Chehalis River Basin Flood Authority

Reducing Flood Damage <u>and</u> Restoring Aquatic Species

City of Centralia

November 26, 2024

2007 Storm

\$938M Basin-wide damage, \$300M lost economic activity (WA).



Exit 77 (I-5) in Chehalis STEVE RINGMAN / SEATTLE TIMES



City of Centralia STEVE RINGMAN / SEATTLE TIMES



*

MIKE

AP

State Route 6, West of Adna

SALSBURY /



Photos Source: LEWIS COUNTY, DIVISION OF EMERGENCY MANAGEMENT 2 of 23

Today's Presentation

- "Flood Authority"
 - **#1 -- Local Projects**
 - #2 -- Flood Warning System

"Chehalis River Basin Flood Control Zone District"

#3 -- Proposed Flow-through Dam for Flood Control



CHEHALIS RIVER BASIN FLOOD CONTROL ZONE DISTRICT



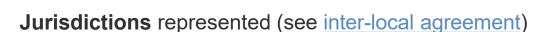
CHEHALIS RIVER BASIN FLOOD AUTHORITY

Chehalis River Basin Flood Authority

- Formed in 2008
- Focused on flood hazard mitigation

Decision-making

- informed by science
- protective of Basin residents/communities
- environmentally appropriate



- ➢ Grays Harbor County (2008) ➢ Lewis County (2008)
 - City of Aberdeen (2008)
 City of Centralia (2008)
 - City of Cosmopolis(2011) City of Chehalis (2008) 0
 - City of Hoquiam (2017)
 City of Napavine (2011)
 - City of Montesano (2008)
 - City of Oakville (2008)

- - Town of Pe Ell (2008)



Town of Bucoda (2008) 0



Help local communities identify, develop, implement local flood hazard reduction solutions.



Local Projects (#1)

- 1. Reduce flood damage.
- 2. Protect people, property, infrastructure.
- 3. Improve readiness, response, resiliency.
 - Drinking Water (Boistfort, Bucoda).
 - Wastewater (Montesano, Pe Ell).
 - *Emergency Response* (Grays Harbor County, Chehalis-Centralia Airport).
 - *Regional Economic Infrastructure* (Montesano, Port of Chehalis, Port of Grays Harbor).
 - Community Protection (Aberdeen, Adna, Bucoda, Centralia, Chehalis, Chehalis Tribe, Hoquiam, Oakville).

	•
CHEHAL	IS
RIVER BAS	
FLOOD AUTHO	RITY

Flood Warning (Basin-wide).

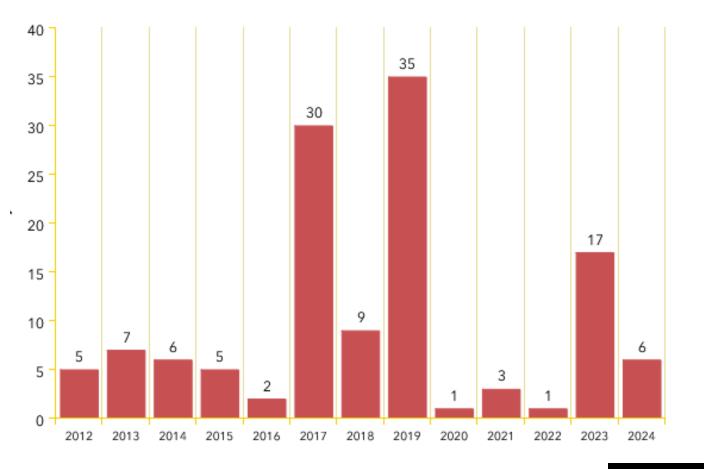
State Capital Budget: 2012-13 \$ 5.0M 2013-15 \$10.7M 2015-17 \$15.7M 2017-19 \$ 9.6M
2019-21 \$ 6.3M
2021-23 \$ 4.1M 2023-25 <u>\$ 3.6M</u>
\$55.0M
2025-27 \$ 3.0M to \$13.0M

Local Projects (100+ Projects Completed 2012-23)



Local Projects (100+ Projects Completed 2012-23)

Projects Completed by Year





Local Projects (Pe Ell, 2014)







- Project = Design/construct 900' dike (between Chehalis r. and WWTP).
- Cost = \$521,000.

Photos =

https://www.ezview.wa.gov/site/alias 1492/35040/default.aspx#peell.

Website =

https://www.ezview.wa.gov/site/alias__1782/34858/overview.aspx

7-05-2022

Local Projects (Chehalis-Centralia Airport, 2017)



- ✓ Completed -- Fall 2017.
- ✓ Cost -- \$1.14M.

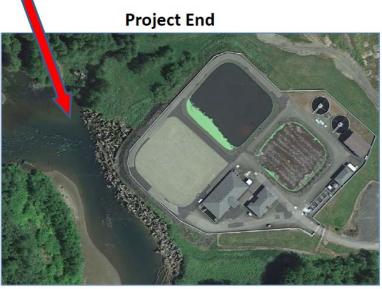


- ✓ January 2022 Flood Event Pumped
 518.4M gallons over many days to keep levee dry.
- ✓ ROI (2018) -- Protects \$45M in assets, ensures \$9M in annual tax revenue.



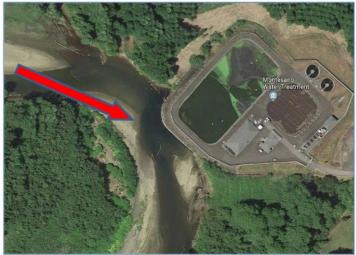
Local Projects (Montesano, 2017-2020)

- Protect WWTP from on-coming Wynoochee river using 220+ "logjacks."
- ✓ \$2 million (for "log-jacks").
- Small cost compared to WWTP relocation and environmental cleanup (in event of WWTP breaching).



https://www.google.com/maps/@46.9678637,-123.6077821,197m/data=!3m1!1e3

July 7, 2022 →



Project Start





Local Projects (Cosmopolis, 2015-2018)

Mill Creek Multi-Objective Implementation Plan:

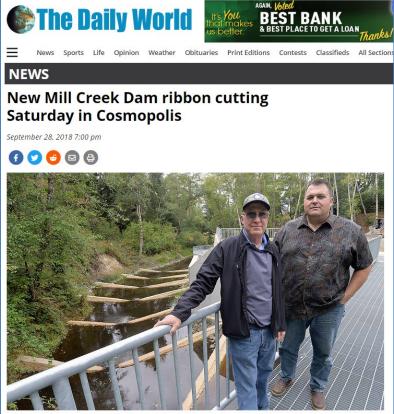
- ✓ Part I = Reconstruct Mill Creek Dam (done).
- ✓ Phase II project = Address 4,500' of Mill Creek flow, culverts, and flood water evacuation (under development).

Read 5-24-2024 news article <u>here</u>





City of Cosmopolis, Sep 29, 2018



FILE PHOTO Cosmopolis Mayor Frank Chestnut (left) will officiate a ribbon cutting ceremony for the new Mill Creek Dam Saturday at noon.

https://www.thedailyworld.com/news/new-mill-creekdam-ribbon-cutting-saturday-in-cosmopolis/



- ✓ \$50M need.
- ✓ \$30M to date (58%).
- ✓ \$12M request (24%).

- 2,735 acres
- **4,583 parcels**
- o 232 businesses
- \$1.1B assessed value

EXAMPLE 10th St Pump Station

Local Projects (Hoquiam, 2024)





Foundation Flood Openings Pilot

Local Projects (Bucoda, 2016)

of Block Numbers, Tax Parcel Number, Legal Description, etc.

ing Street Address (including Apt., Unit, Suite, and/or Bidg, N 303 N. Market Street

Bucoda

ax Parcel No. 6180030090

ional Land Survey

0. Box 740

ELEVATION CERTIFICATE

or PO Poute and Por M

OMB No. 1660-0008 Expiration Date: July 31, 2015

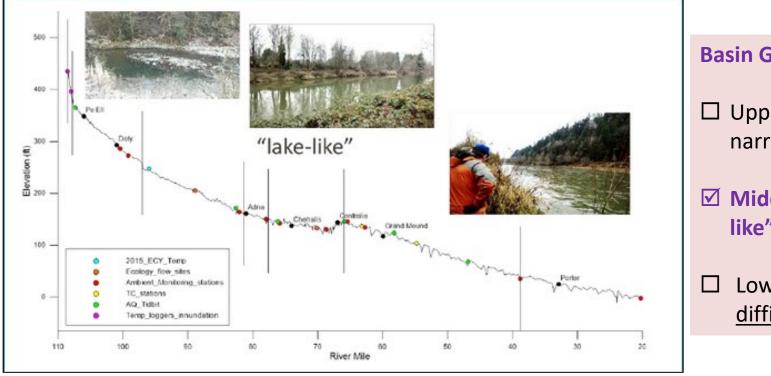


- ✓ Total -- \$ 85,465.43.
- ✓ Average -- \$8,550.
- ✓ Link <u>here</u>.
- ✓ Web map <u>here</u>.





Local Projects (Geographically-Based)



Shah, Mohammad. (2021). inland water-dynamics and ecology. 10.5772/intechopen.87463.



Upper = Steep, narrow, fast flowing.

✓ Middle = Flat, "lake like", slow to drain.

Lower = Flat, coastal, <u>difficult to drain</u>.



Local Projects (China Creek, 2015-2022)

Our Views: China Creek an Example of Success in Chehalis Basin

March 12, 2021

July 13, 2022

FLOOD AUTHORITY



By The Chronicle Editorial Board



Officials Celebrate Completion of Phase Two of the China Creek Project in Centralia





December 28, 2022

Local Projects (Gages)



CHEHALIS RIVER AT CENTRALIA, WA (GOES): https://chehalis.onerain.com/site/?site id=22812&site=49db3831-6517-40a1-9bdd-c86300c495e2



SKOOKUMCHUCK RIVER AT CENTRALIA, WA (GOES): https://chehalis.onerain.com/ site/?site_id=22804&site=23 a7ceaa-7d6c-4453-b695-5bed3b415b94

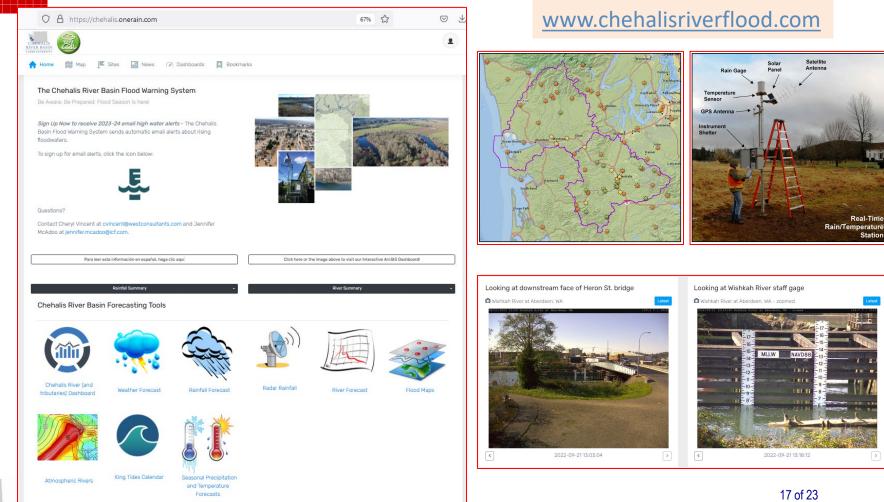


CHINA CREEK ABOVE FCS AT CENTRALIA, WA (CCCW1) https://chehalis.onerain.com/site/?site_id=2 4631&site=01fd47cb-3203-4be3-9c68ba0afb33e72c



- Developed with State Capital Budget \$.
- ✓ Maintained with local \$.

Flood Warning System (#2)



CHEHALIS RIVER BASIN FLOOD AUTHORITY

Flood Warning System (Alert Sign-Ups)



FLOOD AUTHORITY

CHEHALIS RIVER BASIN FLOOD CONTROL ZONE DISTRICT Proposed Flow-Through Dam for Flood Control (#3)



Move
 through
 unobstructed
 ✓ Water
 ✓ Fish
 ✓ Sediment

2. Delivers topto-bottom benefit, Pe Ell to Cosmopolis.

3. See recent presentation <u>here</u>.



www.chehalisriverbasinfczd.com

State Law

Chehalis Basin Strategy

"The primary purpose of the office is to aggressively pursue implementation of an integrated strategy and administer funding for long-term flood damage reduction and aquatic species restoration in the Chehalis river basin." (*RCW 43.21A.730*)

appoints 3 member



Office of Chehalis Basin Chehalis Basin Board

https://chehalisbasinstrategy.com/



Community leaders, Chehalis and Quinault tribal representatives, local and state government liaisons



RIVER B

FLOODAUTHORIT

Office of Chehalis Basin

Small team within the WA Department of Ecology

 $\quad \longleftrightarrow \quad$

"Network of Partners"

Organizations and local entities who turn ideas into shovel-ready reality



Chehalis Basin Strategy (Network of Partners)



Local Resolutions Library

https://www.ezview.wa.gov/site/alias 1492/37643/local_resolutions.aspx

Today vs 2007

Today, we are substantially more aware, better prepared for catastrophic flooding than ever before.

- \checkmark We have a state-of-the art flood warning system.
- ✓ We've completed many cost-efficient local projects and habitat projects.
- ✓ We're serving people, local governments, emergency responders, agriculture, fish, and habitat alike
- ✓ We have a governance, administrative, and funding structure that's delivering results, and is committed to a balanced basin-wide flood and fish solution (see Local Resolution Library).



https://chehalisbasinstrategy.com /office-of-chehalis-basin/

Key Contacts

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vraines@graysharbor.us

Edna Fund, Lewis County Representative Vice-Chair, Chehalis River Basin Flood Authority Chair, Chehalis River Basin Flood Control Zone District Advisory Board 360/269-7515 dutch@localaccess.com

Ron Averill, Centralia Representative

Member, Chehalis River Basin Flood Authority 360/269-2193

colronjanaverill@comcast.net

Scott Boettcher

Staff, Chehalis River Basin Flood Authority 360/480-6600



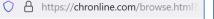
scottb@sbgh-partners.com

Extra – Flood and Fish Articles



CHEHALIS RIVER BASIN

FLOOD AUTHORITY

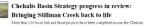


Chehalis Basin Strategy progress in review: Pump station investments to protect 5,100 properties in lower Chehalis River Basin Editor's Note: This article is part of an ongoing series highlighting projects that have been completed as part of the Chehalis Basin Strategy. These projects are implemented

in cooperation ... more By The Chronicle staff | 11/18/24

Chehalis Basin Strategy progress in review: Working together to restore nearly 5 miles of the lower Satsop River for salmon, steelhead and local communities

Editor's Note: This article is part of an ongoing series highlighting projects that have been completed as part of the Chehalis Basin Strategy. These projects are implemented in cooperation ... more By The Chronicle staff | 8/23/24



River Basin, coordinated and funded through the Office of Chehalis Basin (OCB). The OCB board is ... more By The Chronicle staff | 11/17/23

Chehalis Basin Strategy progress in review: Erosion management at Haul Road

More than 140 local fish and flood projects have been completed across the Chehalis River Basin, coordinated and funded through the Office of Chehalis Basin (OCB). The OCB board is ... more

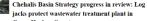


Chehalis Basin Strategy progress in review: Improving fish passage on Middle Fork Wildcat Creek in Grays Harbor County

More than 140 local fish and flood pro acress the Chehalis River Basin, coordinated and funded through the Office of Chehalis Basin (OCB). The By The Chronicle staff | 9/29/23

Chehalis Basin Strategy progress in review: Pump station paves way for economic revitalization, flood protection in Grays Harbor County

More than 140 local fish and flood projects have been completed across the Chehalis River Basin, coordinated and fluaded through the Office of Chehalis Basin (OCB). The OCB board is ... more By The Chronicle staff | 9/15/23



jacks protect wastewater treatment plant in Grays Harbor County

More than 130 local fish and flood projects have been completed across the Chehalis River, Basin coordinated and funded through the Office of Chehalis Basin (OCB). The OCB board is ... more

Chehalis Basin Strategy progress in review: Chehalis-Centralia Airport pump station

replacement It has been more than 15 years since the devastating flooding of December 2007 in the Chehalis River Basin. In the time since, residents, businesses, tribes and government entities ... more By The Chronicle staff | 8/4/23

The Chronicle 😗 🖸 🔕

🔿 A 🗝 🛞 https://www.chronline.com/stories/chehalis-basin-strategy-progress-in-review-pump-station-investm

Chehalis Basin Strategy progress in review: Pump station investments to protect 5,100 properties in lower Chehalis **River Basin**



The Fry Creek Pump Station is pictured in Aberdeen