

# Chehalis River Basin Flood Authority

*Reducing Flood Damage and  
Restoring Aquatic Species*

Lewis County  
December 3, 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



↑  
← **Photos Source:** LEWIS COUNTY,  
DIVISION OF EMERGENCY  
MANAGEMENT

2 of 23



**State Route 6,  
West of Adna**  
MIKE  
SALSBURY /  
AP



# 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



Office of  
Chehalis Basin

Chehalis Basin  
Board

<https://chehalisbasinstrategy.com/>

# 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
- **Jurisdictions** represented (see [inter-local agreement](#))
  - Grays Harbor County (2008)
    - City of Aberdeen (2008)
    - City of Cosmopolis (2011)
    - City of Hoquiam (2017)
    - City of Montesano (2008)
    - City of Oakville (2008)
  - Lewis County (2008)
    - City of Centralia (2008)
    - City of Chehalis (2008)
    - City of Napavine (2011)
    - Town of Pe Ell (2008)



- Thurston County (2008)
  - Town of Bucoda (2008)

***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).
  - *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 -- \$ 3.6M

**\$55.0M**

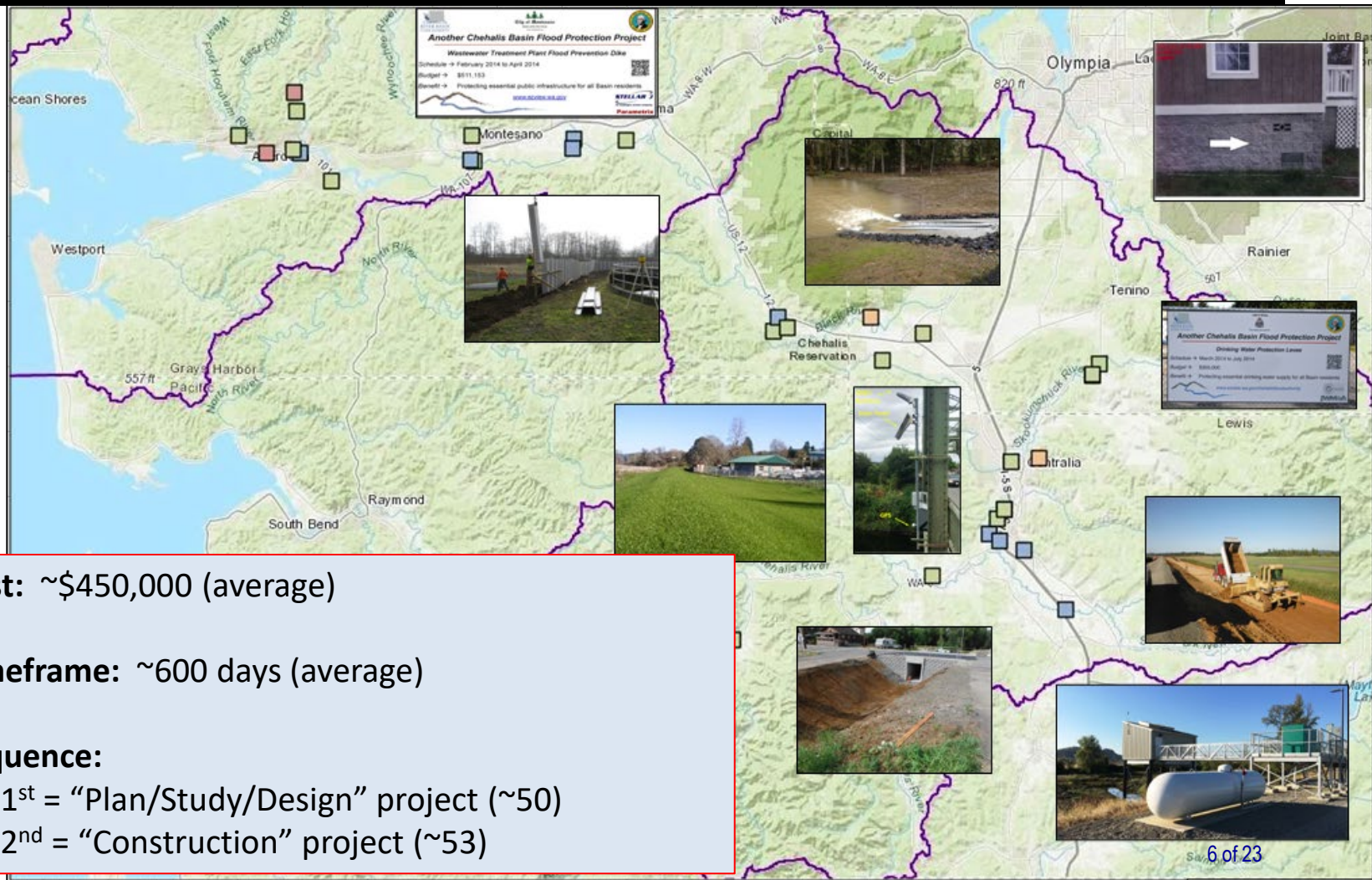
**2025-27 -- \$ 3.0M**

**to**

**\$13.0M**



# Local Projects (100+ Projects Completed 2012-23)



**Cost:** ~\$450,000 (average)

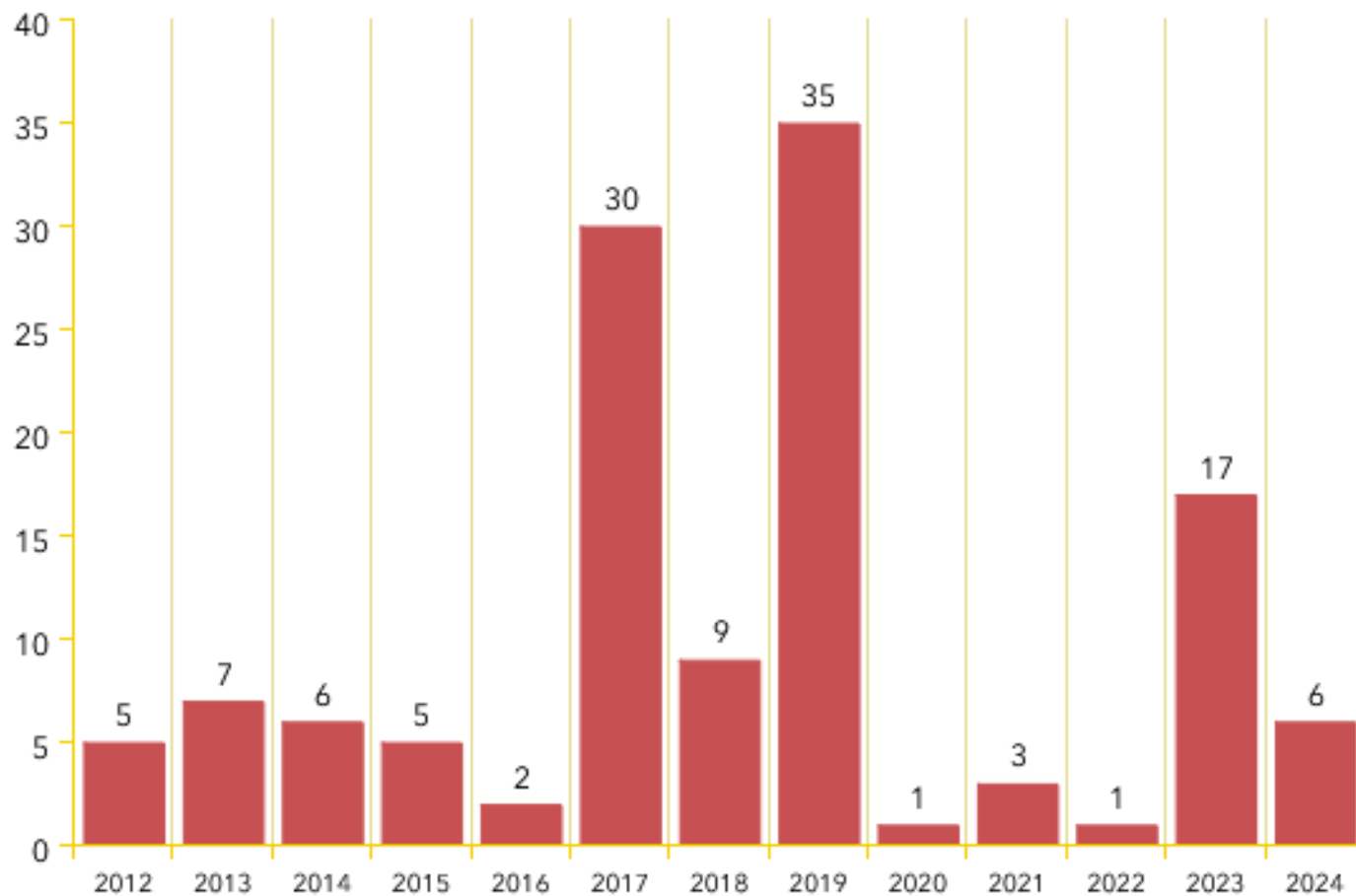
**Timeframe:** ~600 days (average)

**Sequence:**

- 1<sup>st</sup> = "Plan/Study/Design" project (~50)
- 2<sup>nd</sup> = "Construction" project (~53)

# Local Projects (100+ Projects Completed 2012-23)

Projects Completed by Year



# Local Projects (Pe Ell, 2014)



- ✓ Project = Design/construct 900' dike (between Chehalis river and WWTP).
- ✓ Cost = \$521,000.
- ✓ Photos = [Here](#).
- ✓ Website = [Here](#).



# 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.

Read More -- [Here](#).



← Previous  
WWII-era  
pump

[illegible]

March 12, 2021 →

- ✓ \$5.2M
- ✓ Multiple phases
- ✓ Flood, fish, recreation
- ✓ Benefits today, tomorrow

July 13, 2022 →

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



China Creek is seen near the Pine Street and Rock Street intersection in Centralia  
PETE CASTER / FILE PHOTO

Posted Friday, March 12, 2021 4:12 pm

**By The Chronicle Editorial Board**



← CHINA CREEK  
ABOVE FCS AT  
CENTRALIA, WA  
(CCCW1)  
[https://chehalis.onsite.com/site/?site\\_id=24631&site=01fd47cb-3203-4be3-9c68-ba0afb33e72c](https://chehalis.onsite.com/site/?site_id=24631&site=01fd47cb-3203-4be3-9c68-ba0afb33e72c)

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



← December 28, 2022



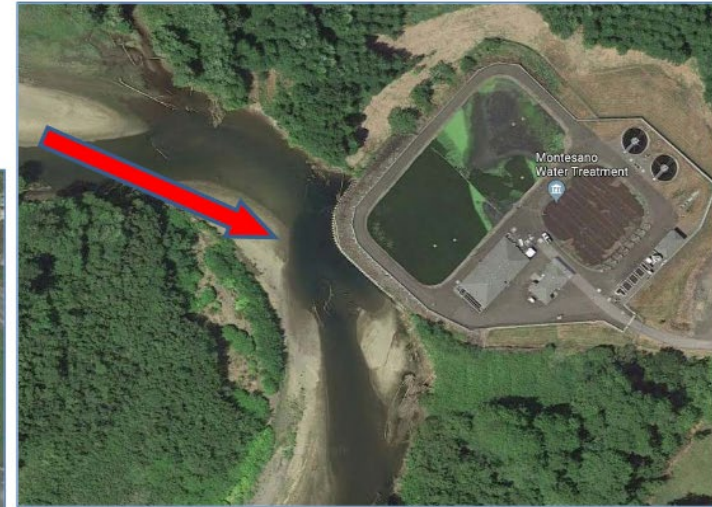
# Local Projects (Montesano, 2017-2020)

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

**Project End**



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



**Project Start**



Governor Inslee and Mayor Samuel stand overlooking the Wynoochee River.

July 7, 2022 →

# 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 [here](#)



**Another Chehalis Basin Flood Protection Project**

**Mill Creek Dam Improvement Project**

Schedule → October 2015 to July 2017

Budget → \$3,082,000

Benefit → Protecting and restoring essential Community flood control assets

[www.ezview.wa.gov/chehalisfloodauthority](http://www.ezview.wa.gov/chehalisfloodauthority)



City of Cosmopolis, Sep 29, 2018



AGAIN, Voted  
It's You that makes us better.  
**BEST BANK**  
& BEST PLACE TO GET A LOAN  
Thanks!

News Sports Life Opinion Weather Obituaries Print Editions Contests Classifieds All Sections

### NEWS

## New Mill Creek Dam ribbon cutting Saturday in Cosmopolis

September 28, 2018 7:00 pm



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-creek-dam-ribbon-cutting-saturday-in-cosmopolis/>



- ✓ 8 pump stations.
- ✓ \$50M cost.
- ✓ \$30M to date (58%).
- ✓ \$12M request (24%).

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

## EXAMPLE 10th St Pump Station

### Local Projects (Hoquiam, 2024)

**PUMP STATION FENCING WITH PRIVACY SLATS**



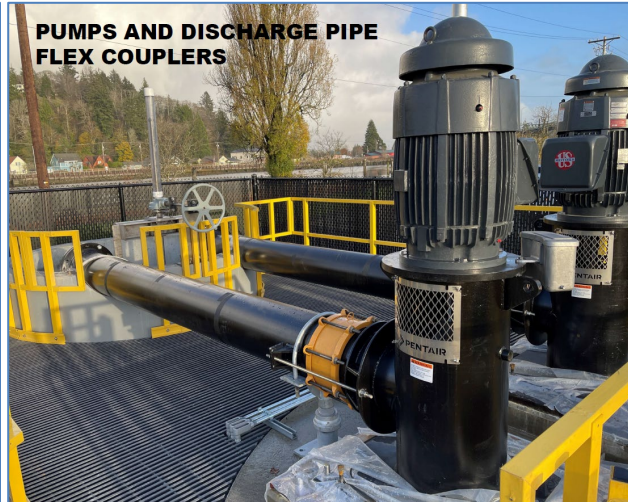
**PUMP STATION FENCING AND DISCHARGE PIPES INSTALLED**



**PROPELLER PUMP MOTORS INSTALLED**



**PUMPS AND DISCHARGE PIPE FLEX COUPLERS**



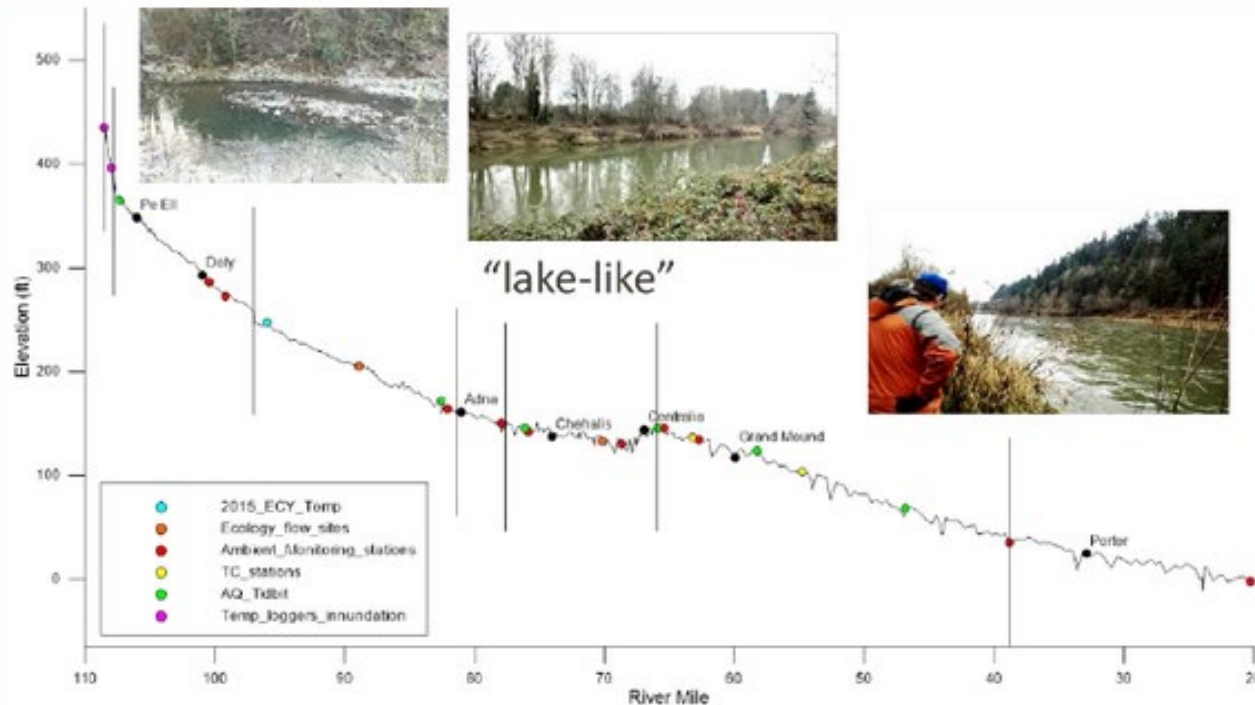


- ✓ Web map – [here](#).

A map of Bucoda, Oregon, showing a grid of streets and several colored diamonds. The streets shown include N Summer St, 4th St, 6th St, E 7th St, N Market St, N River St, SE River St, Main St, S Front St, Wagon St, Main St S, and Ohop St SE. Landmarks include Bucoda Gym, Bucoda Christian Assembly, and Bucoda Volunteer Park. The map features a grid of colored diamonds: a purple diamond at the intersection of N Summer St and 2nd St, a blue diamond at the intersection of N Summer St and 4th St, a yellow diamond at the intersection of N Market St and 4th St, a brown diamond at the intersection of N Market St and 6th St, a green diamond at the intersection of E 7th St and Main St, a pink diamond at the intersection of E 7th St and Main St S, a purple diamond at the intersection of E 7th St and Main St S, a blue diamond at the intersection of Main St S and S Front St, an orange diamond at the intersection of Main St S and S Front St, and a green diamond at the intersection of SE River St and N River St. The map also shows a river on the right side and a park area at the bottom.



# Local Projects (Geographically-Based)



## Basin Geography

- ☐ Upper = Steep, narrow, fast flowing.
- ☒ Middle = Flat, “lake like”, slow to drain.
- ☐ Lower = Flat, coastal, difficult to drain.

Shah, Mohammad. (2021). inland water-dynamics and ecology. [10.5772/intechopen.87463](https://doi.org/10.5772/intechopen.87463).



## Local Projects (Mid-Basin -- Geographically-Based)

### South City of Chehalis & Port of Chehalis



Geographic flooding strategy with sequenced investments:

- ✓ Increase flood storage
- ✓ Reduce flood levels
- ✓ Minimize damage, monetary losses

Feb 6<sup>th</sup> or Mar 6<sup>th</sup> = Community workshop  
(VL Community Building, 2-6 PM)



# Flood Warning System (#2)

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

[www.chehalisriverflood.com](http://www.chehalisriverflood.com)

https://chehalis.rain.com 67%

**The Chehalis River Basin Flood Warning System**  
Be Aware; Be Prepared: Flood Season is here!

Sign Up Now to receive 2023-24 email high water alerts - The Chehalis Basin Flood Warning System sends automatic email alerts about rising floodwaters.

To sign up for email alerts, click the icon below:

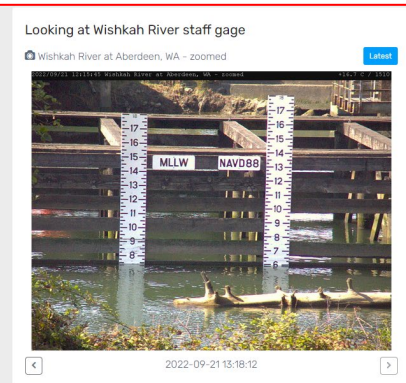
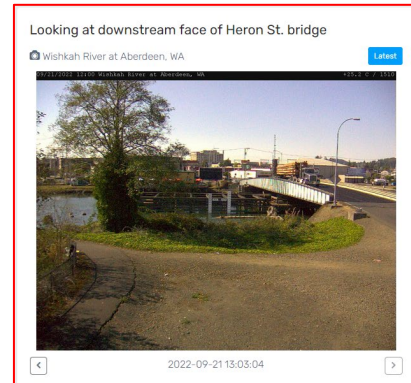
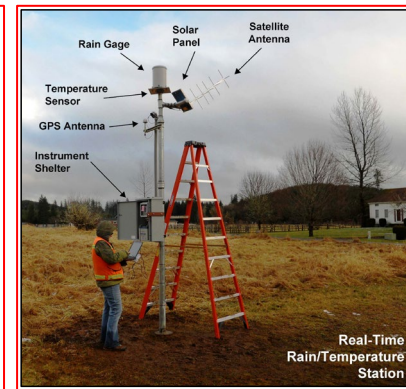
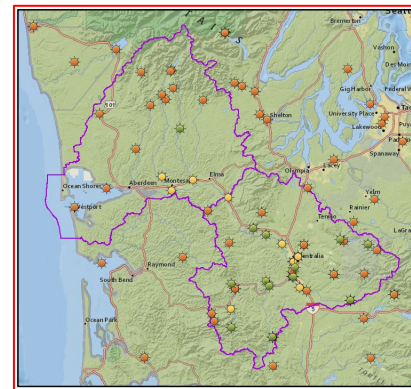
Questions?  
Contact Cheryl Vincent at [cvincent@westconsultants.com](mailto:cvincent@westconsultants.com) and Jennifer McAdoo at [jennifer.mcadoo@icf.com](mailto:jennifer.mcadoo@icf.com).

Para leer esta información en español, haga clic aquí

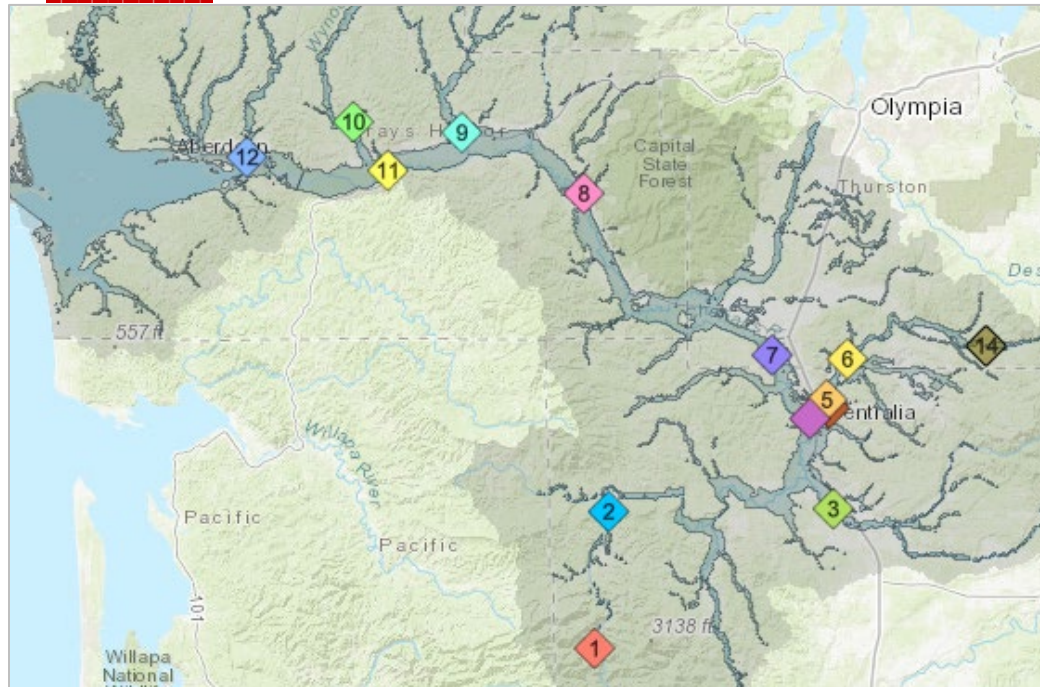
Click here on the image above to visit our Interactive ArcGIS Dashboard!

**Chehalis River Basin Forecasting Tools**

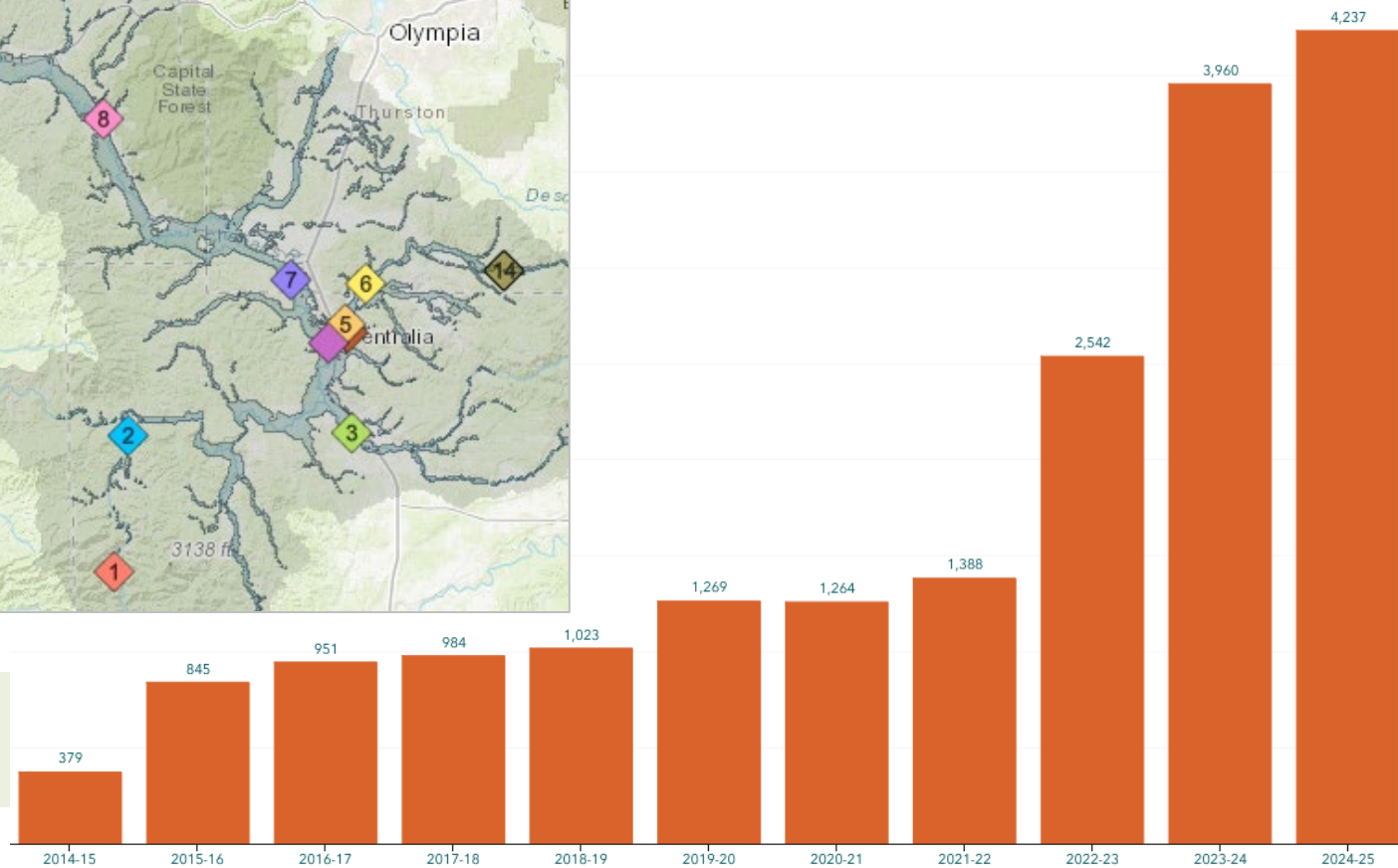
- Chehalis River (and tributaries) Dashboard
- Weather Forecast
- Rainfall Forecast
- Radar Rainfall
- River Forecast
- Flood Maps
- Atmospheric Rivers
- King Tides Calendar
- Seasonal Precipitation and Temperature Forecasts



# Flood Warning System (Alert Sign-Ups)



Sign-up for email high water alerts [here](#).



# Proposed Flow-Through Dam for Flood Control (#3)

1. Move through unobstructed
  - ✓ Water
  - ✓ Fish
  - ✓ Sediment
2. Delivers top-to-bottom benefit, Pe Ell to Cosmopolis.
3. See recent presentation [here](#).

[www.chehalisriverbasinfczd.com](http://www.chehalisriverbasinfczd.com)

# Chehalis Basin Strategy

## State Law

“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](#))



Office of Chehalis  
Basin

Chehalis Basin  
Board

<https://chehalisbasinstrategy.com/>

## Chehalis Basin Board

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

Appoints 3  
member



## Office of Chehalis Basin

Small team within the WA  
Department of Ecology

## “Network of Partners”

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



# Chehalis Basin Strategy (Network of Partners)



# Today vs 2007

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

- ✓ 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

**Vickie Raines, Grays Harbor County Representative**

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**Edna Fund, Lewis County Representative**

*Vice-Chair*, Chehalis River Basin Flood Authority

*Chair*, Chehalis River Basin Flood Control Zone District Advisory Board

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# Extra – Flood and Fish Articles

# The Chronicle

Division of CP Publishing

<https://chronline.com/browse.html?>

**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

**Chehalis Basin Strategy progress in review: Bringing Stillman Creek back to life**  
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  
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  
By The Chronicle staff | 10/27/23

**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 projects have been completed across the Chehalis River Basin, coordinated and funded through the Office of Chehalis Basin (OCB). The OCB board is ... more  
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 funded through the Office of Chehalis Basin (OCB). The OCB board is ... more  
By The Chronicle staff | 8/15/23

**Chehalis Basin Strategy progress in review: Log jacks protect wastewater treatment plant in Grays Harbor County**  
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  
By The Chronicle staff | 8/25/23

**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

<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.