



Chehalis River Basin Flood Warning System

Description

Ongoing investment in the Chehalis River Basin Flood Warning System is necessary to maintain and improve flood warning across the basin for residents, businesses, and first responders alike through real-time flood tracking, email alert flood warning, and web-based flood monitoring. The system is jointly funded by OCB (upgrades and enhancements) and local basin governments (operations and maintenance), consists of over 300 hydrometeorological data sensors located in 102 locations across the basin, 13 email flood alert gages, and a publicly accessible web presence offering real-time flood tracking and flood inundation mapping. The system supports the work of key partners like the National Weather service and their efforts to deliver accurate and reliable weather and river forecasts.

Cost

Annual operation and maintenance costs are \$106,000 in 2024¹ and will increase to \$111,512 in 2025 (reflecting a cost increase associated with new gages coming on-line in 2025). Annual operations and maintenance costs are split equitably² between Lewis County (64%), Grays Harbor County (22%) and Thurston County (14%).

Updates and enhancements to the flood warning system are planned and implemented based on recommendations articulated in the current Gage Master Plan³. The 2023 Gage Master Plan presents five levels of recommendations ranging from critical updates to long-term issues on the horizon (see table for definitions and estimates costs). These recommendations establish the path forward for the next five years to support continued success of the Flood Warning System. Recommendations are derived from experience operating and maintaining the Flood Warning System since 2010, feedback from user surveys, technology advancements, and from lessons learned during recent flood events.

¹ This equates to ~gage alert \$27/sign-up at current January 2024 sign-up levels

² Staff memo - 2023 Flood Warning System Costs

(https://www.ezview.wa.gov/Portals/_1492/images/2023%20Chehalis%20FWS%20Gage%20Masterplan%20-%2008Aug2023.pdf)

³ 2023 Gage Master Plan

(https://www.ezview.wa.gov/Portals/_1492/images/2023%20Chehalis%20FWS%20Gage%20Masterplan%20-%2008Aug2023.pdf)

Estimated capital costs for recommendations in the 2023 Gage Master Plan are summarized by category below. For more detail, see the 2023 Gage Master Plan².

Gage Master Plan Recommendation Category	Estimated Cost
Critical Updates - Updates needing completion ASAP.	\$5,000
Low-Cost Enhancements - "Low-hanging fruit" that are quickly and inexpensively achievable	\$39,000 - \$52,000
Important Upgrades - Key upgrades critical for long-term system performance and success	\$49,500 - \$70,000
Strategic Initiatives - Recommendations that require cooperation and, potentially, joint funding by regional stakeholders which include various local regional, state, and/or federal agencies	\$115,000 - \$140,000 Increased O&M: \$50,000 - \$60,000
Tasks on the Horizon - Upcoming events that may trigger work projects.	TBD
Estimated 5-year Total Capital Costs	\$208,500 - \$267,000 (plus \$50,000 - 60,000 increase in O&M)

Funding sources for upgrades and enhancements has historically been state capital budget (OCB/CBB) and in-kind contributions from partners (Ecology, USGS, NWS, etc.)

Potential Principles

The key tenant behind the Flood Warning System is that by being made aware of imminent potential flooding in advance, residents, businesses, institutions, and emergency responders alike can better prepare and be ready for flooding. The Flood Warning system makes it easy for all within the basin to get timely information delivered real-time.

More Information

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Refer to the [Chehalis River Basin Flood Warning System website](#) for more details.

Key Links:

1. [Chehalis River Basin Flood Warning System](#)
2. Annual operations and maintenance costs (paid by local basin governments) -- see [Attachment B](#) (which updates [annual costs](#)).
3. [2023 Gage Master plan](#)
4. [Email Flood Alert Dashboard](#)