Chehalis Basin Bulletin

Quinault Indian Nation

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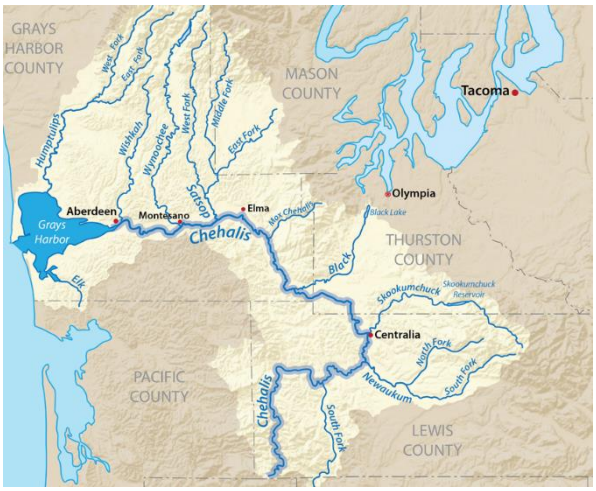
Chehalis dam would not address all major storms, nor regular, shallow flooding

(The Chehalis Basin Bulletin is a series of topical reports about the Chehalis Basin Strategy and proposed dam on the Upper Chehalis River)

The proposed dam on the Upper Chehalis River is a unique, proponents say state-of-the-art, design aimed at reducing the flood peak at the cities of Centralia and Chehalis during major storms.

The Chehalis River Basin Flood Control Zone District (FCZD), in its purpose and need description, openly acknowledges its dam "would not address flooding in all parts of the Basin," and "would neither protect communities from all flooding, nor would it be designed to stop regular annual flooding from the Chehalis River."



If the dam is built, shallow flooding will continue to happen every year in the lowlands surrounding Centralia and Chehalis which at a minimum will inconvenience people and affect property values, insurance rates, and access.

Smaller flood events will continue to cause erosion that leads to loss of land along the river while putting pressure on bridges and roads. In areas outside the "benefit" area of the dam, flooding and its associated impacts will continue and are predicted to worsen under climate change. The huge cost of the dam, both in dollars and human resources, will likely leave few resources to help with flooding in many other parts of the Basin.

Following is a closer look at how the dam would work, its limitations, and two recent examples of the kinds of flooding the dam would not address.

The chosen site of the dam is based on data indicating the Willapa Hills contributed on average 66% of flood waters in the upper Basin in the top 10 historic floods. The remaining 34% of flood waters in the upper Basin comes from the Cascade Mountains.

By holding back water from the Upper Chehalis River during major storms that drench the Willapa Hills, the dam aims to reduce the peak flood elevation at the Mellen Street river gage in Centralia by about 1 foot. The dam would begin holding back water when the river is forecast to exceed a flow of 38,800 cubic feet per second (cfs) at the Grand Mound river gage located about 8 miles downstream of Centralia.

Known for deluges of rain caused by atmospheric rivers coming off the Pacific Ocean, the Chehalis Basin also experiences many regular, smaller floods. While smaller floods would not trigger operation of the dam, they nonetheless can be costly and inconvenient. For example:

- On January 6, 2015 the peak flow at the Grand Mound gage reached 26,300 cfs. That flow is well below the level required to trigger operation of the proposed dam, yet the National Weather Service had a flood warning on for the Newaukum River and significant flood damage occurred in Aberdeen and Hoquiam.
- A significant storm in the Basin in February 2017 brought the river flow up to 30,800 cfs at the Grand Mound gage. Again the peak flow was below the threshold that would trigger the dam into action yet the Skoomkumhuck River jumped its bank and inundated Centralia park.

Water year summaries for the Grand Mound gage can be found here.

A key limitation of the dam's ability to meet its flood damage reduction goals boils down to where the rain falls in major storms:

- The dam would not hold back any water flowing from major tributaries of the Chehalis River upstream of Grand Mound whose watersheds drain from the Cascade Mountains; most notably the Newaukum and Skookumchuck rivers, which each have unique flooding problems of their own.
- The dam would not slow flood waters within the South Fork Chehalis River and other upper Chehalis tributaries which also drain the Willipa Hills.
- Flood waters from major storms dumping rain over the Olympic Mountains would not be held back by the dam and so flood peaks would not be reduced in lower Basin rivers such as the Satsop, Wynoochee, Wishkah and Humptulips.

For more information about the Chehalis Basin Strategy and proposed dam check out the Quinault Nation's FAQs and the Quinault Division of Natural Resources website.

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