

More than 130 local fish and flood projects have been completed across the Chehalis basin coordinated and funded through the Office of Chehalis Basin (OCB). The diverse OCB board is comprised of local officials as well as tribal and environmental representatives. These projects are done in cooperation with the Flood Authority, local governments, tribes and the Aquatic Species Restoration team. Together these projects are action steps of the Chehalis Basin Strategy to restore aquatic species and to reduce flood damage for families and communities.

Log Jacks Protect Montesano Wastewater Treatment Plant

[Montesano, WA]

Summary

Over the course of 2018 and 2019, over 220+ “log jacks” were placed in front of the Montesano Wastewater Treatment Plant (WWTP) to:

- Protect the treatment plant from the on-coming Wynoochee river.
- Prevent the treatment plant’s catastrophic failure from the river undermining and toppling the facility (and preventing a public health and environmental disaster from raw sewage being dumped on downriver communities, e.g., Cosmopolis, Aberdeen, tribal lands, etc.).
- Buy time by prolonging the plant’s operational life.

The Problem

In the mid-2010s, basin residents were at risk of being exposed to sewage sludge because flooding and riverbank erosion were threatening the Wastewater Treatment Plant in Montesano. By 2017 it became abundantly clear that that the Montesano WWTP was substantially threatened with catastrophic failure due to the continuing eastward migration of the Wynoochee River toward the City’s treatment plant.

- Wynoochee River was steadily migrating eastward (~17 feet/year) toward the treatment plant to the point where the river was beginning to work its way around the plant, threatening to encircle and topple the facility.
- Existing sheet pile wall and riprap protection measures were failing to the point where they were in fact exacerbating erosion and scour at the plant (sheet pile wall had scoured out to a depth of minus 35+ feet, significantly beyond the original design of no more than minus 25 feet).
- The City lacked the financial resources necessary to move the treatment plant (these kind of facilities take years – decades -- of planning and capital investments to move).

The Project

Construct and install 220+ log jacks through 2018 and 2019 construction seasons to prevent further eastward migration and undermining of the wastewater treatment plant by the Wynoochee River.

- Log Jacks are an innovative, “bioengineered” streambank protection method that mimics natural processes and enhances aquatic habitat while minimizing typical “hard armoring” techniques (e.g., sheet pile, riprap).
- This was a collaborative project involving local, state, and federal and tribal agencies, who worked in tight timeframes within their authorities to develop and implement a cost-efficient, timely, permit-friendly, and effective solution.
- Project is very much realizing today the flood and fish benefits envisioned by the Chehalis Basin Strategy!
- Thank you to Chehalis River Basin Flood Authority, Office of Chehalis Basin, City of Montesano, Parametrix, and all local, state, federal and tribal agencies who rolled up their sleeves to help!

The Impact

City and downstream communities can breathe a sigh of relief knowing an immediate environmental, public health threat has been averted and that there is now more time to plan for the future.

- **Millions of dollars in emergency, clean-up, and replacement measures have been averted (upwards of approximately \$40M) for relatively small cost (approximately \$2M).**
- River is moving away, and the riverbank is growing.
- Habitat complexity has increased with more nooks/crannies for juvenile fish, river otters, vegetation, sediment deposition, etc.
- Life of the WWTP has been extended by 15 to 30 years.
- **Huge return-on-investment for the \$2M spent!**

Quotes

- “Back in 2018, the Wynoochee River that runs behind this plant was eroding at around 17 feet a year. The innovative project that occurred here protected the city of Montesano’s wastewater treatment plant and prevented a massive disaster for public health and safety, as well as a disaster for fish and wildlife,” Samuel explained. [Source -- <https://www.thevidette.com/news/gov-inslee-visits-flood-hazard-reduction-projects-in-montesano/>]
- “If we chose to do nothing, the wastewater treatment plant would have washed away and would have ended up polluting the Wynoochee River with millions of gallons of raw sewage

downstream into Aberdeen, as well as the tribal lands causing a pretty significant ecological disaster,” Samuel said. [Source -- <https://www.thevidette.com/news/gov-inslee-visits-flood-hazard-reduction-projects-in-montesano/>]

- “I’m super impressed with what the local community in the Harbor is doing for a variety of reasons. Number one is super collaboration. Everyone is working together from landowners, the Department of Ecology, to local mayors,” Inslee said. “Number two, people are making decisions based on science, not mythology, not ideology, just science. Third, we’re doing good things for economic development, which we know is so critical in the Harbor. When you make infrastructure investments, you’re building jobs. From soup to nuts, the Harbor is doing some great work, so it’s been a good day.” [Source -- <https://www.thevidette.com/news/gov-inslee-visits-flood-hazard-reduction-projects-in-montesano/>]

Photos



Figure 1 – Before, March 2017



Figure 2 – After, October 2020
See Google Earth image [here](#).



Figure 3 – Jacks (kids)



Figure 4 -- Jacks (adults)



Governor Inslee and Mayor Samuel stand overlooking the Wynoochee River.

Figure 5 – Governor Inslee and Montesano Mayor Samuel at Treatment Plant, 7-07-2022

More pics . . .



