# Lower Satsop River Floodplain Restoration Project Stakeholder Meeting

**March 25, 2014**
**6:30 – 9:00 pm**
**Brady Fire Hall**

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| Introduction | 15 min |
| Project History | 15 - 20 min |
| Phase 2 of Project | 30 - 45 min |
| Additional Stakeholder Discussion | 15 - 20 min |
| Wrap up | 5 -10 min |

**Contact Information**


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Chehalis River Basin Flood Authority website: https://www.ezview.wa.gov

Stakeholder Meeting Summary 3/25/2014

The meeting was attended by 15 local landowners and stakeholders, along with the project team. Most of the stakeholders were longtime participants in the discussions and previous projects. The project team was introduced to the group as WDFW project engineer, Michelle Cramer, WDFW project biologist, Doris Small and a consultant team from Watershed Science & Engineering of Larry Karpak, Mark Indrebo and Jeff Johnson.

Mark and Larry discussed the project history from river dynamics through the Corps study in 2002-04 and the WSE project to analyze the benefits and impacts of rip rap removal along the river for floodplain restoration and bank protection for agricultural lands. The presentation highlighted the alluvial fan of the lower Satsop and the current land use that limits the extent of the river corridor.

- The Corps study was initiated to restore the floodplain of the lower Satsop while improving fish and wildlife habitat. The project produced alternatives analysis and preliminary report before funding was lost.

- The Phase 1 analysis of the rip rap removal did not show appreciable benefits for floodplain restoration and bank erosion and has not been pursued as a stand-alone project to meet the stakeholder objectives.

- Reports from the past studies are available at www.ezview.wa.gov

Phase 2 of the project was introduced by Terry Willis. She described the project funding through the Chehalis Basin Flood Authority and the WDFW role as one of the eligible parties as a financial agent after the county declined. The funding is targeted to reduce erosion of agricultural lands in the lower Satsop and to improve fish and wildlife habitat.

Michelle led a discussion of preliminary goals and objectives for Phase 2. The draft goals and objectives were included as a handout (see attached) and input is requested.

- Goal #1: Protect public and private infrastructure, and agricultural lands from bank erosion

  While initial discussion focused on gravel removal as a technique to manage the river bed, the eventual discussion of this goal focused on defining the river corridor. There was agreement on the Keys Road as one of the boundaries and discussion of flooding impacts on the left bank (looking downstream). This will need continued discussion as the project moves forward.

  Participants also discussed the need to not only work in the lower river but also to address sediment sources in the upper watershed. While this type of work may be outside of the current funded phase, this may be a recommendation for future work and/or partnerships to be developed for addressing the upper watershed.

- Goal #2: Improve floodplain connectivity to spread flood flows throughout the floodplain and restore side-channel and off-channel habitats for anadromous and resident fish, and wildlife

  This goal and related objectives needed clarification that the side channel habitat to be restored was within the river corridor, as defined by the project, and would not include some of the historic channels on the alluvial fan.

Participants discussed fish needs within channels in floodplains. Additional information is needed for this topic for clarity.

- Goal #3: Lower flood elevations in the project area

  Past flooding events were described by local landowners. Highest floods were in 1997 for the Satsop and 2007 for the Chehalis. Stakeholders were less concerned about flooding than erosion.

Participants recommended that the goals and objectives include 1) recommendations for future work and 2) identification of on-going needs for work after the initial project is complete.

As part of the discussion of goals and objectives, we presented a preliminary list of potential options to address these goals and asked for input. Much of the discussion focused on past gravel removal work and the results of that work. There was much interest in removing gravel for protection of agricultural land while preserving gravel bars for fish habitat. We asked for information about the amount and timing of gravel removal, which has been estimated by some participants as up to 10,000 cy per year over several decades. Some thought it was less than this amount – a couple of dump trucks per day. There was a comment about funding the project through gravel removal and sale. Several participants mentioned gravel removal projects on the Fraser and Skokomish Rivers as informative to the discussion.

The option of "buyout" also generated discussion. This was clarified as a potential option for willing sellers only where it would benefit the goals and objectives of the project.

The meeting concluded with a discussion of the next steps in the project. Larry described the studies that will inform the development of alternatives. We also handed out a draft project timeline through June 2015, including the preliminary timing of four additional stakeholder meetings (see attached). We included contact information for the project team and invited comments. Information from this meeting and upcoming reports and documentation will be posted at **www.ezview.wa.gov**

# Satsop River Project
# Draft Goals & Objectives and Potential Project Elements

**Project Mission: To develop and implement a river corridor project to reduce flood and erosion hazards and improve habitat conditions on the lower Satsop River.**

**Goal #1: Protect public and private infrastructure, and agricultural lands from bank erosion**

Objective 1a: Identify areas at risk of accelerated erosion and develop project alternatives to limit the extent of lateral channel migration and bank scour that meets the needs of, and will be supported by, the landowners

Objective 1b: Bank erosion reduction techniques will work with natural processes to enhance the ecological values of the reach and provide channel complexity and habitat for fish and wildlife habitats

Objective 1c: Existing bank protection will be evaluated and where possible, be modified to be self-sustaining and to improve habitat conditions

Objective 1d. New bank protection techniques will not directly cause bank erosion upstream and downstream from the project site

Objective 1e: Bank erosion reduction techniques will work with natural processes to enhance the ecological values of the reach and provide channel complexity and habitat for fish and wildlife habitats

Goal #1. Potential Project Elements

Instream habitat complexity bank protection structures
Instream habitat complexity structures to nudge flow and collect large wood
Gravel removal/pilot channel
Revegetation and invasive plant treatments
Riprap removal (partial or complete)
Setback dike along Keys Rd
Well removal/relocation
Well protection
Buy-outs??

**Goal #2: Improve floodplain connectivity to spread flood flows throughout the floodplain and restore side-channel and off-channel habitats for anadromous and resident fish, and wildlife.**

Objective 2a: Restore ingress and egress into side-channel and off-channel habitats for all life stages of anadromous and resident fish

Objective 2b: Remove or reduce constructed barriers to floodplain flow to allow a more natural timing and distribution of flood flows on the WDFW property. (Maybe X% of floodplain inundation at Y year flow.)

Objective 2c: To the extent practicable remove invasive plant coverage throughout the project site and replant with appropriate native riparian species in concert with watershed-scale invasive plant eradication activities

Objective 2d: Work closely with local landowners and stakeholders to develop project alternatives that the landowners will support.

| Goal #2. Potential Project Elements |
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| Side channel reconnection and enhancement |
| Spoil removal |
| Dike breaching |
| Dike removal |
| Revegetation and invasive plant treatments |

**Goal #3: Lower flood elevations in the project area**

Objective 3a: Remove or redistribute fill at WDFW property in a manner that maximizes flood storage capacity and conveyance

| Goal #3. Potential Project Elements |
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| Excavation and grading of dike and spoils piles |
| Spoil removal |
| Dike breaching |
| Dike removal |
| Raise Keys Road |
| Revegetation and invasive plant treatments |

| Preliminary schedule | |
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| Kickoff meeting with Stakeholders to introduce project | March 2014 |
| Analysis and development of range of alternatives | March - September 2014 |
| Stakeholder meeting to discuss alternatives | September 2014 |
| Selection of preferred alternative | September – October 2014 |
| Stakeholder meeting to discuss preferred alternative | October 2014 |
| Design work on preferred alternative | October – December 2014 |
| Stakeholder meeting to discuss preliminary design and permit strategy | December 2014 |
| Design work to final project design | December – March 2015 |
| Stakeholder meeting to review final design and final report | March 2015 |
| End of project | June 30, 2015 |