

PUGET SOUND

National Estuary Program

Geomorphic Flood Hazard Risk on the Lower Skykomish River

This work includes a geomorphic assessment, an assessment of levees and riprap, a channel migration assessment and stakeholder engagement. Questions addressed include describing the 50-year future condition of the river, its infrastructure, and flood hazards, in addition to the existing geomorphic condition between the river mouth and the City of Sultan, river miles 0 to 23.5.

What We're Doing

Integrated flood management (IFM) is a form of planning and management that seeks collaborative, shared solutions for our floodplain areas. Instead of competing for limited resources, various interests (for example, flood risk reduction, agricultural viability, and habitat restoration) can develop solutions that create benefit for all parties and that can be jointly pursued.



Why Is This Issue Important?

Integration of geomorphic risk/processes can lead to multiple-benefit projects that meet the needs of more than one floodplain value in one place. Integrated solutions make better use of limited funding and lead to wiser capital investments. It also strengthens the adaptive capacity to climate variability and change.



What You Can Do

Snohomish County welcomes the public's participation in planning activities around our rivers and floodplains. Public meetings are being used to share assessment results and solicit public feedback.

Surface Water Management

Surface Water Management is a utility that provides services to unincorporated areas of Snohomish County. We work to reduce flood damage and protect and improve our water resources by providing customers with services to:

- Address chronic flooding problems
- Fix failing and aging drainage infrastructure along county roads
- Protect and restore water quality and fish and wildlife habitat
- Reduce flood risk for people and properties near rivers

FOR MORE INFORMATION:

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Project Based on NTA 2018-0623



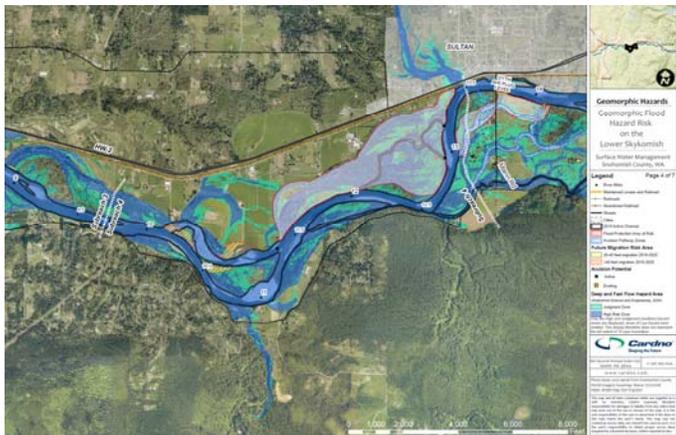
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This project is key to understanding and predicting future risks associated with changing river conditions.

Project outcomes

- Delineated a reach-scale channel migration zone (CMZ) and completed a geomorphic assessment. These results will be used to establish a comprehensive technical basis for evaluating multi-benefit projects throughout the Lower Skykomish River valley – specifically those that reduce flood hazards, restore salmon habitat, and improve agricultural viability.
- Completed the infrastructures assessment and found two very high hazards which led an emergency repair on a County levee.



Map of flood hazards along the Skykomish River near Sultan, WA.

Success stories

- Identified risks that led to temporary repairs at Haskel Slough levee and determined the need for a long-term fix there and at nearby private Sultan trainee levee.
- Used new ways to label and describe near-term and long-term (50-year) geomorphic hazards, and also 10-year Deep and Fast Flows hazard zones, in addition to the standard 100-year Channel Migration Zone (CMZ).



Substantial gravel deposits have caused rapid bank erosion and added to the large wood debris (LWD) load of the Skykomish River.

FUTURE OPPORTUNITIES

This work is a key part of the county's Floodplains by Design (FbD) grant/program efforts – Community Floodplain Solutions (CFS) – informing an acquisition strategy, multi-benefit projects, and community outreach in the Lower Skykomish River valley.

The approach used in these studies provide a new model for conducting similar geomorphic assessment and hazards mapping in other reaches and watersheds.

LINKS:

- <https://snohomishcountywa.gov/5763/Flood-Hazard-Mapping>
- <https://snohomishcountywa.gov/5574/Community-Floodplain-Solutions-CFS>
- <https://snohomishcountywa.gov/DocumentCenter/View/78780/Skykomish-River---Geomorphic-Assessment-Report---2021>
- https://snohomishcountywa.gov/DocumentCenter/View/78596/Skykomish-CMZ-Study-Final_20200610-with-Appendix

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