Chehalis River Basin Flood Authority

Reducing Flood Damage and

Restoring Aquatic Species

Lewis County

June 29, 2022

Scott Boettcher
Staff, Chehalis River Basin Flood Authority
360/480-6600 | scottb@sbgh-partners.com

Today's Presentation

- Describe the "Flood Authority"
  - #1 -- Local Projects
  - #2 -- Flood Warning System
  - #3 – Role
- Touch on "Office of Chehalis Basin" and "Chehalis Basin Strategy"
- Allow time for discussion

CHEHALIS RIVER BASIN FLOOD AUTHORITY

DEPARTMENT OF ECOLOGY State of Washington
OFFICE OF CHEHALIS BASIN

CHEHALIS BASIN STRATEGY

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)

Local Projects (#1)

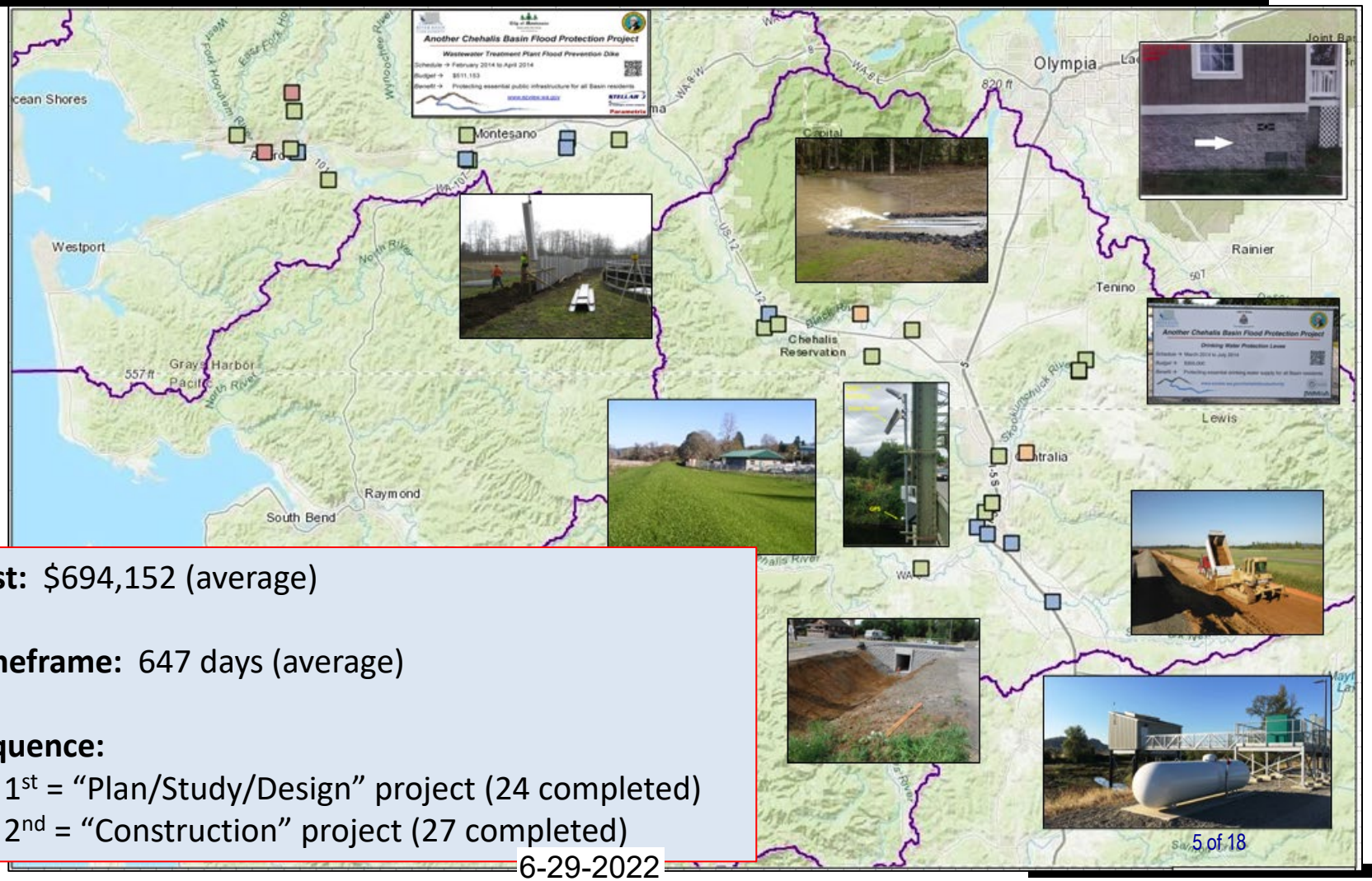
1. **Reduce flood damage.**

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, Cosmopolis, 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
$51.4M

Local Projects (Completed 2012-23)



Cost: $694,152 (average)

Timeframe: 647 days (average)

Sequence:

- 1st = "Plan/Study/Design" project (24 completed)
- 2nd = "Construction" project (27 completed)

COMPLETED **–** Chehalis-Centralia Airport

Local Projects (Chehalis-Centralia)

New Pump -- 2017

January 2022

Old Pump – 1940s

Widening/Repairing Levee – 2014

- ✓ New Pump Cost = $1.1M
- ✓ Widening Levee = $1.2M
- ✓ ROI = Substantial (~$9M annual in local and state tax revenues)
- ✓ 1/2022 High-water event = Airport stayed operational

CHEHALIS RIVER BASIN FLOOD AUTHORITY

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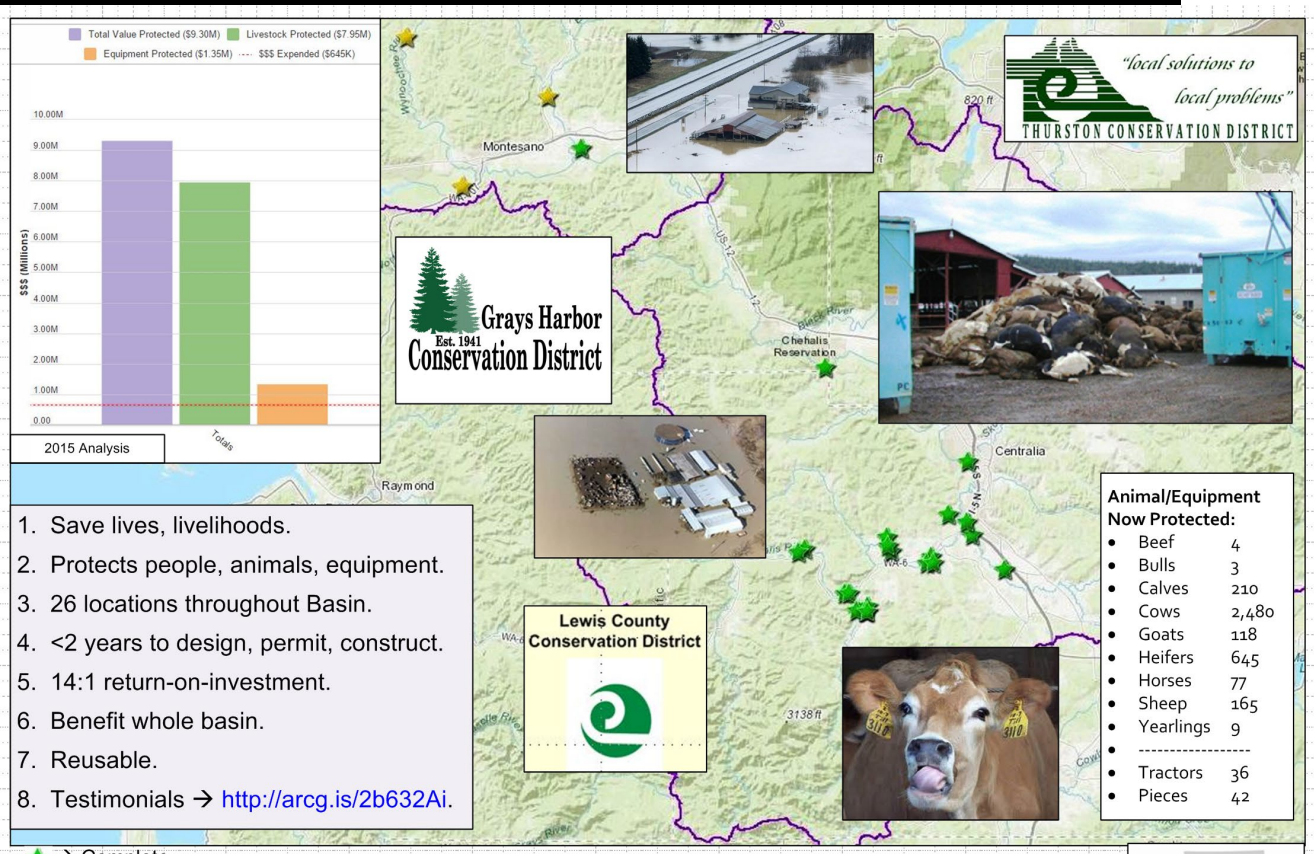
COMPLETED – Farm Pads (Lewis and Grays Harbor counties)

Local Projects (Farm Pads)

January 2022 Flood Event (Bob Amrine, Lewis CD):

- Farm pads worked for those who used their pads (animals did not drown like in 2007 and equipment was saved).
- Farmers were grateful that their livelihoods could continue, and their animals were out of harm's way (though in some cases they wish they had larger pads for more equipment).



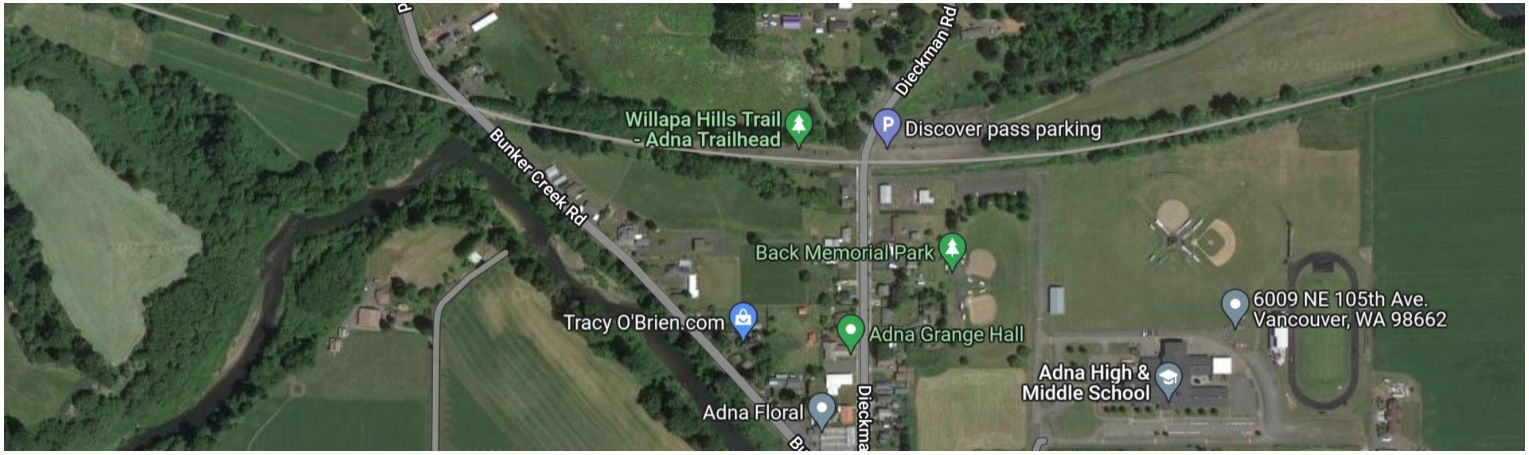
Contact: Scott Boettcher; Staff, Chehalis River Basin Flood Authority; 360/480-6600; scottb@sbgh-partners.com

Local Projects (Boistfort Valley)

COMPLETED **–** Boistfort Valley Water Pre-Sedimentation Pond

COMPLETED **–** Adna Levee Project (2013)

Local Projects (Adna)



CHEHALIS RIVER BASIN FLOOD AUTHORITY

Local Projects (Chehalis Industrial Park)

BEFORE THE BOARD OF COUNTY COMMISSIONERS
LEWIS COUNTY, WASHINGTON

IN THE MATTER OF: RESOLUTION NO. 20-163

APPROVE A .09 ("DISTRESSED COUNTIES") GRANT AGREEMENT WITH LEWIS COUNTY FLOOD CONTROL DISTRICT #1

WHEREAS, by Resolution the Lewis County Board of County Commissioners approve funding in the amount of $156,000.00 for the Flood Reduction Projects in the LCFCD #1 a project to serve future demand, a project that meets the definition of a "public facility" under RCW 82.14.370; and

WHEREAS, the Comprehensive Economic Development Strategy (CEDS) is a list of projects maintained by the Lewis County Economic Development Council (EDC) (RCW 82.14.370); and

WHEREAS, Lewis County Flood Control District #1 application for funding of the Flood Reduction Projects in the LCFCD #1 project has been recommended for approval and listing in the CEDS by the Distressed Counties/Rural Economic Development Public Facilities Advisory Committee, the Committee created to recommend projects for listing in the CEDS; and

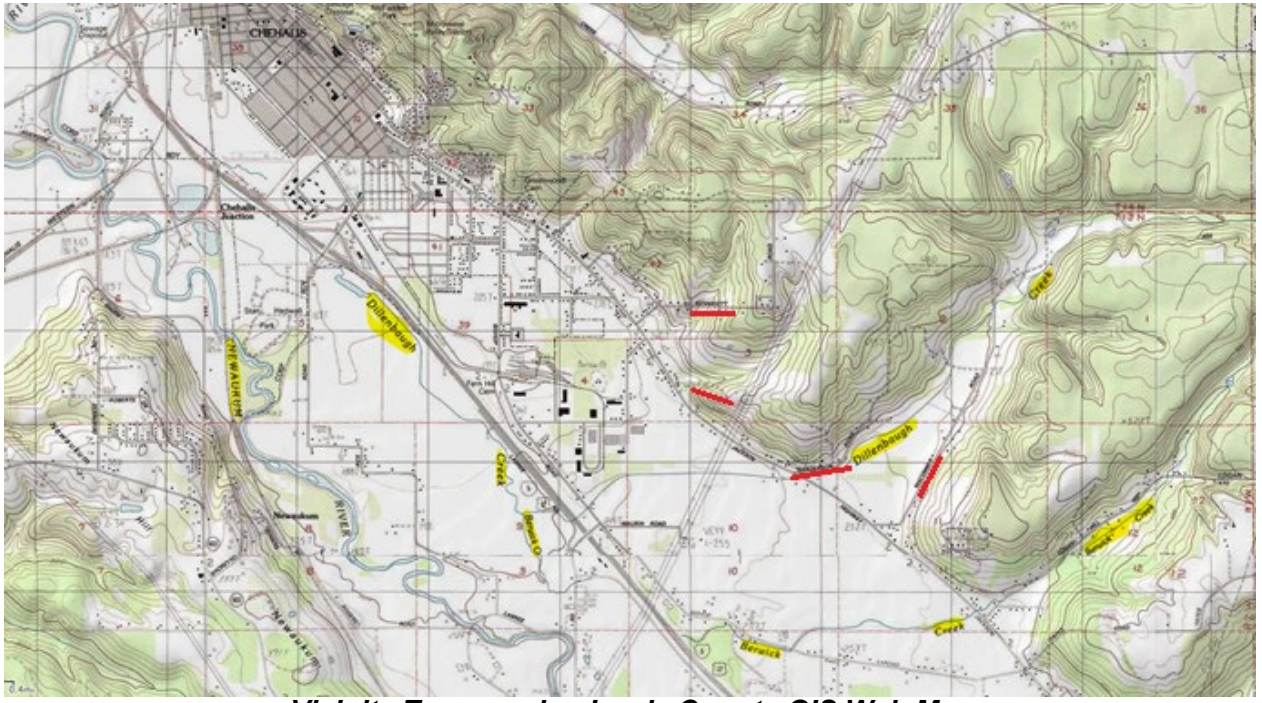
WHEREAS, the Lewis County Flood Control District #1 application is also supported by the attached Grant Agreement prepared by the EDC pursuant to the CEDS, which Agreement is incorporated herein by reference; and

WHEREAS, it is in the best interest of the citizens of Lewis County that the funds requested by CEDS be authorized in order to allow completion of the "Flood Reduction Projects in the LCFCD #1" a project that supports economic development in our community.

NOW THEREFORE BE IT RESOLVED that the Lewis County Board of County Commissioners (BOCC) approves the Flood Reduction Projects in the LCFCD #1 project as a public facility for purposes of RCW 82.14.370 and amends the Community Economic Development Strategies (CEDS) list to include that project in the county's overall economic development plan; and

NOW THEREFORE BE IT FURTHER RESOLVED that the BOCC authorizes Lewis County to enter into the attached Grant Agreement with the Lewis County Flood Control District #1, for the Flood Reduction Projects in the LCFCD #1 project, in the amount of $156,000.00 using monies from the "Distressed Counties Fund," all in accordance with RCW 82.14.370 and applicable law.

DONE IN OPEN SESSION this 18th day of May, 2020.



Vicinity Topography, Lewis County GIS Web Map

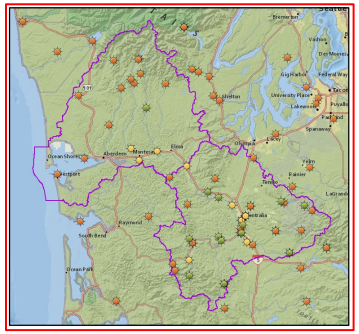
2019 Flooding, Rick Rouse

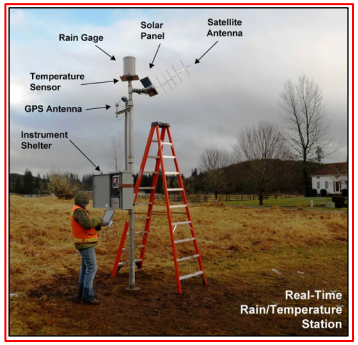
CHEHALIS RIVER BASIN FLOOD AUTHORITY

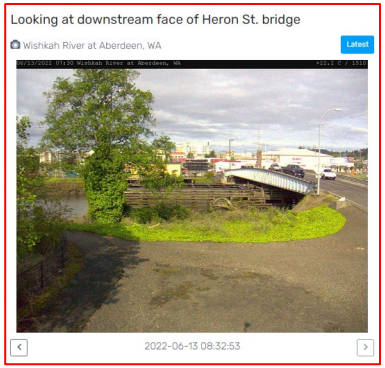
Chehalis River Basin Flood Warning System
www.chehalisriverflood.com

Click icon to sign-up for email gage alerts.

Flood Warning System (#2)







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

CHEHALIS RIVER BASIN FLOOD AUTHORITY

6-29-2022

Chehalis River Basin Flood Warning System
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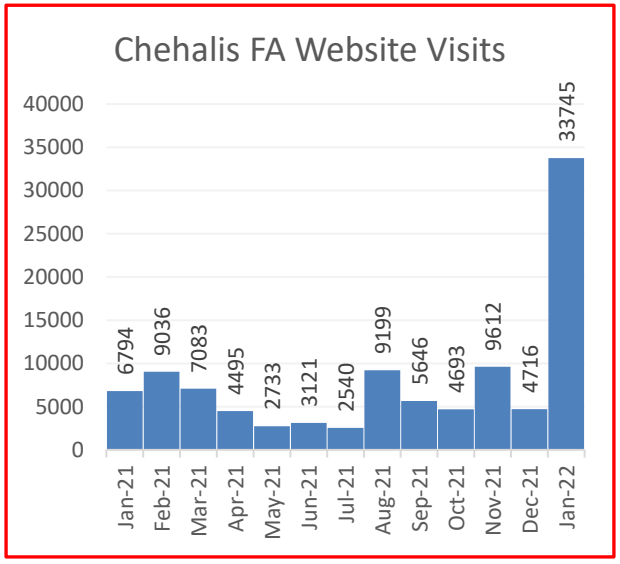
Flood Warning System (2022 Flood Event)

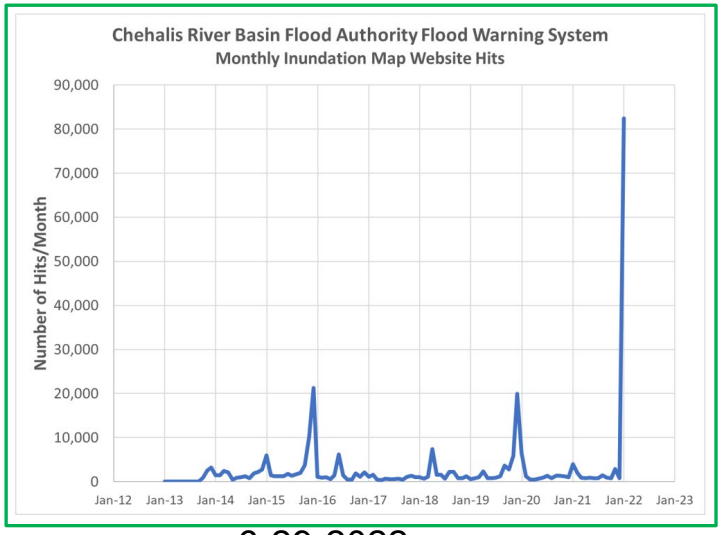
Flood Warning System Works!

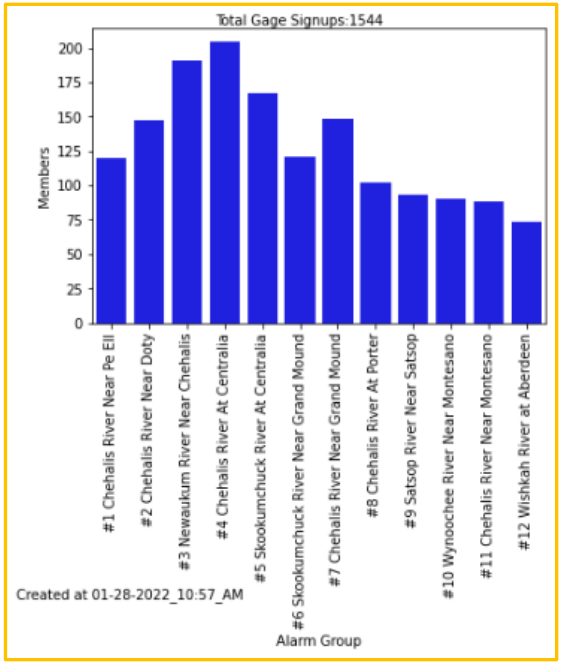
The Flood Authority's flood warning system website was incredibly active during the January flood. Nearly 25,000 individual user logins were recorded and the flood inundation maps received almost 75,000 hits, providing vital information to the community during the flood emergency. *Dave Curtis, West Consultants, 2/01/2022*

Unknown contact said:

"Our house flooded in '96 and '07--we like to be prepared The gauges and alerts give us more peace of mind. Info=peace of mind" *Survey Respondent, 2/01/2022*







CHEHALIS RIVER BASIN FLOOD AUTHORITY

Flood Authority Role (#3)

Local Resolutions Favoring Basin-Wide Solution

File Name	File Size	Category	Date Added
Aberdeen -- 2020-07-29 -- 2020-14.pdf	84 KB	2020	08/05/20 01:25 PM
Aberdeen -- 2021-01-27 -- 2021-05.pdf	1.3 MB	2021	03/18/21 05:27 AM
Bucoda -- 2020-06-09 -- 2020-04.pdf	610 KB	2020	07/15/20 10:38 AM
Bucoda -- 2021-02-08 -- 2021-01.pdf	862.3 KB	2021	03/18/21 05:11 AM
Centralia -- 2016-11-08 -- 2652.pdf	76 KB	2016	07/15/20 10:38 AM
Centralia -- 2020-05-26 -- 2718.pdf	809.8 KB	2020	07/15/20 10:39 AM
Centralia -- 2021-02-09 -- 2733.pdf	1 MB	2021	03/18/21 09:11 AM
Chehalis -- 2010-02-22 -- 5-2010.pdf	40.8 KB	2010	07/15/20 10:39 AM
Chehalis -- 2016-10-24 -- 19-2016.pdf	40.2 KB	2016	07/15/20 10:39 AM
Chehalis -- 2020-04-27 -- 6-2020.pdf	239 KB	2020	07/15/20 10:39 AM
Chehalis -- 2021-02-08 -- 2-2021.pdf	553.8 KB	2021	03/18/21 05:10 AM
Cosmopolis -- 2020-05-20 -- 2020-01.pdf	122 KB	2020	07/15/20 10:40 AM
CRBFA -- 2021-01-21 -- Resolution.pdf	130.3 KB	2021	03/18/21 05:09 AM
CRBFA Letter Re NEPA DEIS 11-13-2020 (additional 11-19-2020).pdf	252.7 KB	2020	02/01/21 09:12 AM
CRBFA Letter Re NEPA DEIS 11-13-2020.pdf	3.5 MB	2020	02/01/21 09:12 AM
Final CRBFA Letter Re DEIS 4-21-2020.pdf	293 KB	2020	02/01/21 09:11 AM
Grays Harbor County -- 2016-11-14 -- 2016-129.pdf	98.6 KB	2016	07/15/20 10:40 AM
Grays Harbor County -- 2020-05-19 -- 2020-054.pdf	92.8 KB	2020	07/15/20 10:40 AM
Grays Harbor County -- 2021-04-06 -- 2021-031.pdf	126.2 KB	2021	04/07/21 10:19 AM
Hoquiam -- 2021-04-12-- 2021-12.pdf	110.1 KB	2021	04/16/21 10:14 AM
Hoquiam -- 2020-08-10 -- 2020-12.pdf	88.8 KB	2020	08/14/20 03:52 PM
Lewis County -- 2016-10-24 -- 16-287.pdf	71.7 KB	2016	07/15/20 10:40 AM
Lewis County -- 2020-05-11 -- 20-154.pdf	651 KB	2020	07/15/20 10:40 AM
Lewis County -- 2021-02-01 -- 21-046.pdf	1.2 MB	2021	03/18/21 05:10 AM
Montesano -- 2020-06-10 -- 959.pdf	503.2 KB	2020	07/15/20 10:41 AM
Napavine -- 2020-07-28 -- 20-07-110.pdf.pdf	463.1 KB	2020	07/29/20 11:25 AM
Oakville -- 2020-07-20 -- 424.pdf.pdf	288.5 KB	2020	07/21/20 12:06 PM
Pe Ell -- 2010-04-06 -- 184.pdf	56.9 KB	2010	07/15/20 10:41 AM
Pe Ell -- 2010-12-28 -- 192.pdf	56.4 KB	2010	07/15/20 10:41 AM
Pe Ell -- 2012-09-18 -- 201.pdf	55.4 KB	2012	07/15/20 10:41 AM
Pe Ell -- 2016-11-15 -- 232.pdf	76.7 KB	2016	07/15/20 10:42 AM
Pe Ell -- 2020-06-01 -- 251.pdf	134 KB	2020	07/15/20 10:42 AM
Pe Ell -- 2021-03-02 -- 260.pdf	134 KB	2021	03/18/21 05:11 AM

- ✓ **Help** local communities identify, develop, implement local flood hazard solutions.
- ✓ **Appoint** 3 of 7 members to Chehalis Basin Board (current appointees are Vickie Raines, Edna Fund, Jay Gordon).
- ✓ **Provide** local perspective to Basin-Wide solution discussions.
- ✓ **Advocate** for balanced basin-wide fish and flood solutions (see local resolutions library here).
- ✓ **Work** as a team.

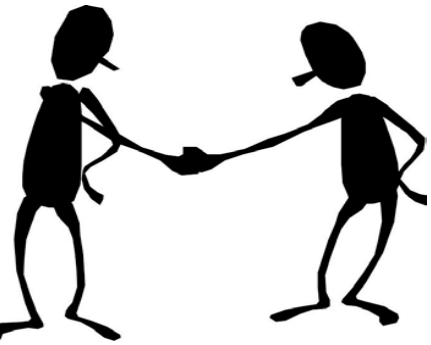
CHEHALIS RIVER BASIN FLOOD AUTHORITY

Office of Chehalis Basin, Chehalis Basin Strategy

CHEHALIS BASIN STRATEGY

Office of Chehalis Basin | Chehalis Basin Board

https://chehalisbasinstrategy.com/



Chehalis Lead Entity

TOWN of BUCODA

6-29-2022

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.
- ✓ We have a governance, administrative, and funding structure that's delivering results.

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

Looking Ahead

- ✓ **Proposed Flood Retention Facility –** DRAFT EISs were issued February 2020 (SEPA) and September 2020 (NEPA). Chehalis River Basin Flood Control Zone District (project proponent) working diligently to provide refinements and clarifications for FINAL EIS. Final EISs are currently scheduled for release in late 2022/early 2023.

- ✓ **Local Projects –** (1) 2023-25 call for local projects will be issued June 29, 2022.
  (2) Working with LC Public Works to scope out a $60K "Lower Boistfort Valley preliminary CMZ study"

- ✓ **Flood Authority Meetings –** Third Thursday of January, February, March, May, July, September, and November from 10 AM to 11:15 AM (11:30 AM).

- ✓ **Chehalis Basin Board Meetings –** First Thursday of every month from 9 AM to 2 PM.

- ✓ **Sign-Up For Email Gage Alerts –** www.chehalisriverflood.com

Click icon to sign-up for email gage alerts.

Key Contacts

Vickie Raines, *Grays Harbor County Representative*
Chair, Chehalis River Basin Flood Authority
Chair, Chehalis Basin Board
360/249-3731
vraines@co.grays-harbor.wa.us

Edna Fund, *Lewis County Representative*
Vice-Chair, Chehalis River Basin Flood Authority
Member, Chehalis Basin Board
360/269-7514
dutch@localaccess.com

Scott Boettcher
Staff, Chehalis River Basin Flood Authority
360/480-6600
scottb@sbgh-partners.com

Thank You!

This Presentation:
Available at “Chehalis River Basin Flood Authority” Website at https://www.ezview.wa.gov/site/alias__1492/34490/outreach__education.aspx

Email Distribution Lists:
Megan Sathre (Flood Authority) megan.sathre@lewiscountywa.gov **Cindy Bradley (Office of Chehalis Basin)** Cindy.Bradley@ecy.wa.gov

Also -- Key Links

Key Organizations:

1. Chehalis River Basin Flood Authority -- www.ezview.wa.gov/chehalisfloodauthority
2. Office of Chehalis Basin -- https://ecology.wa.gov/About-us/Get-to-know-us/Our-Programs/Office-of-Chehalis-Basin
3. Chehalis Basin Board -- https://www.ezview.wa.gov/site/alias__1962/37068/chehalis_basin_board.aspx

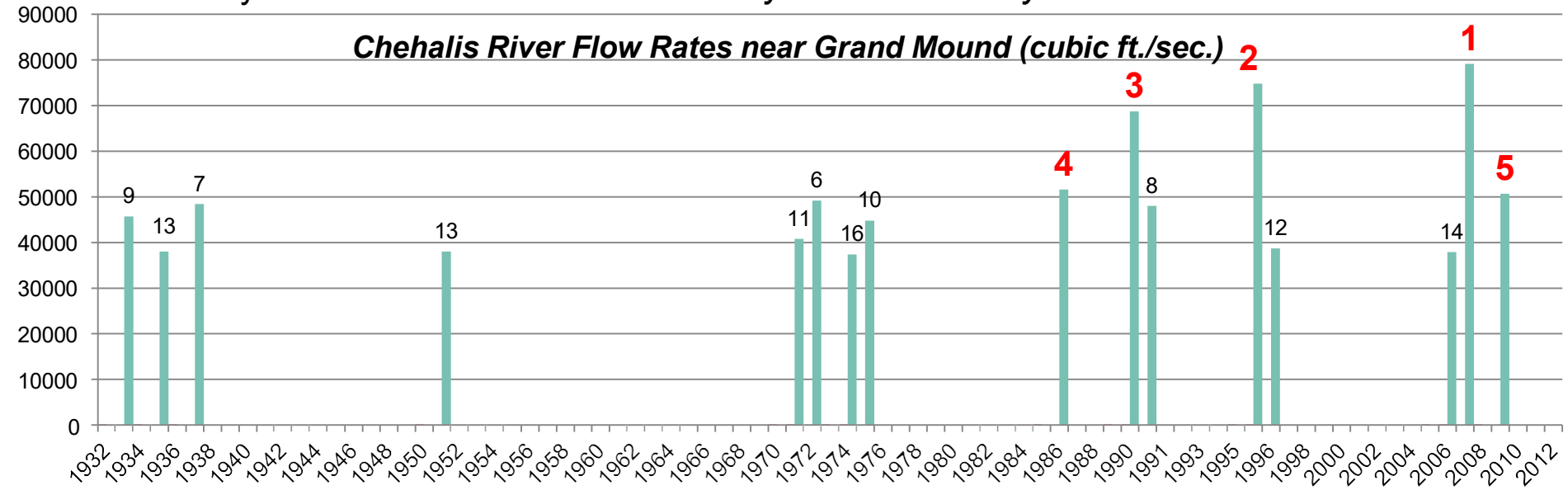
Key Activity Areas:

1. Local Projects -- https://www.ezview.wa.gov/site/alias__1492/34489/local_projects.aspx
2. Flood Warning System -- www.chehalisriverflood.com
3. Chehalis Basin Strategy -- www.chehalisbasinstrategy.com
    - ASRP -- https://chehalisbasinstrategy.com/asrp/
    - CFAR -- https://chehalisbasinstrategy.com/cfar/
    - Proposed Retention Project -- https://chehalisbasinstrategy.com/proposed-project/
        - Chehalis River Basin Flood Control Zone District -- https://www.chehalisriverbasinfczd.com/
        - State EIS (SEPA) -- https://chehalisbasinstrategy.com/sepa-process/
        - Federal EIS (NEPA) -- https://chehalisbasinstrategy.com/federal-envl-review/
        - Flood Retention Facility (visualization) -- https://www.youtube.com/watch?app=desktop&v=cKTejUE3WsU
    - Skookumchuck Dam -- https://chehalisbasinstrategy.com/skookumchuck-dam-study/
    - LAND -- https://chehalisbasinstrategy.com/local-actions-non-dam-alternative/

Also → Sign-Up for Email Gage Alerts – https://chehalis.onerain.com/upload/files/6a9bf8e2-f04b-4165-8a9f-ce031d5db6b4.pdf

Also -- Background

- **Ranked high flow events (1932 - 2012) . . .**
  - I-5 closed 1990, 1996, 2007, 2009.
  - Five largest events since 1986 -- *Frequent floods are getting worse and damage is increasing . . .*
  - 100 year flood estimate -- *Increased by 33% in last 30 years.*



Also -- Background

- **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

State Route 6, West of Adna
MIKE SALSBURY / AP

Photos Source: LEWIS COUNTY, DIVISION OF EMERGENCY MANAGEMENT