

Tolt River Corridor Plan

Goals and Objectives
Tools and Approaches

January 15, 2015



King County



**KING COUNTY
FLOOD CONTROL
DISTRICT**

Goals and Provisional Objectives



Goal 1

Reduce risks from flood and channel migration hazards

- Consider future sediment accumulation and climate change
- Reduce levee breach hazards
- Mitigate risks from channel migration and avulsion hazards
- Consider risks over a long time horizon



Goals and Provisional Objectives



Goal 2

Reduce long-term costs of flood hazard management

- Implement sustainable solutions
- Reduce facility maintenance and repair costs

Goals and Provisional Objectives



Goal 3

Improve salmonid habitat and restore natural river processes

- Protect and improve floodplain habitats and off-channel connections
- Protect and improve instream aquatic habitat
- Protect and improve riparian habitat

Goals and Provisional Objectives



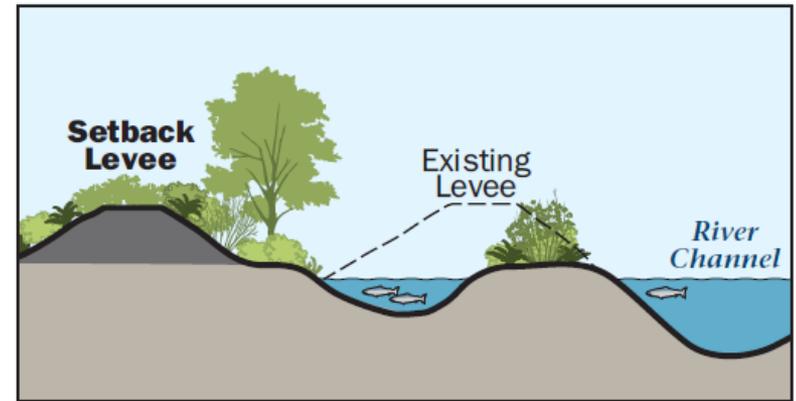
Goal 4

Incorporate stakeholder and community input into the Corridor Planning process.

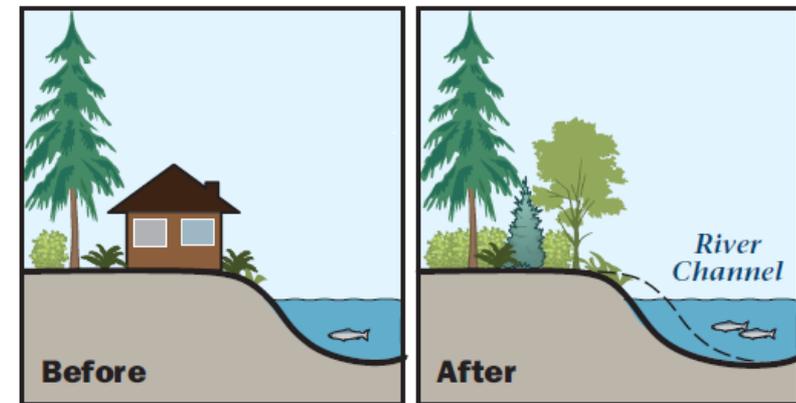
- Involve the community and stakeholders and incorporate their input
- Provide equitable outcomes to all in the community

Floodplain management tools

- Levee setbacks
- Maintain and repair existing levees and revetments
- Home buyouts and open space acquisition
- Remove existing levees and revetments
- Raise or reconstruct levees and revetments in their current location



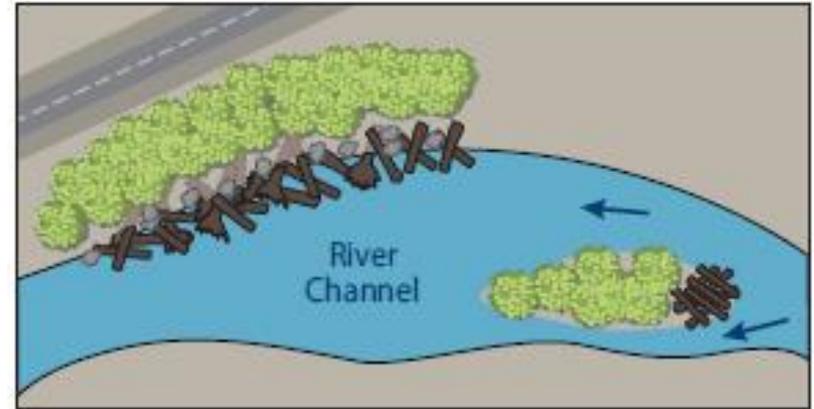
Levee Setback



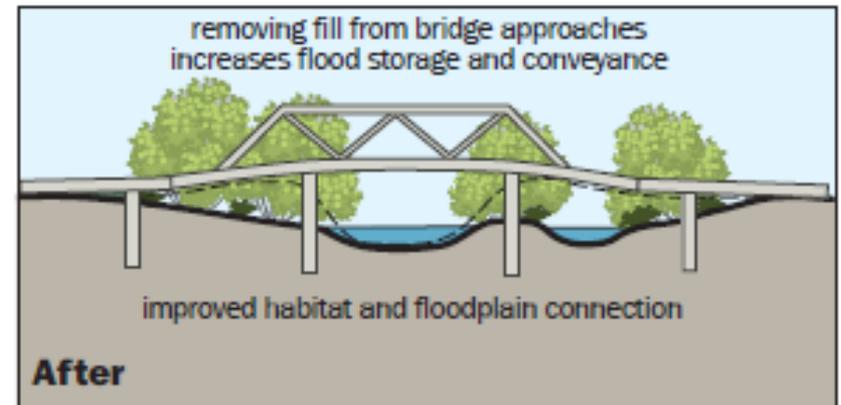
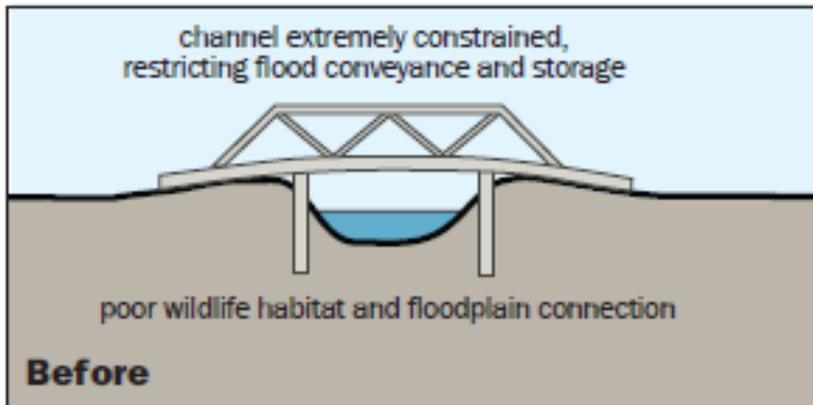
Home Buyout

Floodplain management tools

- Bridge and road modifications
- Gravel removal
- Land use management
- New in-stream wood structures



Wood Structures



Bridge Improvement

Possible Corridor Approaches



Approach 1: Encourage natural river processes

- Levee setbacks, extensive home buyouts in most hazardous areas
- Allow the river to naturally store and convey flood waters and sediment

Approach 2: Prevent flooding and channel migration to the extent feasible

- Rebuild levees and roads in their current locations to higher standards
- Limit natural flooding processes

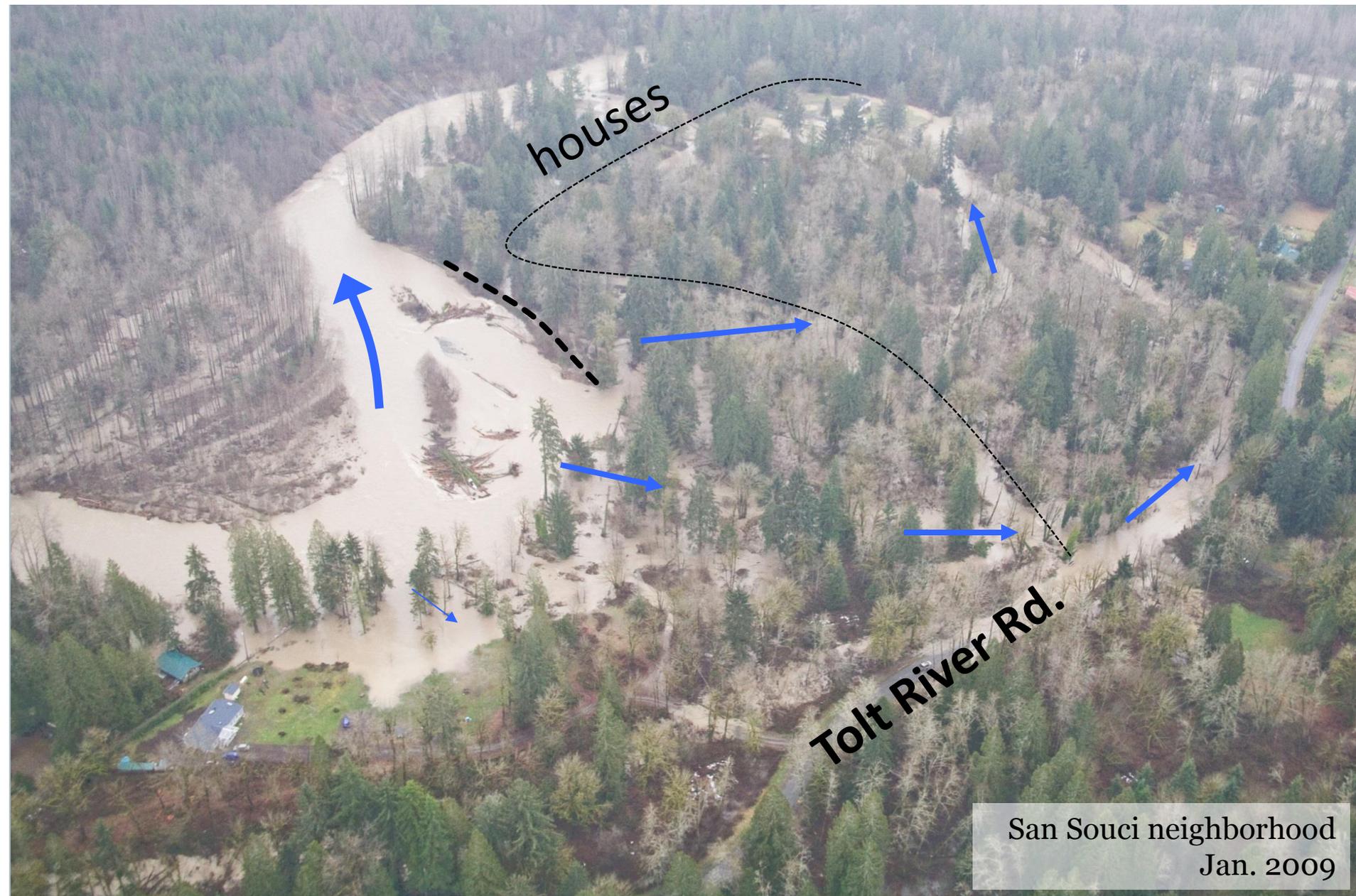
Approach 3: Continue existing management practices

- Repair damages after they occur, make limited improvements

Approach 1. Encouraging natural river processes: levee setbacks



Approach 1. Encouraging natural river processes: home buyouts in hazardous areas



Approach 1. Encouraging natural river processes



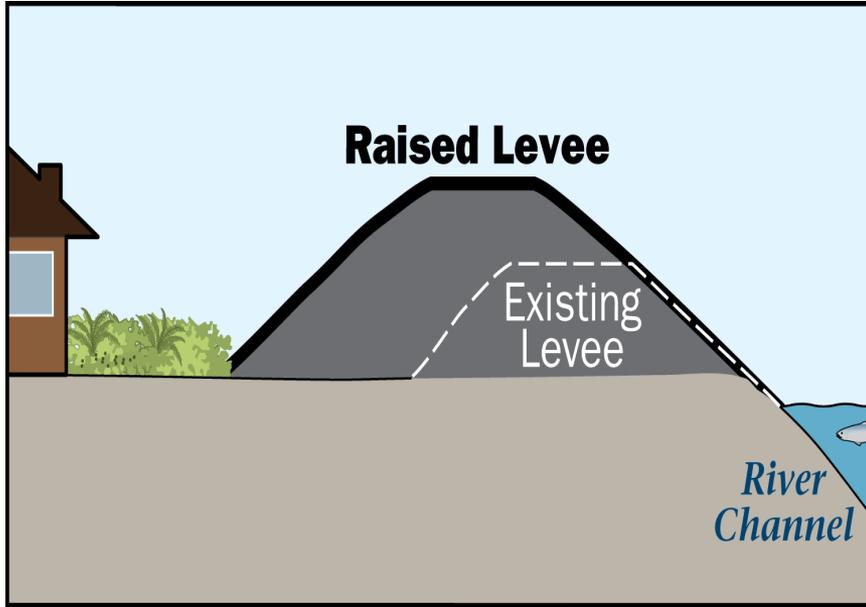
Advantages

- Highest certainty of reducing risks
- Works with the river rather than against it
- Lower maintenance costs
- Significantly improves river habitat

Drawbacks

- Highest initial costs
- Requires extensive real estate including buyouts of residences

Approach 2. Prevent flooding and channel migration: Higher levees, structural solutions



Example of levee reconstruction adjacent to river (Green River)

Approach 2. Preventing flooding and channel migration



Advantages

- Reduces risks for residences and roads
- Preserves existing housing and maintains current road locations

Drawbacks

- Upstream and downstream impacts
- Expensive to construct and maintain
- Further degrades habitat conditions
- Difficult to permit

Approach 3. Continue Existing Management Practices



*Tolt River emergency repair
Jan. 2009*

- Repair damages after they occur
- Make limited improvements

Approach 3. Continue existing management practices



Advantages

- Low cost to implement
- Smaller, simpler projects
- Easier to design and permit
- Most predictable to community (least change)

Drawbacks

- Maintains substandard flood risk conditions
- Increasing risk in future
- Increasing long-term costs as facilities degrade
- Further degrades habitat conditions



Questions & Discussion

Do these initial goals make sense?

Which actions do you support?
Which do you not support?

Is there anything else you'd like to share?