

RECLAMATION

Managing Water in the West

Schaake Property Habitat Improvement Project

November 5, 2015



U.S. Department of the Interior
Bureau of Reclamation

Introduction

- Reclamation welcome and opening comments
- Group participant self-introductions
- Meeting purpose and agenda review

Meeting Purpose

1. Present preferred alternative
2. Introduce Preliminary (30 Percent Design) Package
3. Discuss next steps
4. Solicit constructive feedback

Presentation Overview / Agenda

- Introduction
- Project overview and goals
- Summary of alternatives development
- Presentation of preferred alternative
- Introduction of Preliminary (30%) Design Package
- Next Steps
- Group Discussion and Q & A
- Closing Remarks
- Summary

Project Overview

- **Schaake *Property* vision:**
 - Improve salmonid habitat
 - Restore riparian vegetation and wetlands
 - Allow public access after restoration
 - Provide public benefits
- **Schaake *Project* vision**
 - Setback the Schaake Levee to reconnect the Yakima River to its floodplain and improve hydrologic connectivity
 - One step towards achieving the vision for the *property*; does not preclude future actions

Project Goals

- **Goal 1.** Improve habitat for juvenile salmonids, both anadromous (salmon, steelhead) and resident (trout).
- **Goal 2.** Promote natural channel processes as much as possible while reducing ongoing maintenance.
- **Goal 3.** Maintain or improve current level of flood protection for downstream and adjacent properties.
- **Goal 4.** Protect existing infrastructure from inundation and erosion at the design discharge.

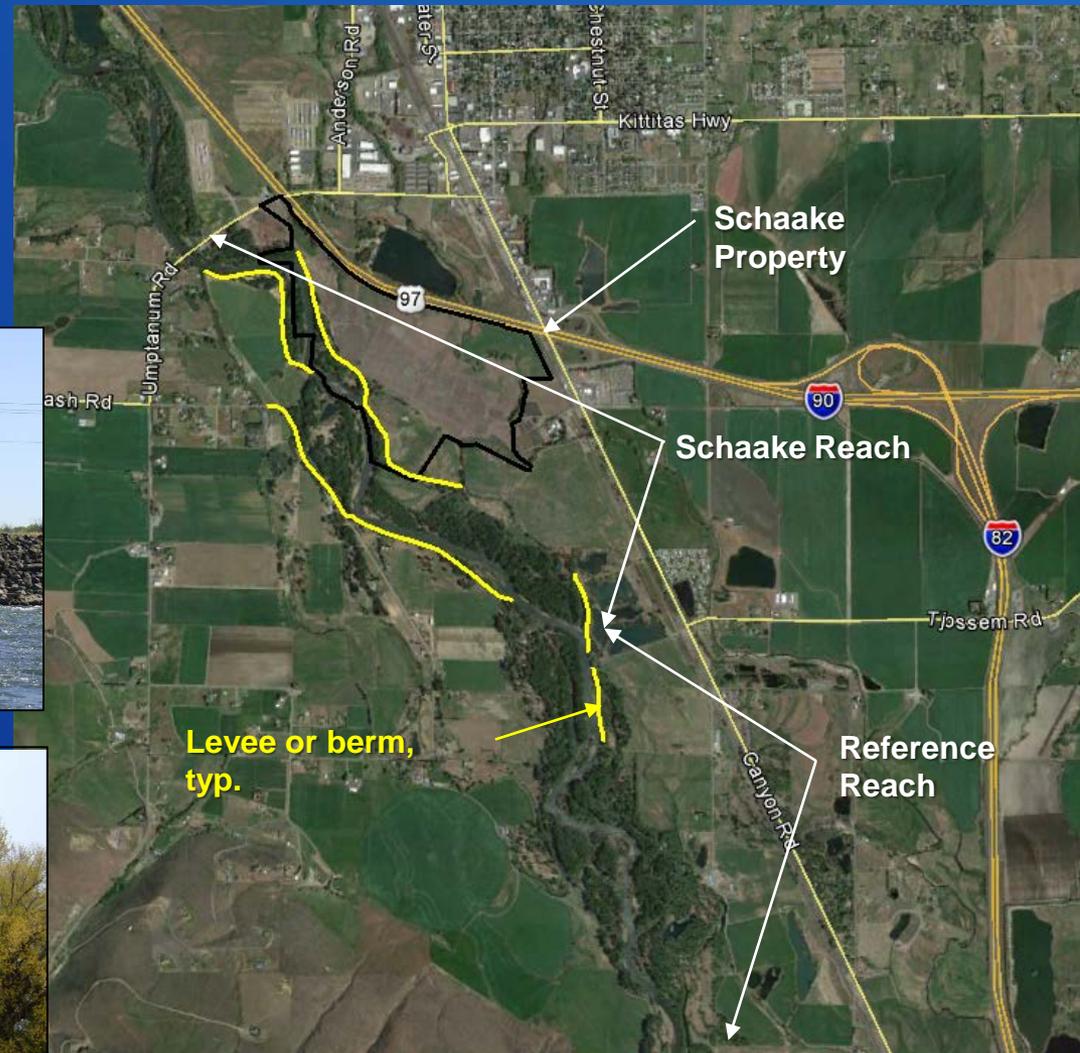
Project Overview



Schaake Reach



Reference Reach



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Project Overview



Historic stockyard – surface layer now removed

Historic slaughterhouse – now removed

Alternatives Development

No Action

- No changes to levees or side channels, but natural processes will continue to change Schaake reach



LEGEND

Background Elements

- × Yakima River Mile (RM)
- Abandoned Levee
- Active Levee
- Rein vigorated Side Channel
- Schaake Property Boundary

Proposed Project Elements

- Alcove Excavation
- Levee Removal
- Setback Levee
- Side Channel Excavation

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Alternatives Development

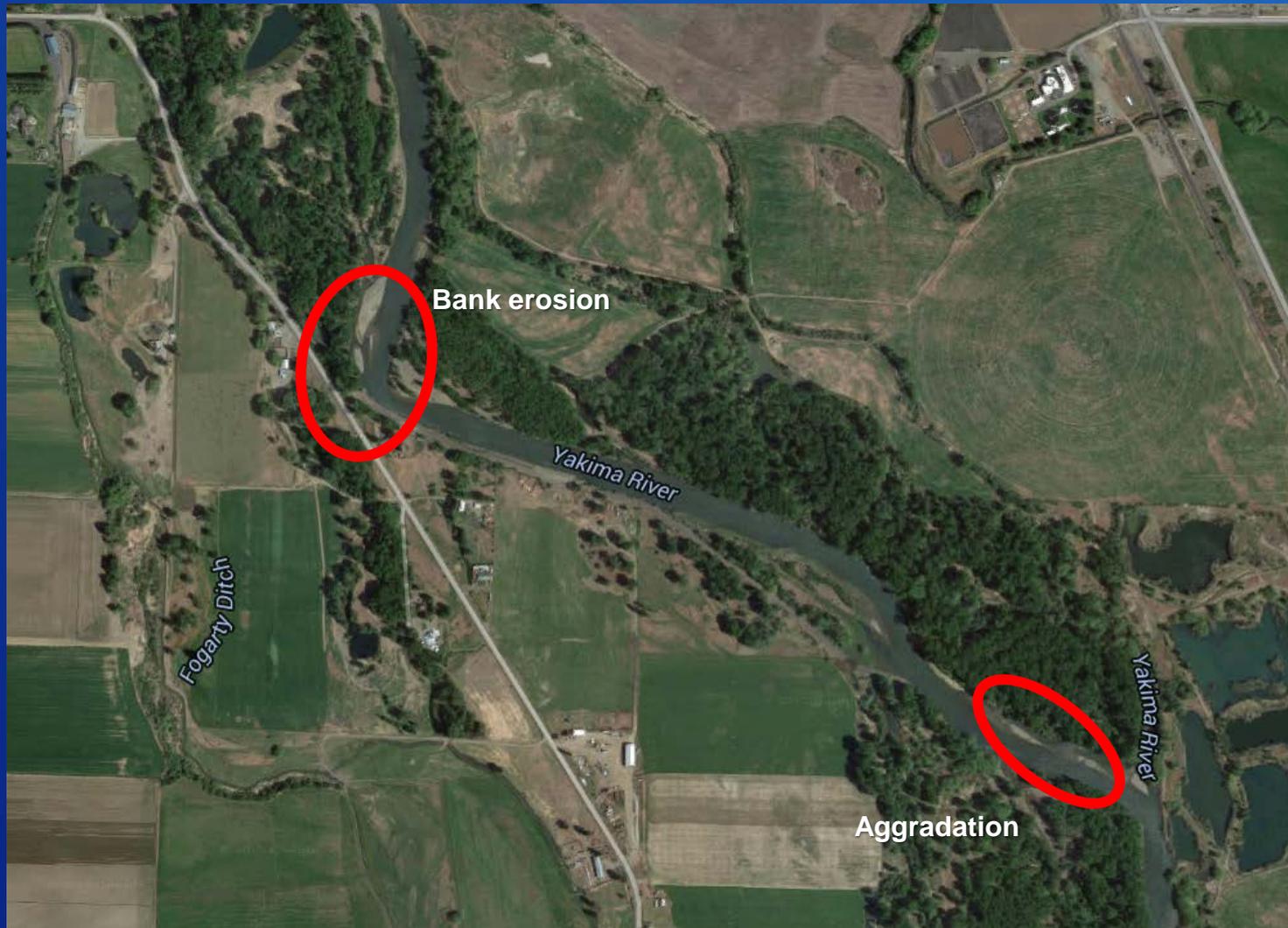
No Action



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Alternatives Development

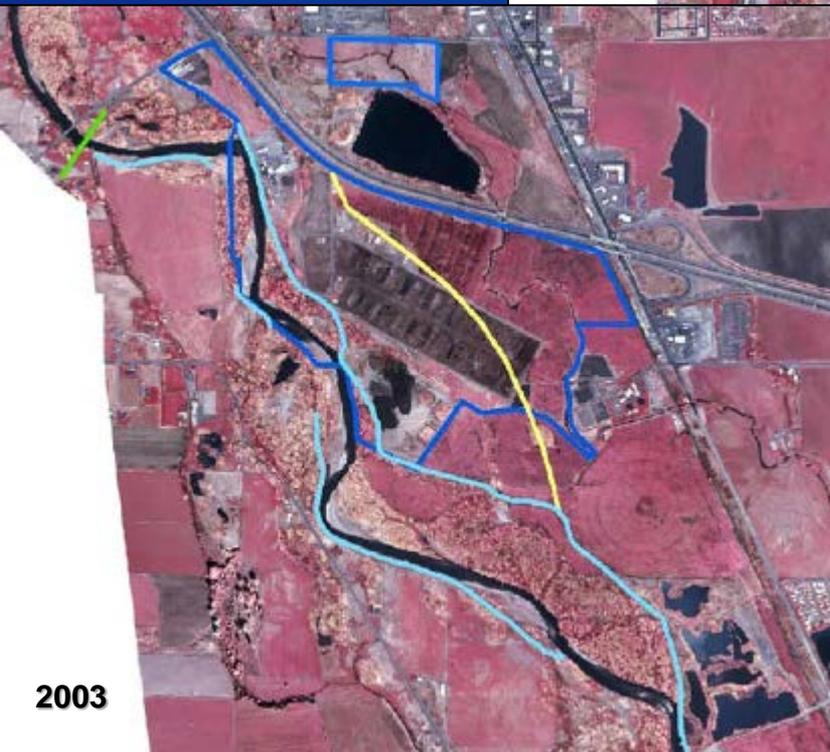
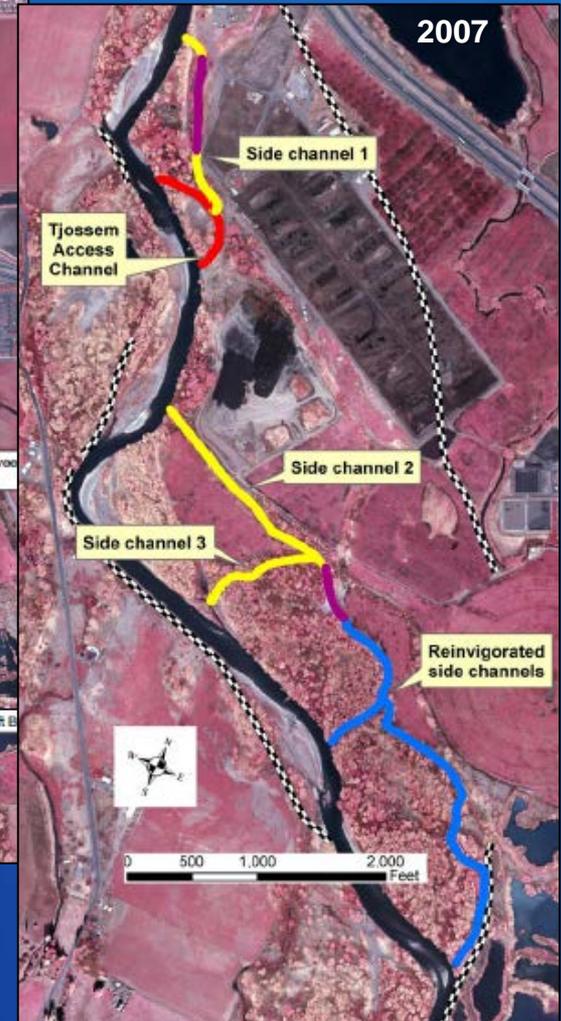
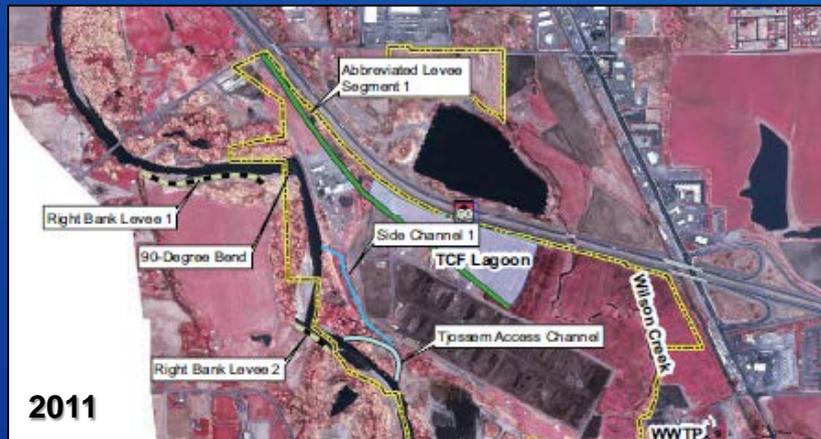
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Alternatives Development

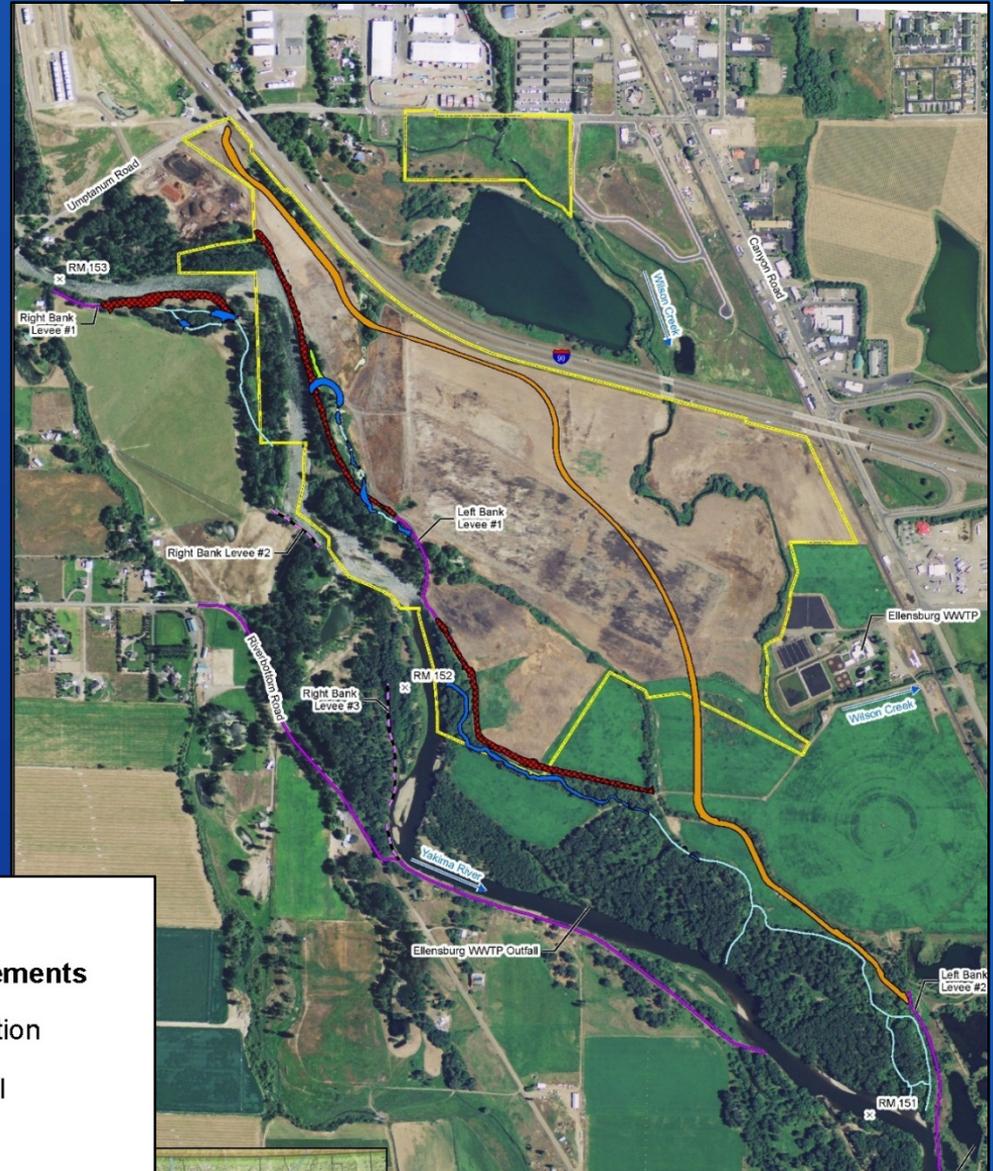
2003 to 2011



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Alternatives Development

2012 to 2014



LEGEND

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Proposed Project Elements

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- ▣ Levee Removal
- Setback Levee
- Side Channel Excavation

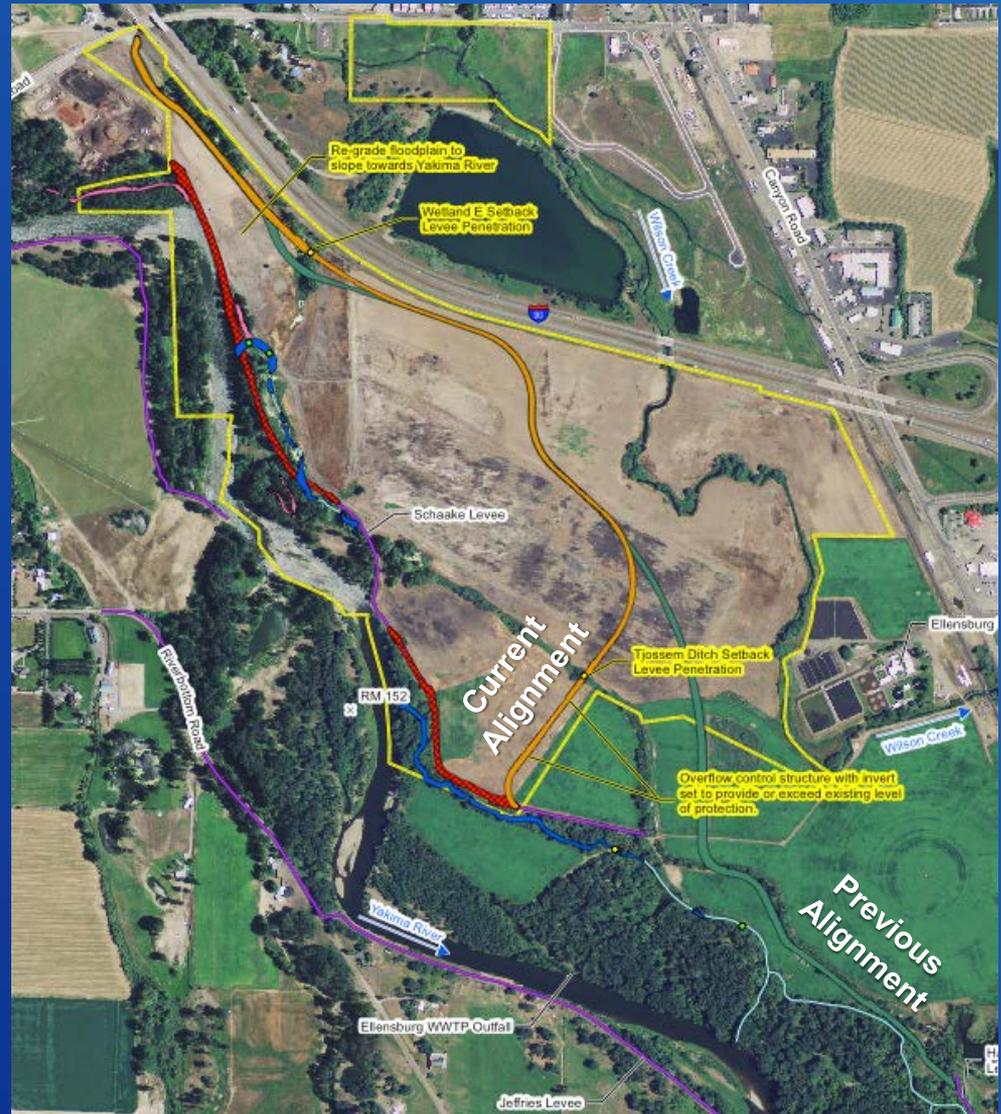
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Technical Criteria

- **Manage overall flood risk**
- **Level of protection**
 - US Army Corps PL84-99 criteria for urban levee
 - Match existing level of protection
- **Few locations to terminate setback levee**
- **Reduce O&M expenses**
- **Complicated high flow hydraulics**
 - Consider “best and highest” land use
 - Avoid impacts to structures

Preferred Alternative (Alternative 3)

- Remove levee to reconnect floodplain
- Setback levee to maintain existing level of protection
- Provide 2 side channels and 4 alcoves for fish habitat
- Improves water delivery to Tjossem Ditch



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Preliminary Design Package

Intent

- Convey the project's grading extent, quantities, and key elements
- Provide basis for initial cost estimate
- Preliminary assessment of temporary and permanent project benefits and impacts

- Future Design Milestones
 - Intermediate (60 Percent) Design
 - Pre-Final (90 Percent) Design
 - Final (100 Percent Design)

Next Steps

Project Timeline*



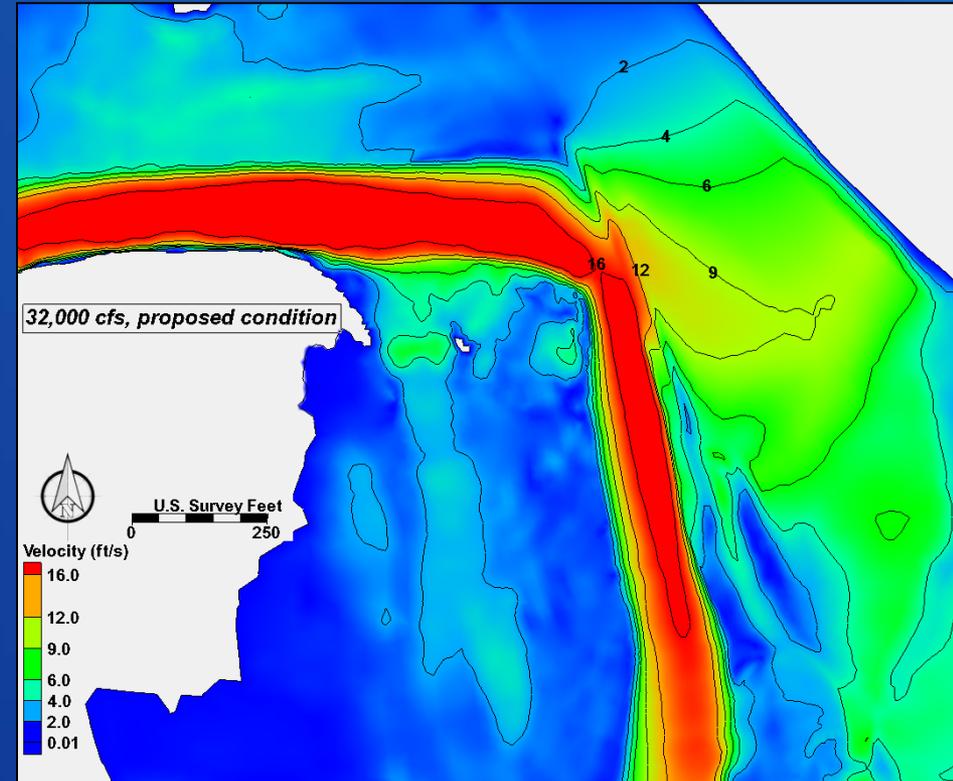
*Subject to change

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Next Steps

Refine Design at 90-Degree Bend

- Consider the following alternatives to reduce floodplain velocities:
 1. Expect erosion and increase setback levee protection
 2. Re-shape and re-armor bank
 3. Increase elevation of left-bank floodplain
 4. Increase floodplain roughness with wood and/or vegetation
 5. Incorporate engineered log jams to deflect flow
 6. Retain portion of Schaake Levee until vegetation stabilizes or Jensen Levee is modified



Facilitated Group Discussion, Q&A

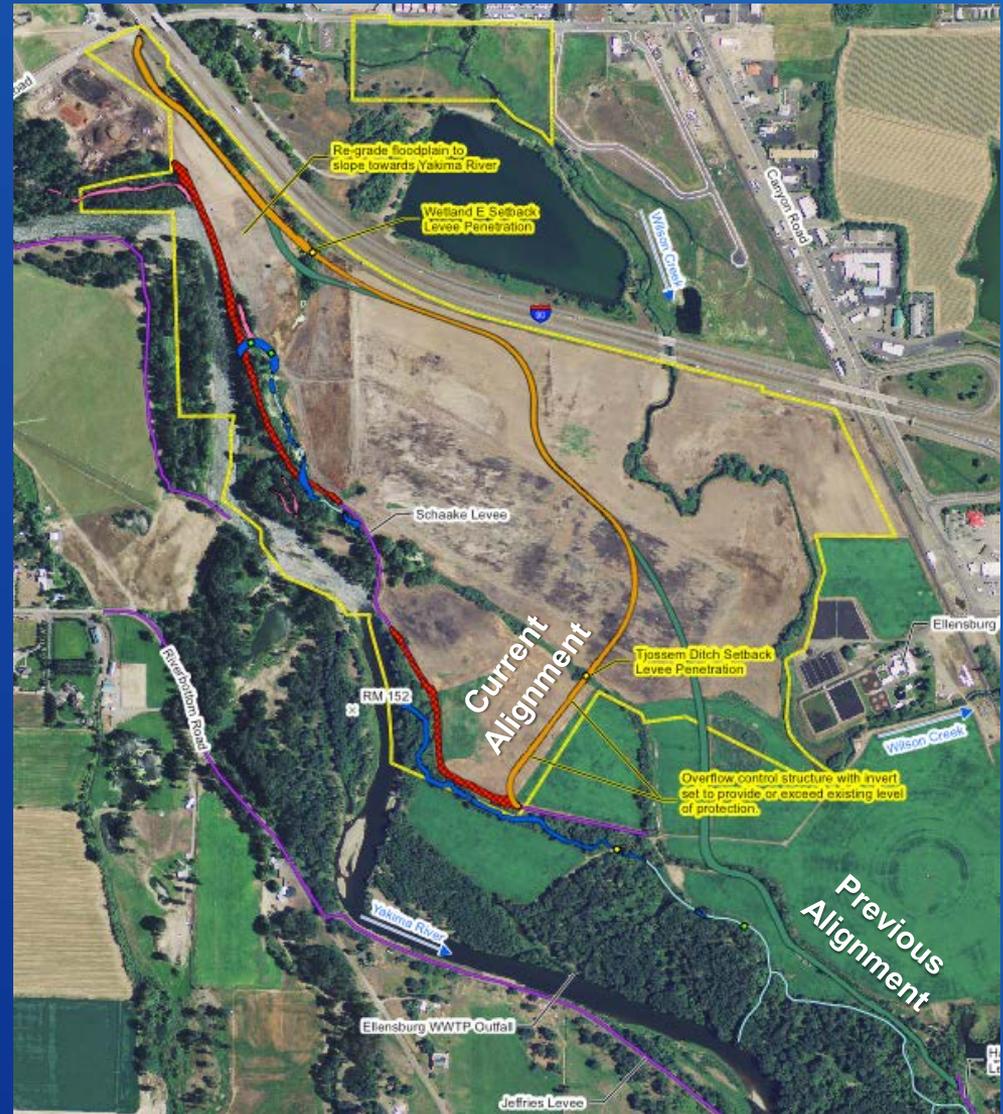
- Open roundtable discussion of issues, comments, concerns, questions

Summary

- Closing remarks
- Tim McCoy (tmccoy@usbr.gov) will be primary contact for project after December 31
- 30 Percent Design Package and previous studies can be accessed at:
 - <http://www.usbr.gov/pn/programs/yrbwep/phase2/schaake>
- Comments and feedback due to Jeff Graham (jgraham@usbr.gov) by Wednesday, November 25
 - Please submit using provided review form!

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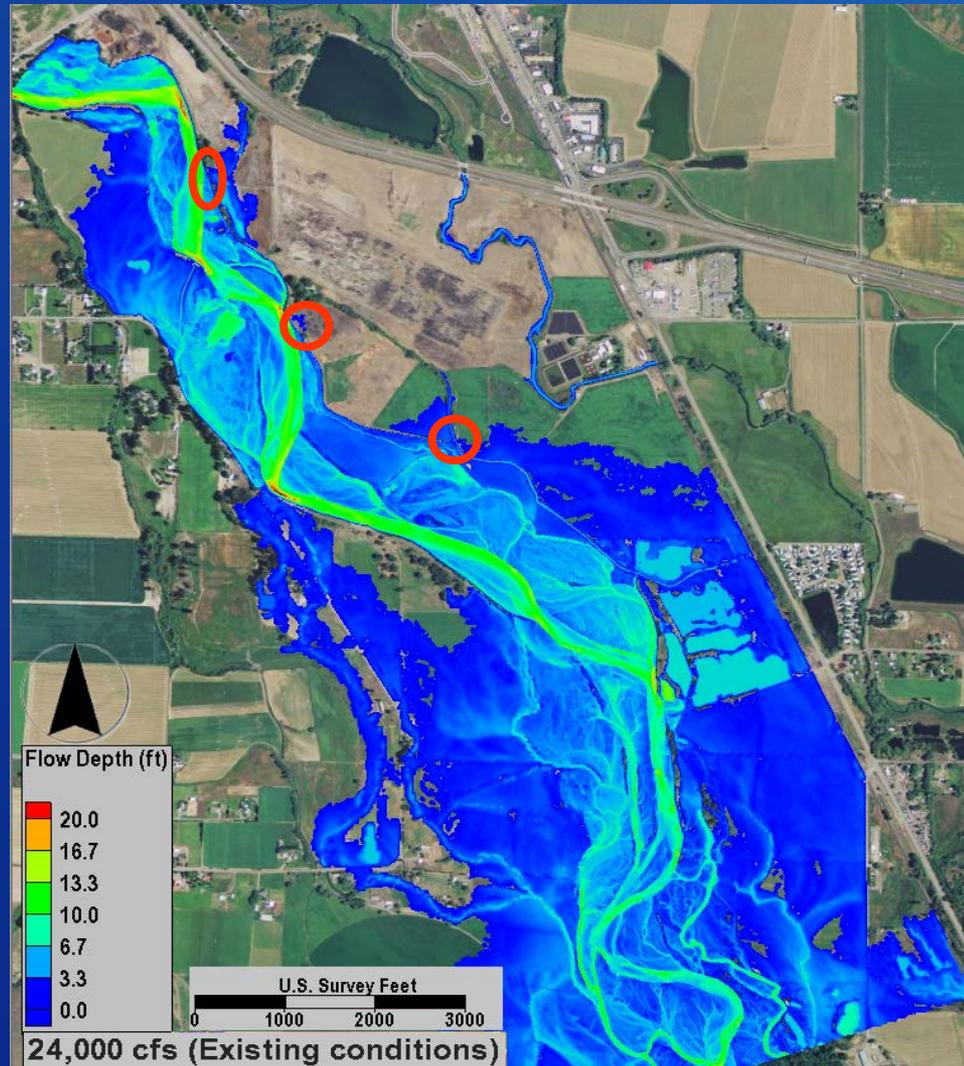
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Backup Slides

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Alternatives Development

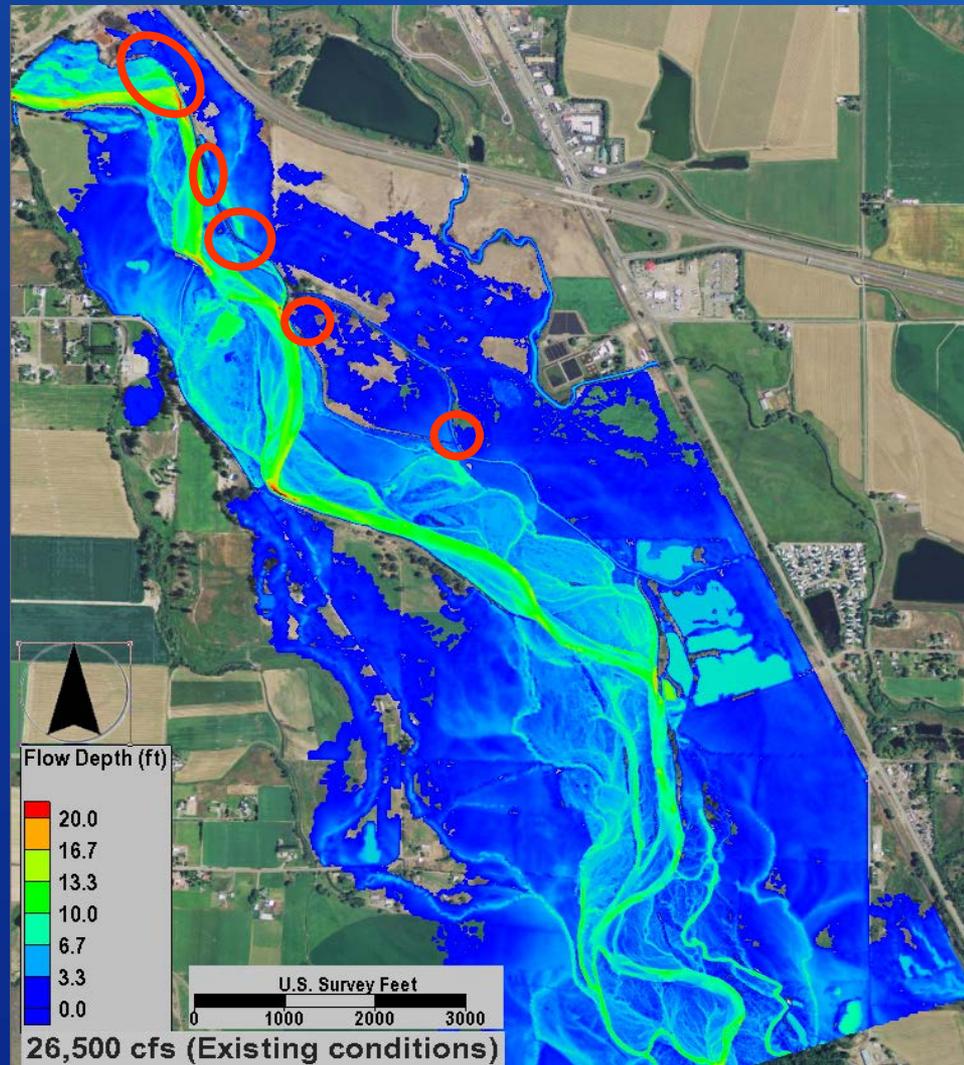
Existing Level of Protection – 24,000 cfs



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Alternatives Development

Existing Level of Protection – 26,500 cfs



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