### **Chehalis River Basin Flood Authority**

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

City of Montesano January 14, 2025

#### **2007 Storm**

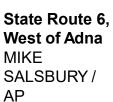
■ \$938M Basin-wide damage, \$300M lost economic activity (WA).



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 25



#### **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



#### **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) O City of Chehalis (2008)

  - City of Montesano (2008)
  - City of Oakville (2008)

- City of Hoquiam (2017)City of Napavine (2011)
  - Town of Pe Ell (2008)



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

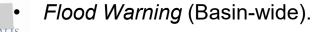


**Help** local communities identify, develop, implement local flood hazard reduction solutions.

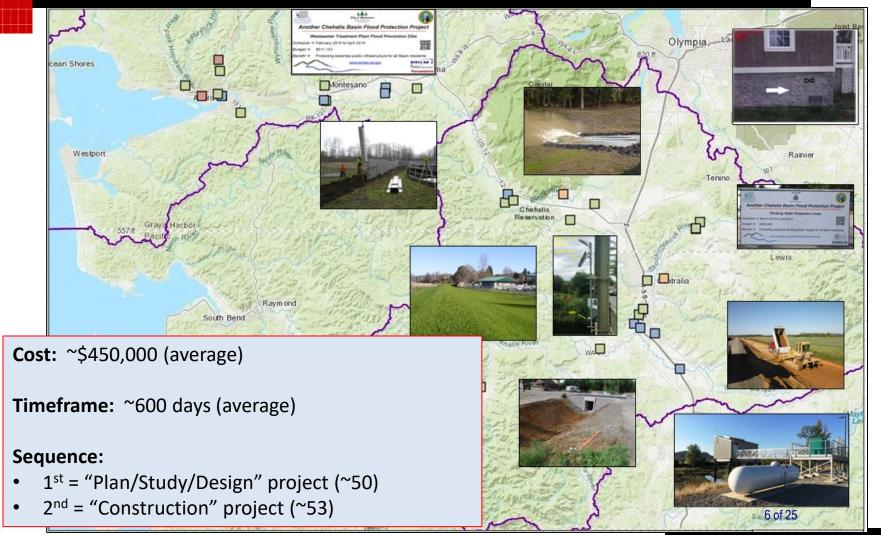
### **Local Projects (#1)**

- 1. Reduce flood damage.
- 2. Protect people, property, infrastructure.
- 3. Improve readiness, response, resiliency.
  - Drinking Water (Boistfort, Bucoda, Montesano).
  - 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).

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



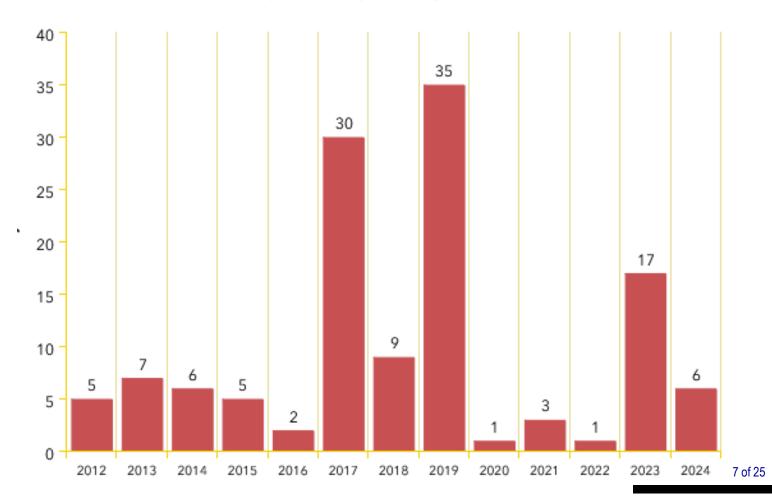
### **Local Projects (100+ Projects Completed 2012-23)**





### **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 =  $\frac{\text{Here}}{\text{Here}}$ .
- ✓ Website =  $\frac{\text{Here}}{\text{Here}}$ .

#### **Local Projects (Boistfort Valley)**

- Construct presedimentation pond to settle-out flood-generated sediment before entering water treatment plant.
- ✓ Sediment choked-out treatment plant in 2007 for 6 months and drinking water had to be trucked in.





- **√** \$332,350
- More prepared now.







### **Local Projects (Chehalis-Centralia Airport, 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.





← Previous WWII-era pump

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Read More -- Here.

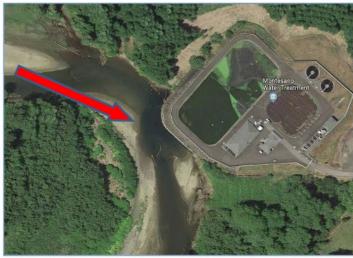
### Local Projects (Montesano, 2017-2020)

- ✓ 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** 



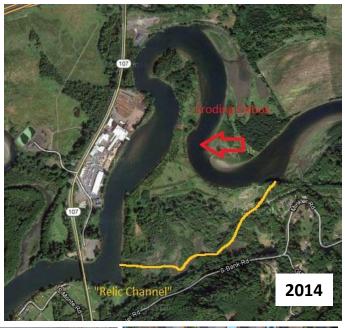
Governor Inslee and Mayor Samuel stand overlooking the Wynoochee River.

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### Local Projects (Montesano, 2012-15)















- √ ~\$6M protection against Chehalis River
- ✓ Funding pooled/shared.



### 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





City of Cosmopolis, Sep 29, 2018



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

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





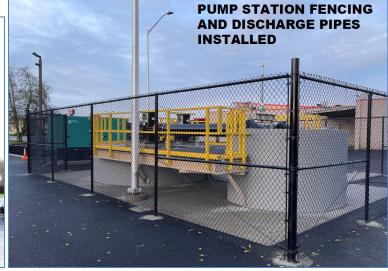
- ✓ 8 pump stations.
- **√** \$50M cost.
- ✓ \$30M to date (58%).
- ✓ \$12M request (24%).

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

## **EXAMPLE 10th St Pump Station**

### Local Projects (Hoquiam, 2024)







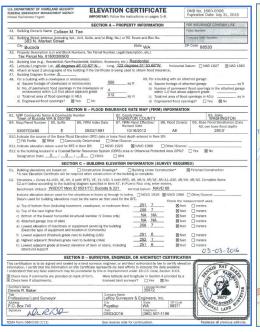




#### **Foundation Flood Openings Pilot**

### Local Projects (Bucoda, 2016)

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

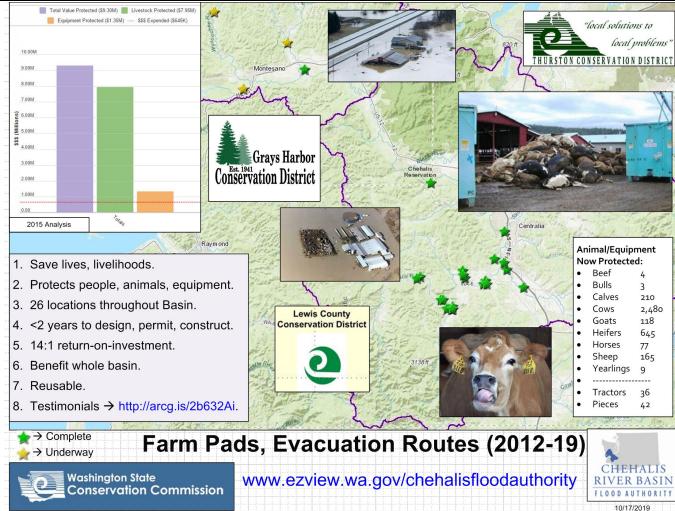






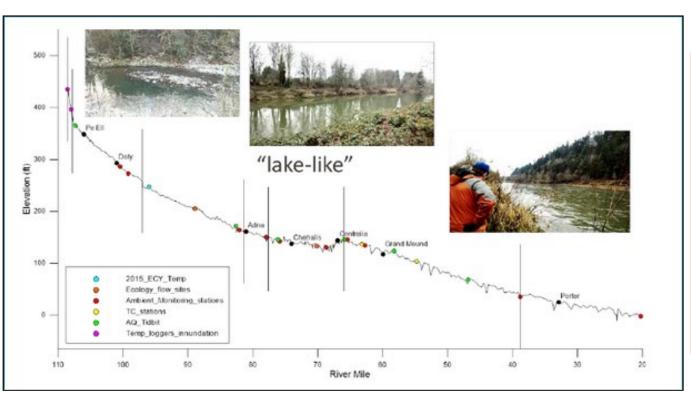


### **Local Projects (Farm Pads)**





#### Local Projects (Geographically-Based)



#### **Basin Geography**

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

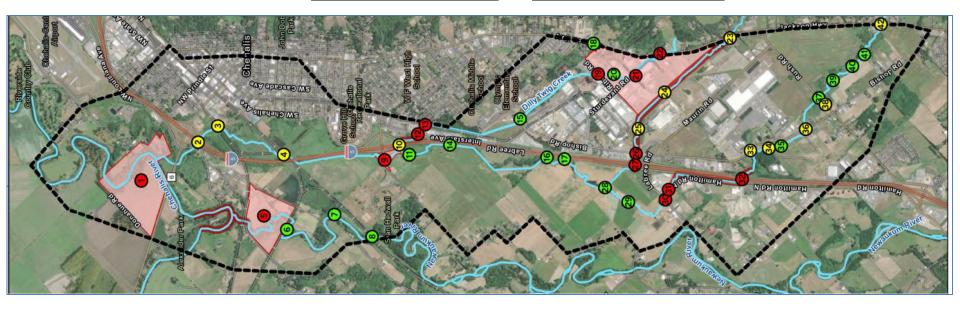
Shah, Mohammad. (2021). inland water-dynamics and ecology. 10.5772/intechopen.87463.



#### **2023-25 Funding -- Flood Storage Investment Plan**

### 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

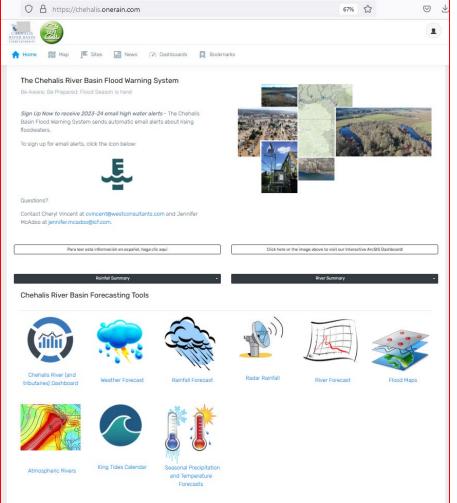
Mar 6<sup>th</sup> = Community workshop (VL Community Building, 2-6 PM)



✓ Minimize damage, monetary losses

### Flood Warning System (#2)

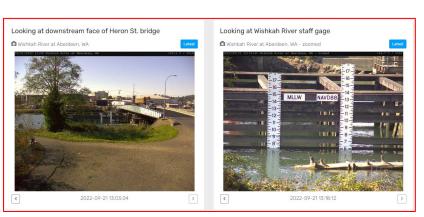
- ✓ Developed with State Capital Budget \$.
- ✓ Maintained with local \$.



#### www.chehalisriverflood.com

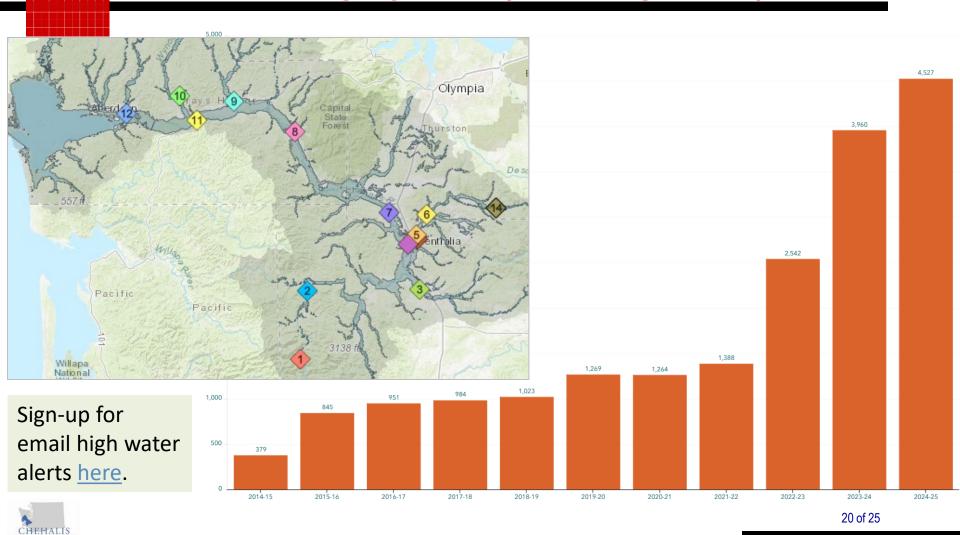








### Flood Warning System (Alert Sign-Ups)



# CHEHALIS RIVER BASIN FLOOD CONTROL ZONE DISTRICT

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



- 1. Move through unobstructed
- ✓ Water
- ✓ Fish
- ✓ Sediment
- 2. Delivers topto-bottom benefit, Pe Ell to Cosmopolis.
- 3. See recent presentation <a href="here">here</a>.



### **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





#### **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)**





























































#### **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.

- ✓ 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/



#### Thank You! and Key Contacts

#### Vickie Raines, Grays Harbor County Representative

Chair, Chehalis River Basin Flood Authority
Flood Authority Appointee & Chair, Chehalis Basin Board
360/590-4100

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

#### Mike Olden

*Montesano Member*, Chehalis River Basin Flood Authority 360/589-0333

molden@montesano.us

#### **Scott Boettcher**

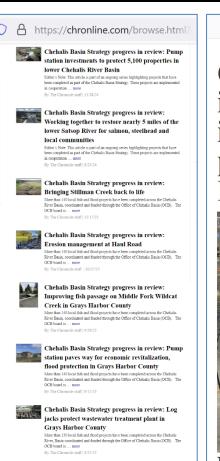
Staff, Chehalis River Basin Flood Authority 360/480-6600

scottb@sbgh-partners.com



#### Extra – Flood and Fish Articles





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

It has been more than 15 years meet the demanting flooding of December 2007 in the
Chehalis New Bunn. In the time since, resides, historieses, white sand government

By The Chronicle staff | 8/4/23

The Chronicle 1000



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.



#### Extra – Local Resolutions

#### Local Resolutions Favoring Basin-Wide Solution

File Name	File Size	<u>Category</u>	<u>Date Added</u> ▼
Cosmopolis 2024-19-12 Resolution 2024-04.pdf	1.1 MB	2024	01/14/25 06:53 AM
Grays Harbor County 2024-17-12 Resolution 2024-143.pdf	847.5 KB	2024	01/14/25 06:53 AM
Bucoda 2024-10-12 Proclamation.pdf	1.4 MB	2024	01/14/25 06:53 AM
Hoquiam 2024-09-12 Resolution 2024-20.pdf	317 KB	2024	12/11/24 09:46 AM
Pe Ell 2024-15-10 276.pdf	2.9 MB	2024	11/11/24 05:44 AM
Chehalis 2024-14-10 Proclamation.pdf	1.6 MB	2024	11/11/24 05:44 AM
Hoquiam 2021-04-12 2021-12.pdf	110.1 KB	2021	04/16/21 10:14 AM
Grays Harbor County 2021-04-06 2021-031.pdf	126.2 KB	2021	04/07/21 10:19 AM
Centralia 2021-02-09 2733.pdf	1 MB	2021	03/18/21 09:11 AM
Aberdeen 2021-01-27 2021-05.pdf	1.3 MB	2021	03/18/21 05:27 AM
Pe Ell 2021-03-02 260.pdf	134 KB	2021	03/18/21 05:11 AM
Bucoda 2021-02-08 2021-01.pdf	862.3 KB	2021	03/18/21 05:11 AM
Chehalis 2021-02-08 2-2021.pdf	553.8 KB	2021	03/18/21 05:10 AM
Lewis County 2021-02-01 21-046.pdf	1.2 MB	2021	03/18/21 05:10 AM
CRBFA 2021-01-21 Resolution.pdf	130.3 KB	2021	03/18/21 05:09 AM

See *Local Resolutions Library* <u>here</u>.

