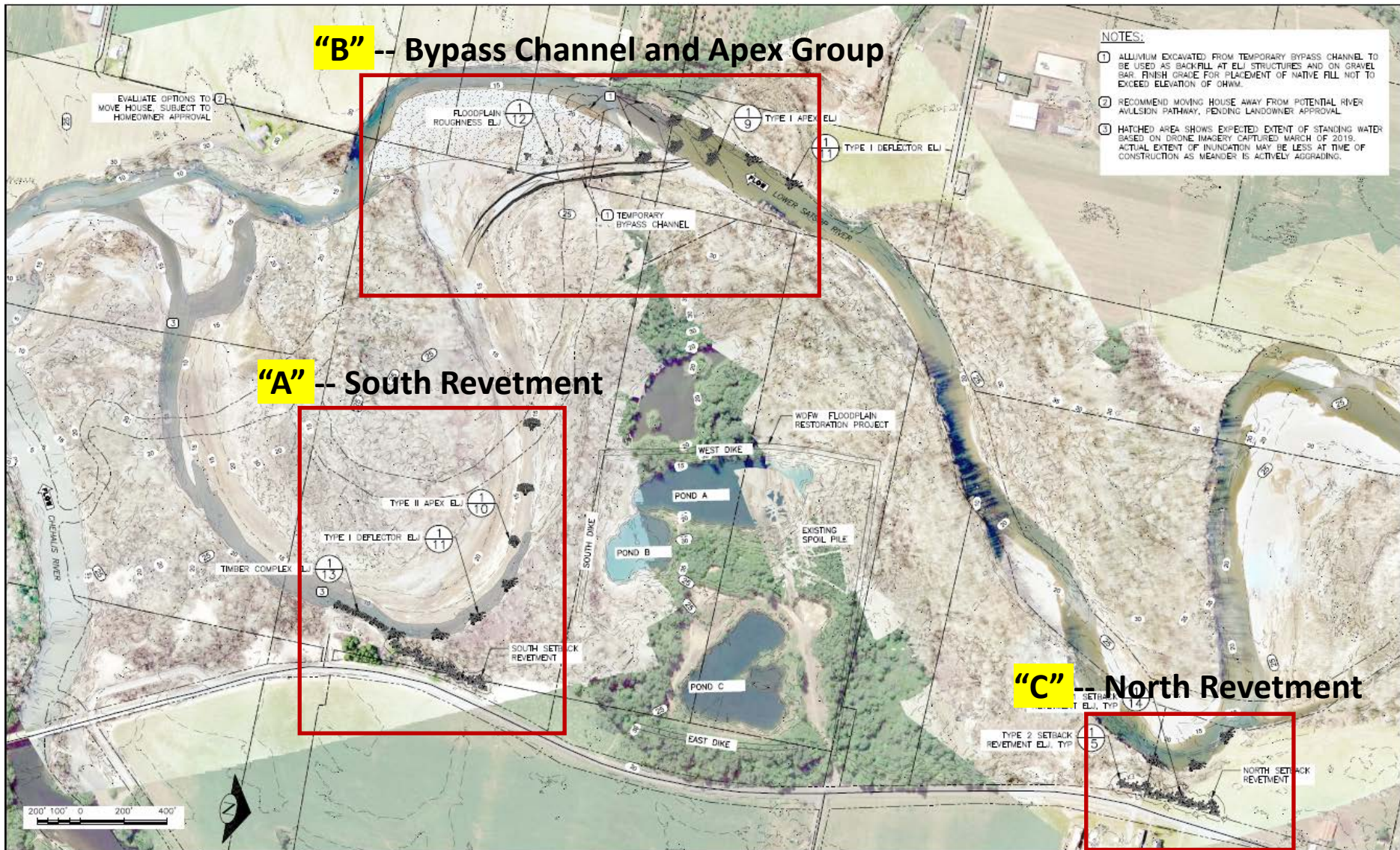
2019

✓ Many Community Meetings

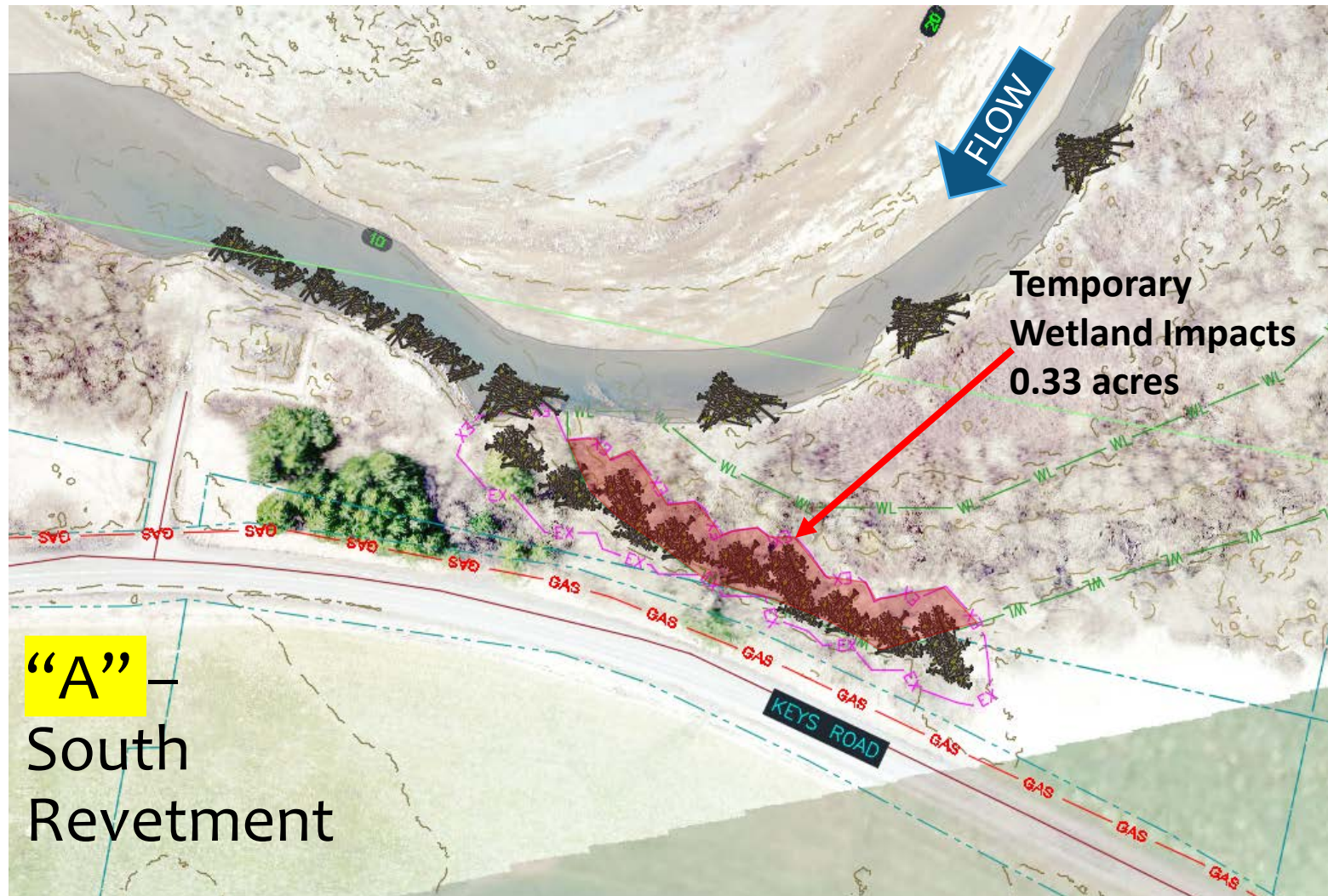
✓ Many Individual Meetings/Presentations/Tours

✓ Many Multi-Agency Advisory Group Meetings

Phase I (2020), Keys Road Corridor Flood Protection



Phase I (2020), Keys Road Corridor Flood Protection



Phase I (2020), Keys Road Corridor Flood Protection

“A” --
South
Revetment



Timber Complex at the Port of Grays Harbor well

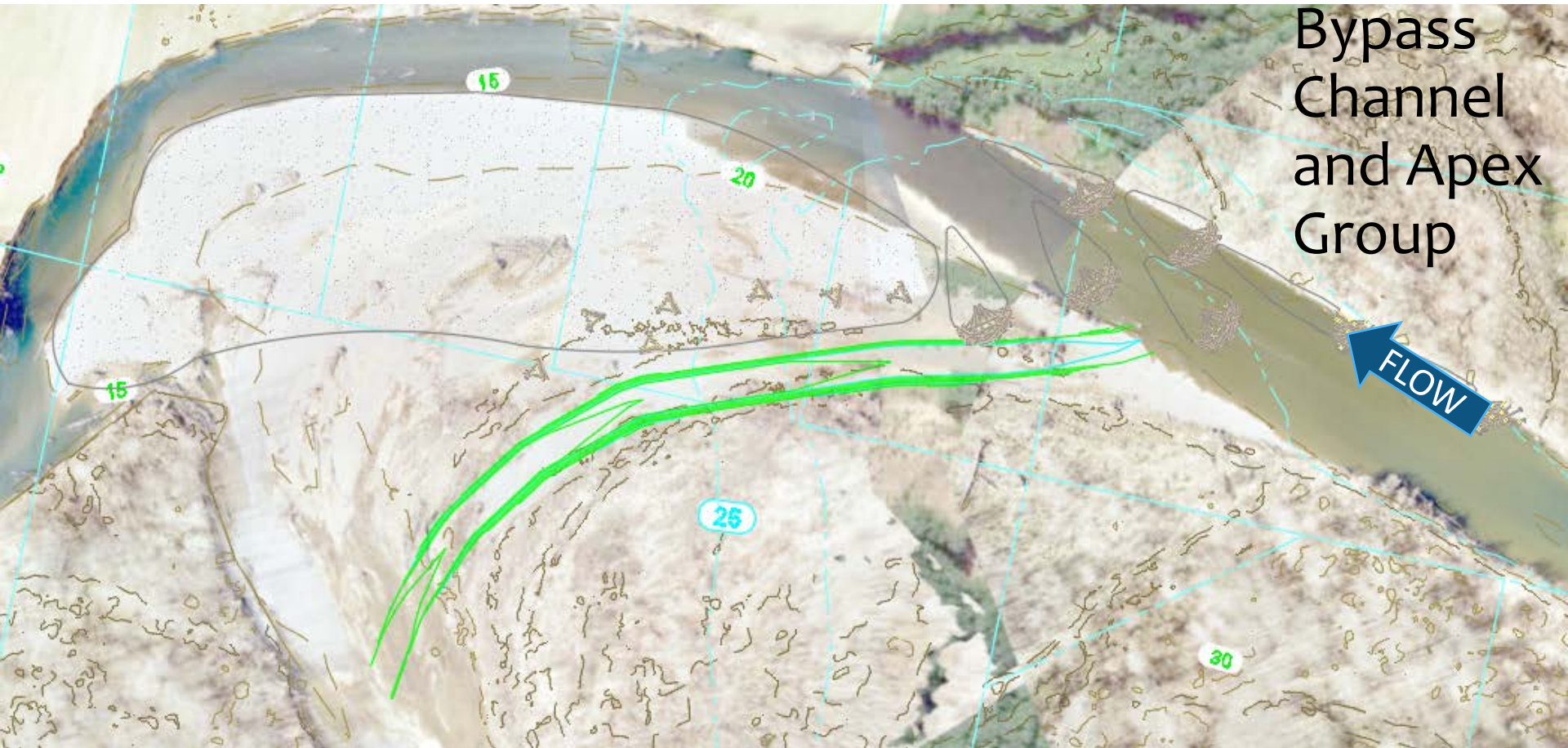
Phase I (2020), Keys Road Corridor Flood Protection

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 poles, are placed across the river to create riffles and roughness. The surrounding area is a mix of sand, gravel, and dense green vegetation. The text "B" is highlighted in a yellow box, and the text "Bypass Channel and Apex Group" is written below it.

“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 -- Assumes “coordinator/convener/momentum generator” role on 9/20/2017 (here)
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

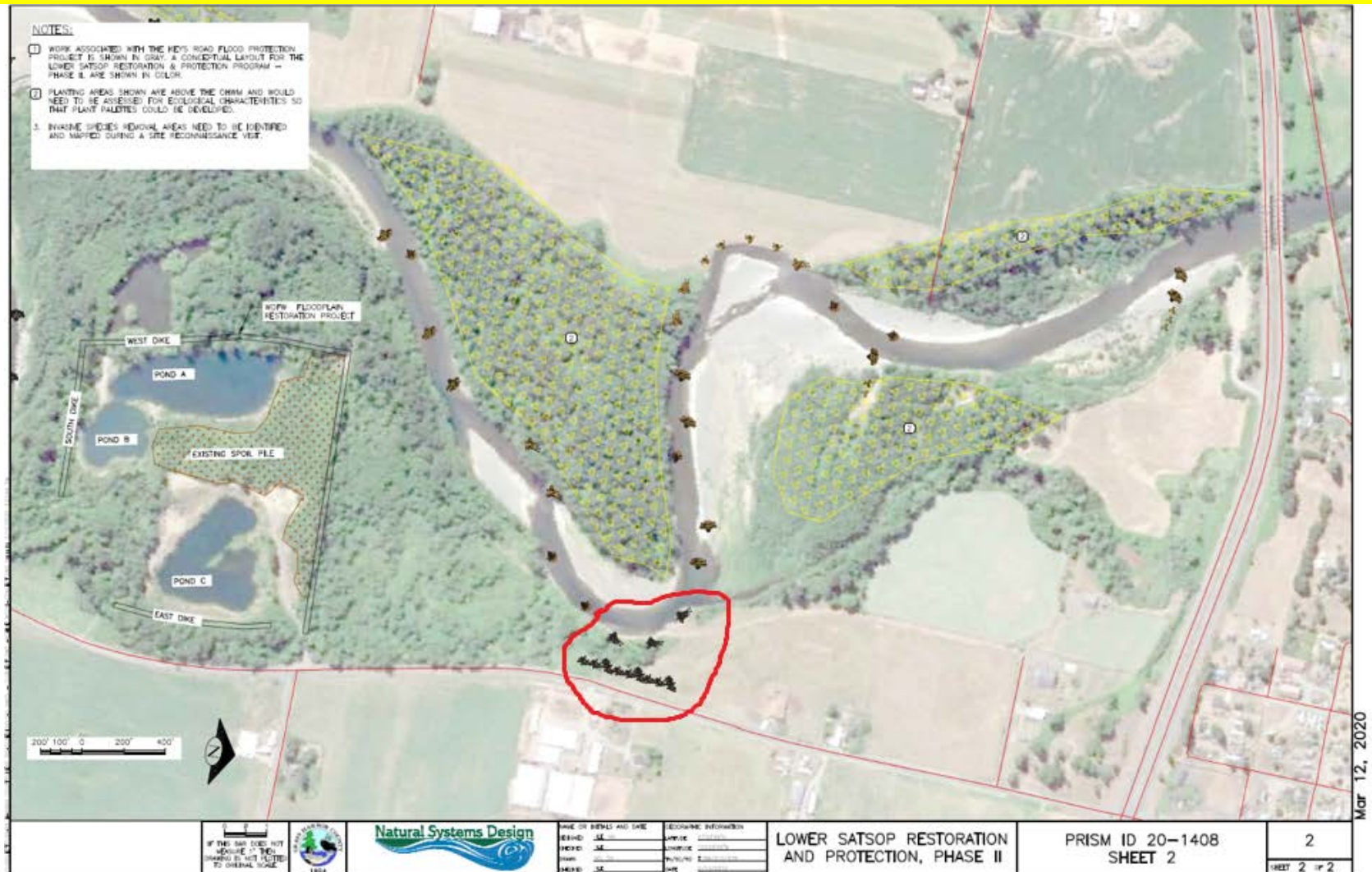
- Build on investment in East Fork Satsop (Early-Action ASRP) by improving connectivity between critical habitats.
- Achieve reach-scale effect on sediment and flow dynamics.
 - ▶ 35 in-channel structures
 - ▶ 130 acres of riparian planting
- Reduce invasive species (~10 acres invasive plant control).

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

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

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Design

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Chehalis River
Basin Flood
Authority

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

