



Be Aware, Be Prepared: Learn the Flood Warning System

Nov. 2, 2022





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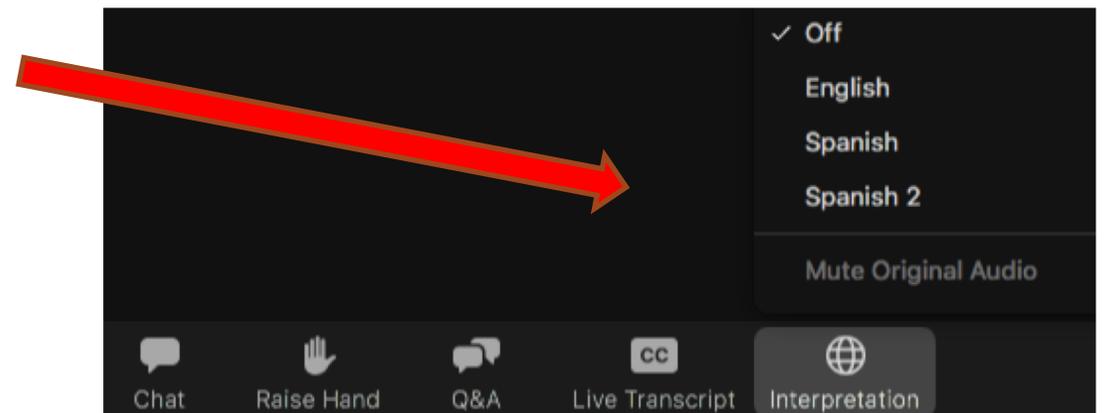
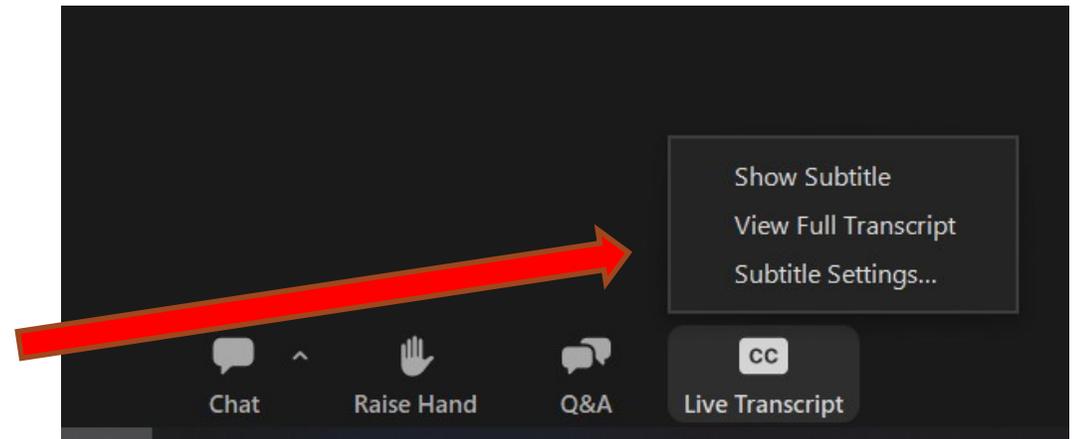
Andrea McNamara Doyle

Director, Office of Chehalis Basin
Washington Department of Ecology

PARTICIPATING IN TODAY'S WEBINAR

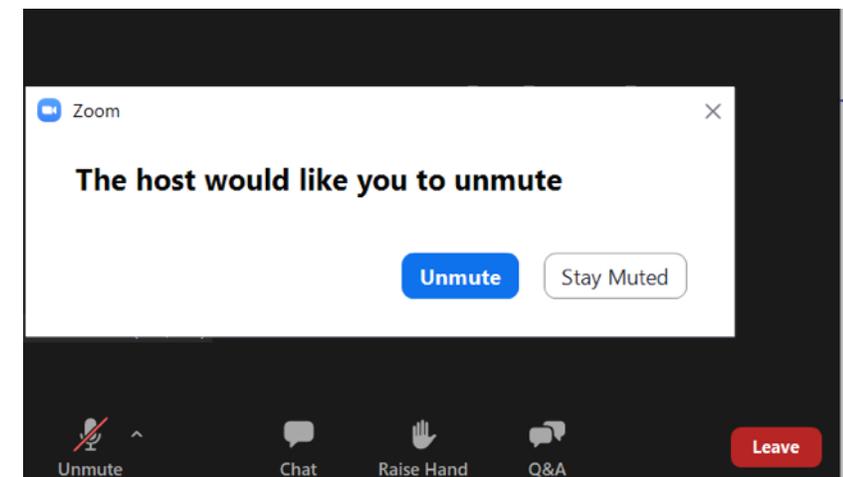
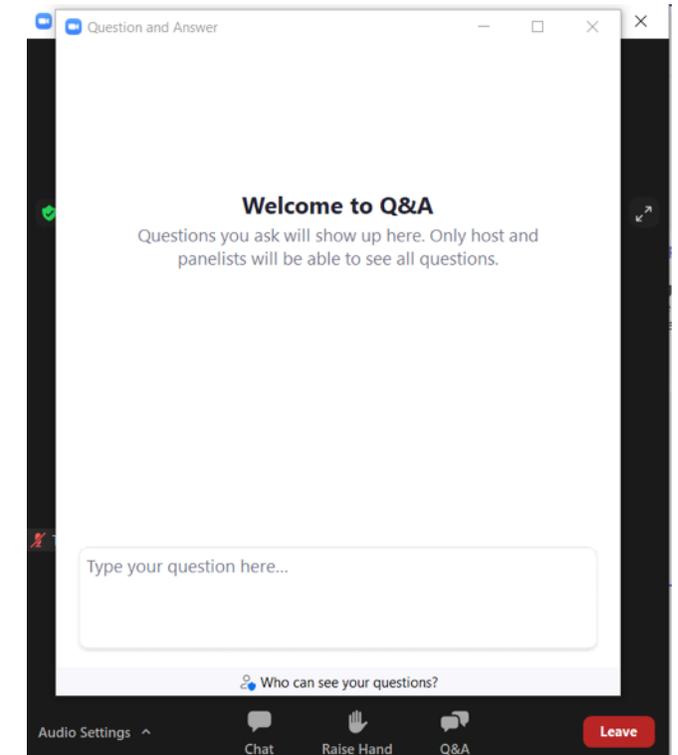
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QUESTION & ANSWER

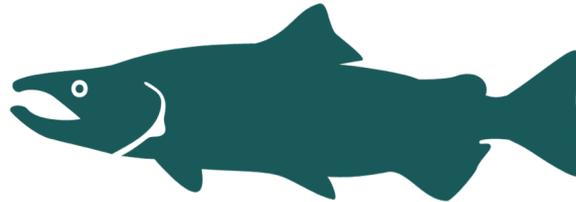
- The **Q&A box** will be available during the entire meeting for attendees to submit questions or upvote another person's question.
- Attendees can submit questions anonymously.
- There will be designated times when questions will be answered.
- Please note the raise hand feature and the chat are disabled. At the end of the webinar attendees will be invited to raise hands for questions.
- For verbal questions at the end of the webinar:
 - If you are joining via phone only you can raise your hand using *9
 - We will call your name and invite you to unmute.



THE CHEHALIS BASIN STRATEGY



Helping residents and communities protect homes and businesses from flood damage



Working with landowners to slow harmful erosion and restore habitats for salmon and other aquatic life



Preparing the region and its future generations for more frequent major and catastrophic flooding

THE CHEHALIS BASIN STRATEGY

- **Evacuation routes** and early flood **warning systems**
- **Flood protections** for homes, businesses & critical infrastructure
- **Raised farm pads** that safeguard farms, livestock and farm equipment
- **Fish passage barrier corrections** opening up 100+ miles of salmon and steelhead
- **60+ habitat restoration projects**



AGENDA

1. The Chehalis River Basin Flood Authority
2. The Chehalis River Basin Flood Warning System
3. Website demo
4. Actions you can take
5. Q&A

THE CHEHALIS RIVER BASIN FLOOD AUTHORITY

THE CHEHALIS RIVER BASIN FLOOD AUTHORITY



Local Projects

[https://chehalisbasinstrategy.com/
local-flood-solutions/](https://chehalisbasinstrategy.com/local-flood-solutions/)

(Topic for a future webinar)

Flood Warning System

- ✓ This is your system.
- ✓ Feedback is essential.
- ✓ Information = 1st line of defense.

THE CHEHALIS RIVER FLOOD WARNING SYSTEM



Plan

Threat

Forecast

Disseminate

Respond

Recover

Review

Re-Assess

Flood Preparedness

OBJECTIVE:

- Mitigate risk
- Reduce recognition time
- Increase response time

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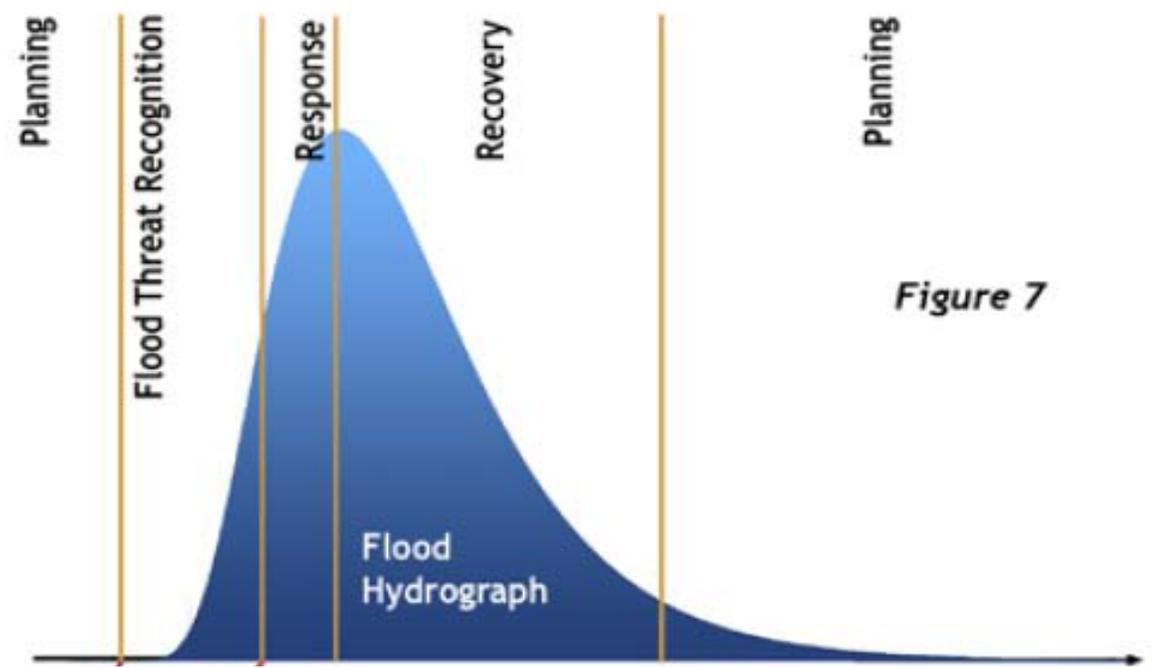


Figure 7

OBJECTIVE:

- Mitigate risk
- Reduce recognition time
- Increase response time

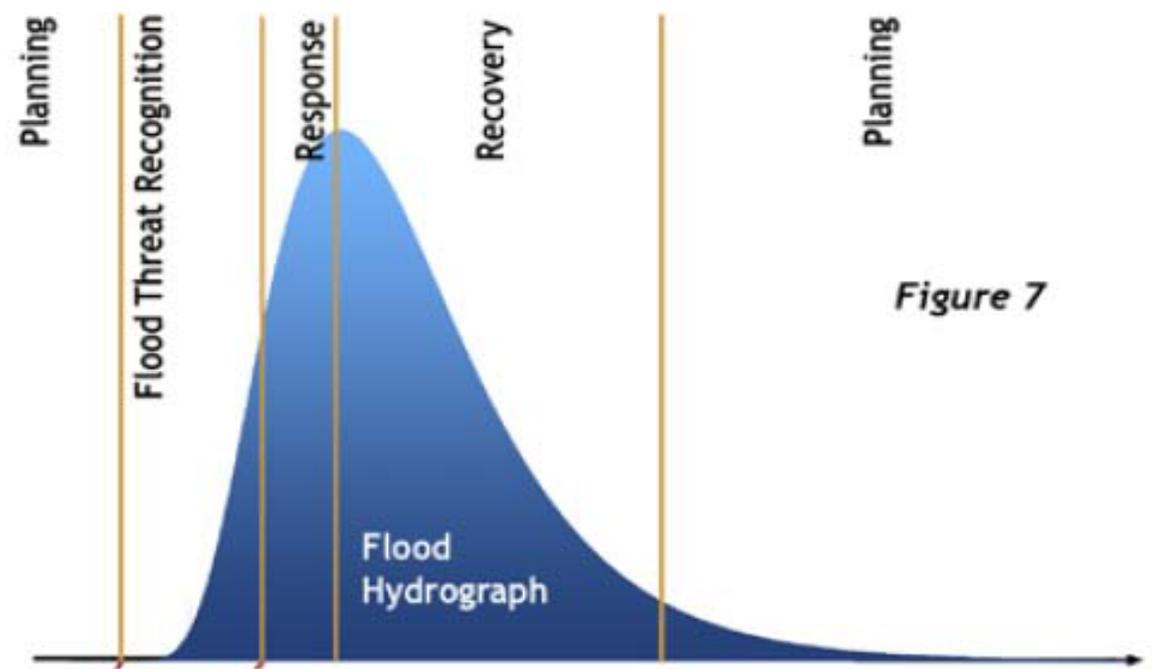


Figure 7

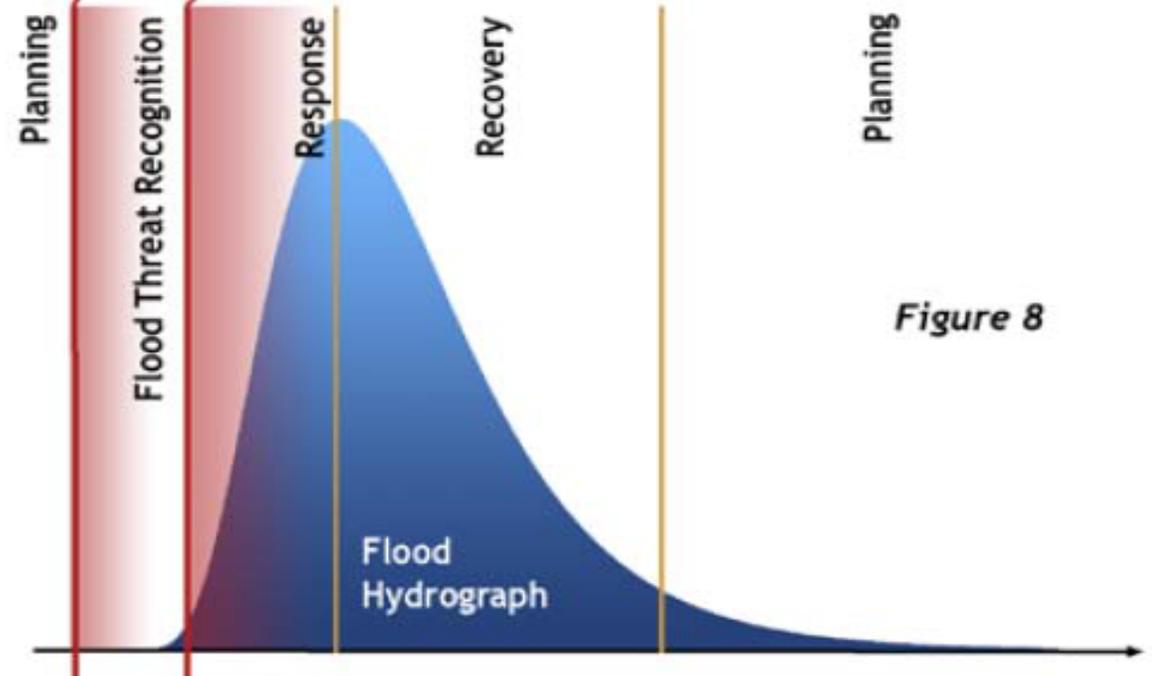


Figure 8

CATASTROPHIC AND MAJOR FLOODING

2007

2009

2022

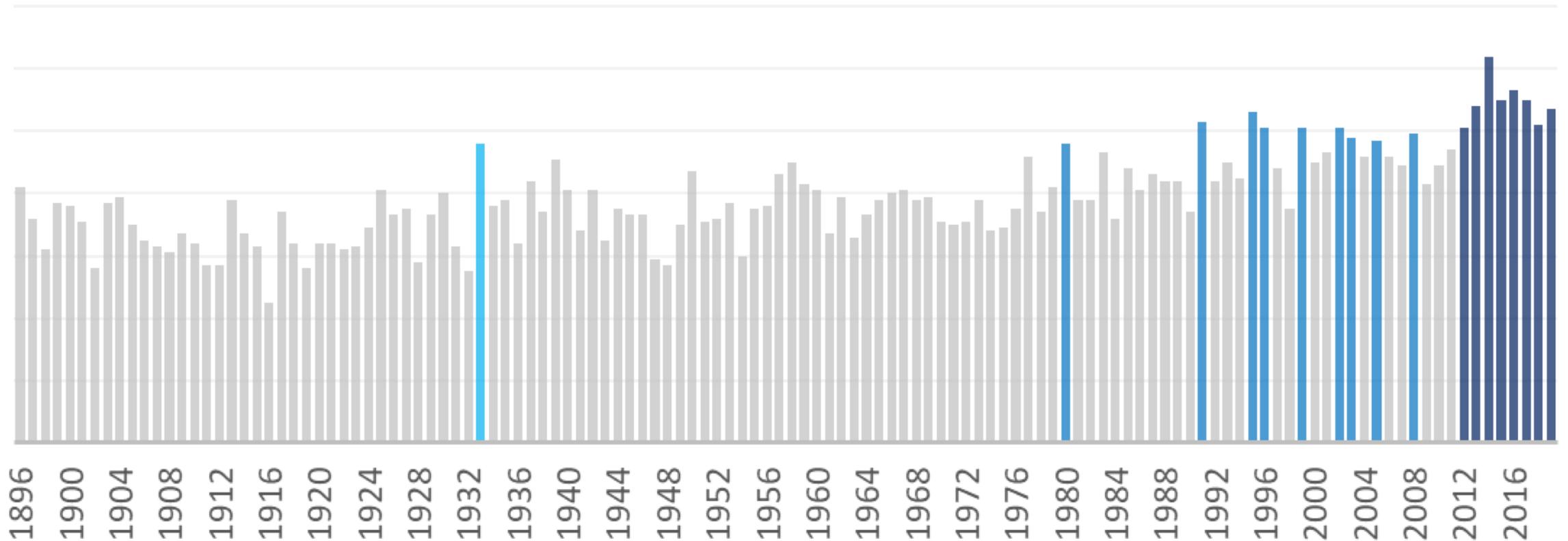


FLOODING & CLIMATE CHANGE

Rare

Episodic

Common





THE FLOOD WARNING SYSTEM

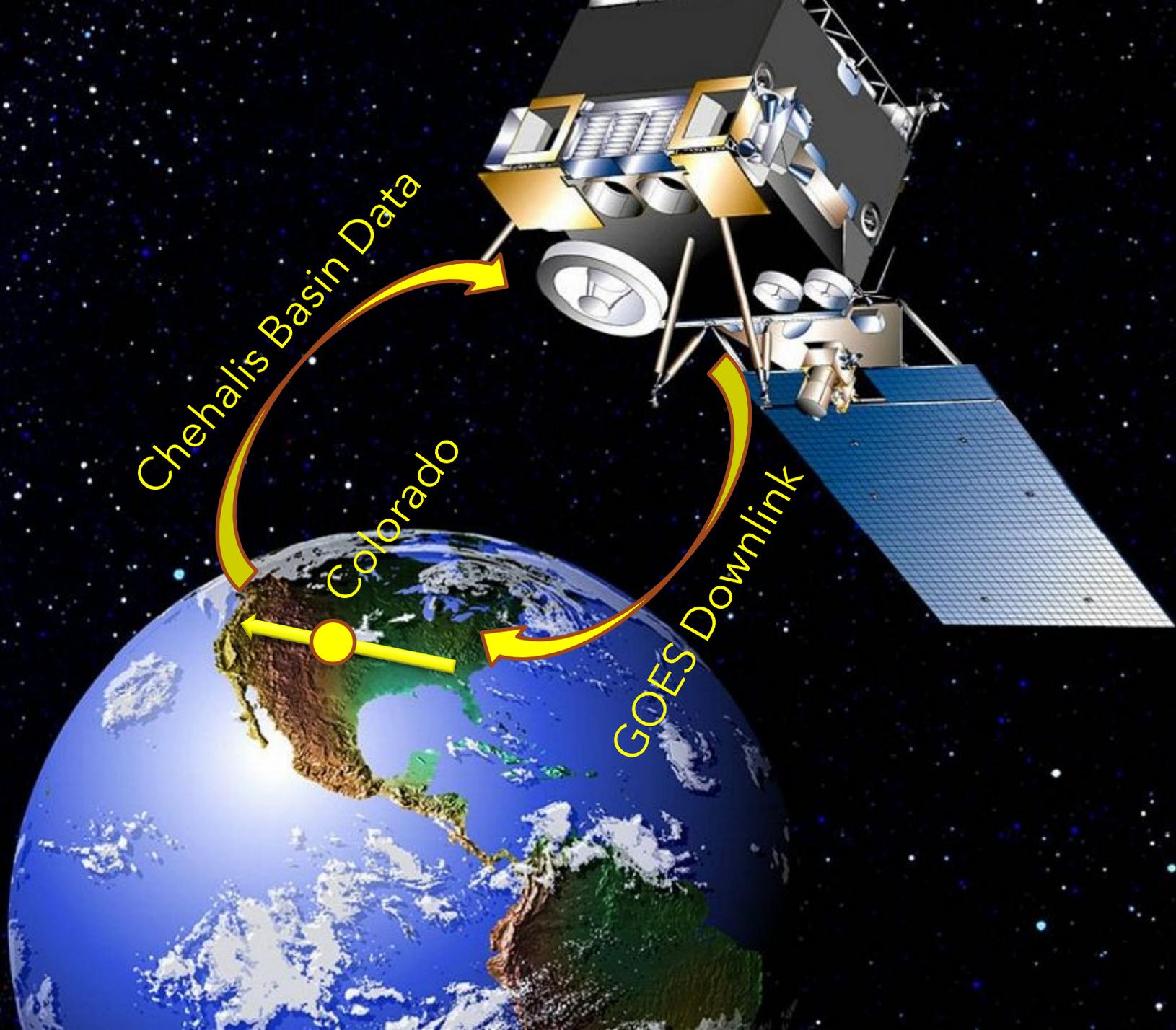
- Built in 2010
 - 10 new sites
 - 8 rain & temperature
 - 2 rain, temperature, & streams
- 300 sensors
- 100 sites



Installing a river gage at the West Fork Satsop River

Rain and temperature gage at Haywire





Chehalis Basin Data

Colorado

GOES Downlink

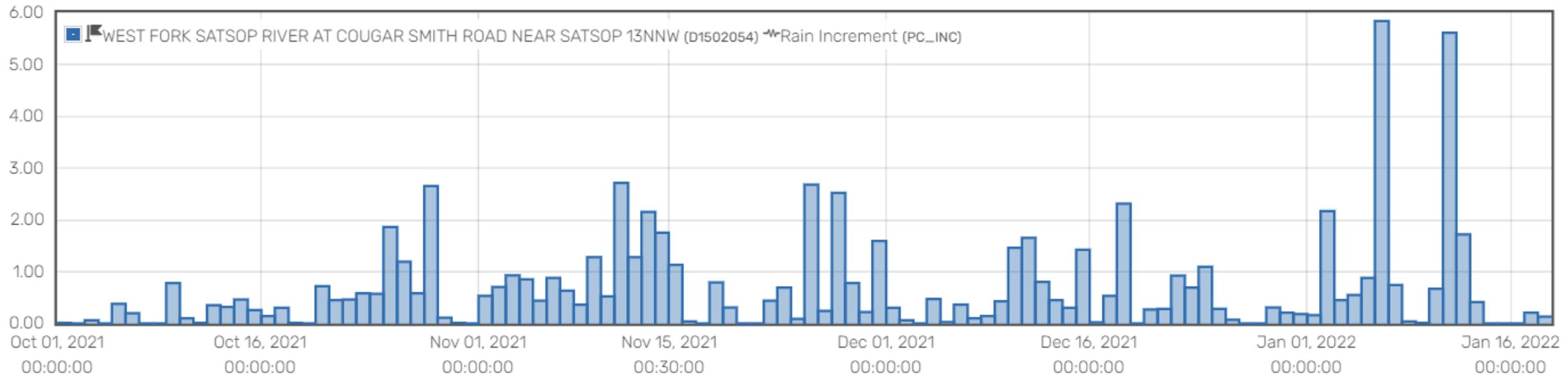
WWW.CHEHALISRIVERFLOOD.COM

The screenshot shows the homepage of the Chehalis River Basin Flood Authority website. At the top left is the logo with a map of the basin and the text "CHEHALIS RIVER BASIN FLOOD AUTHORITY". To the right is a user profile icon. Below the logo is a navigation menu with icons and labels for "Home", "Map", "Sites", "News", and "Dashboards". A large banner image of a river valley contains three menu items: "Rainfall Summary", "River Summary", and "Additional Resources". The main content area features a grid of twelve icons, each with a corresponding label: "Weather Forecast", "Rainfall Forecast", "River Forecast", "Flood Maps", "Plot Gage Data", "Gage Data Maps", "Landslide", "Radar Rainfall", "Road Conditions", "USGS Gages", "Atmospheric Rivers", and "Chehalis Basin Gage Height Conversion Project". At the bottom left of the page, it says "Photo Credit:".

EXAMPLE: RAINFALL IN BEEVILLE (89.98 INCHES)

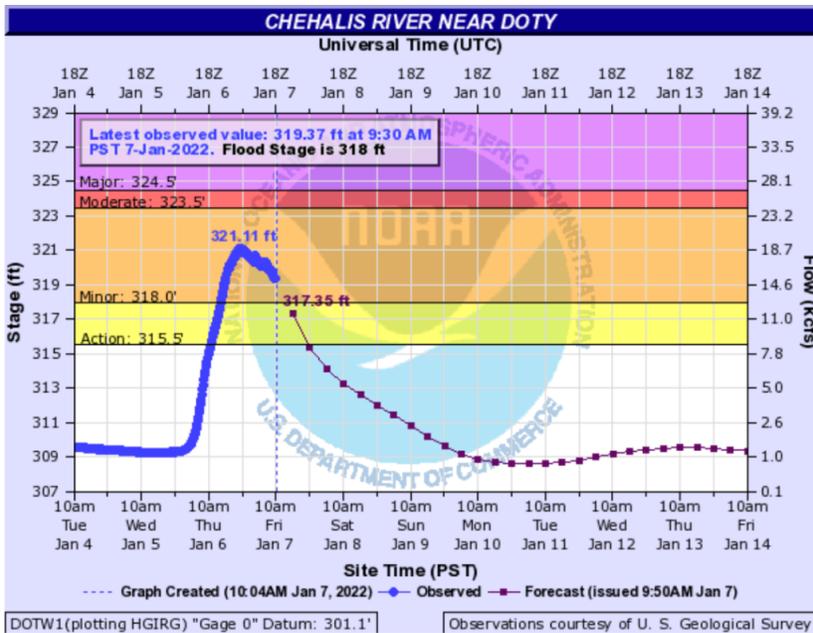
01 October, 2021 - 18 January, 2022

Markers Legend Daily

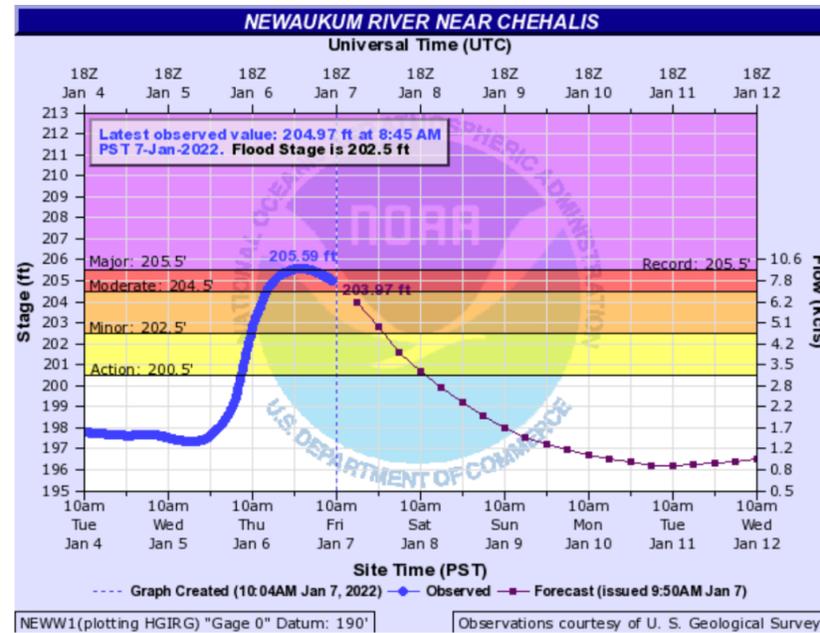


EXAMPLE: NWS FORECASTS

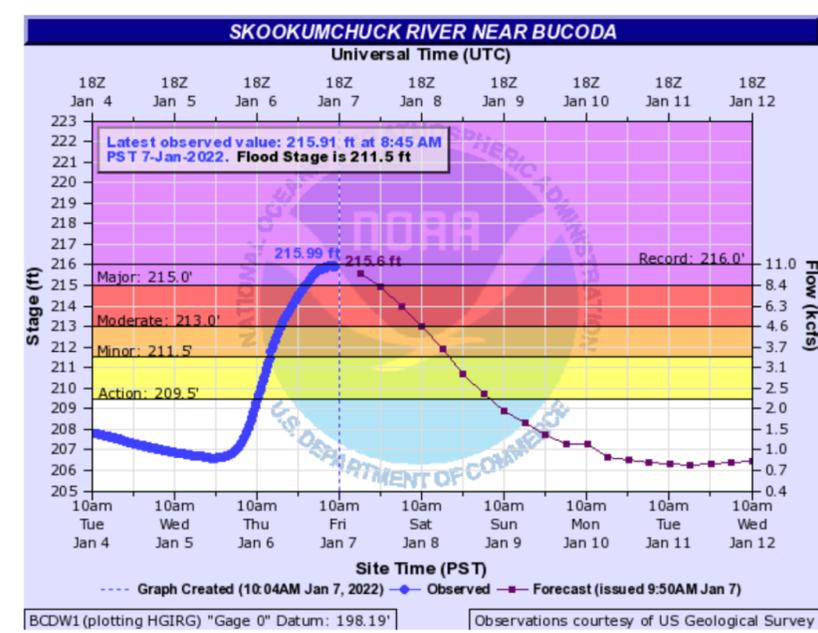
Chehalis at Doty



Newaukum near Chehalis

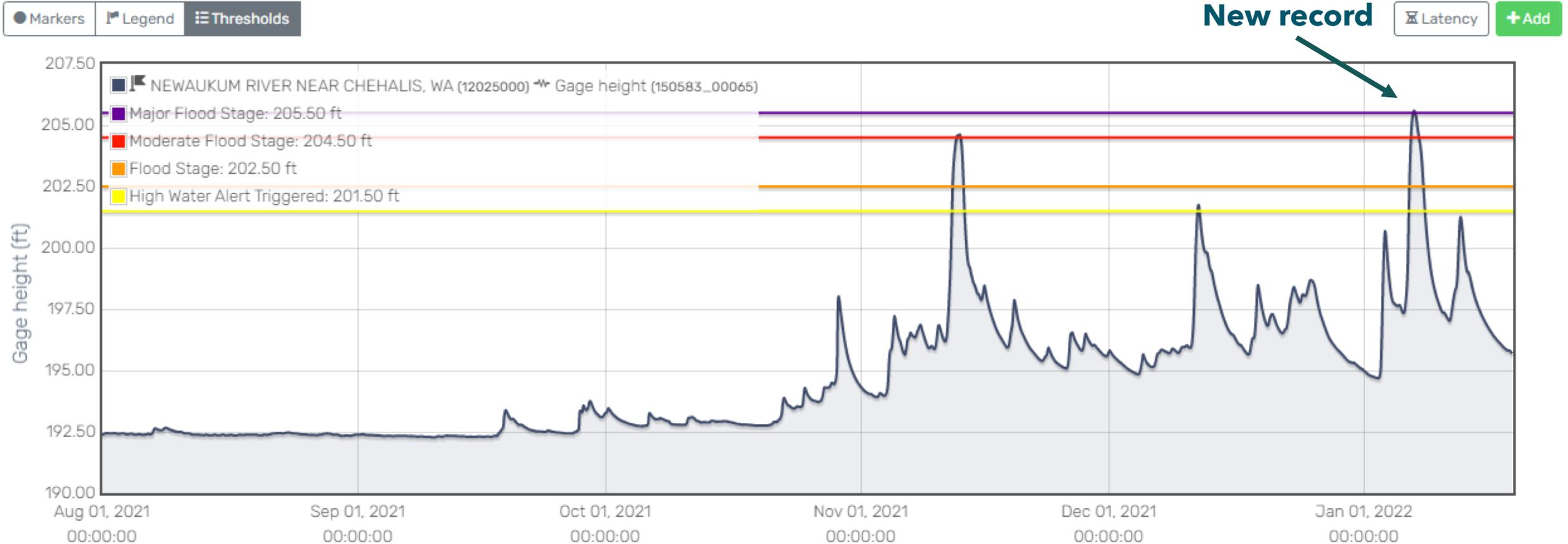


Skookumchuck near Bucoda



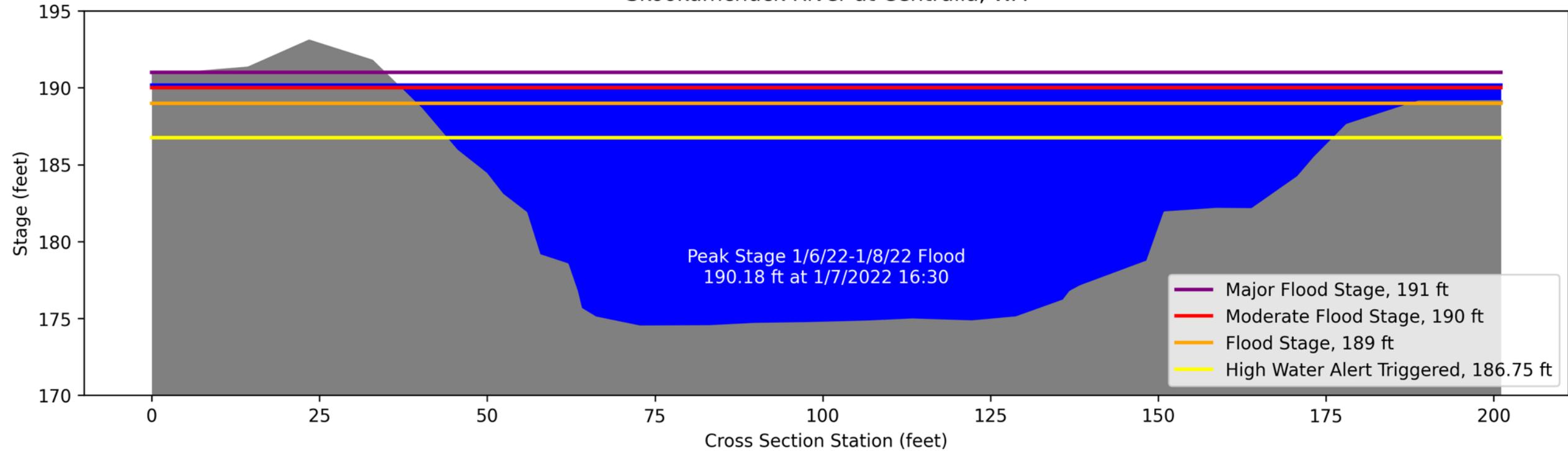
EXAMPLE: NEWUAKUM RIVER LEVEL NEAR CHEHALIS

01 August, 2021 - 18 January, 2022



EXAMPLE: RIVER CROSS SECTION CHARTS

Skookumchuck River at Centralia, WA



EXAMPLE: LIVE WEB CAMS



Chapman Farms

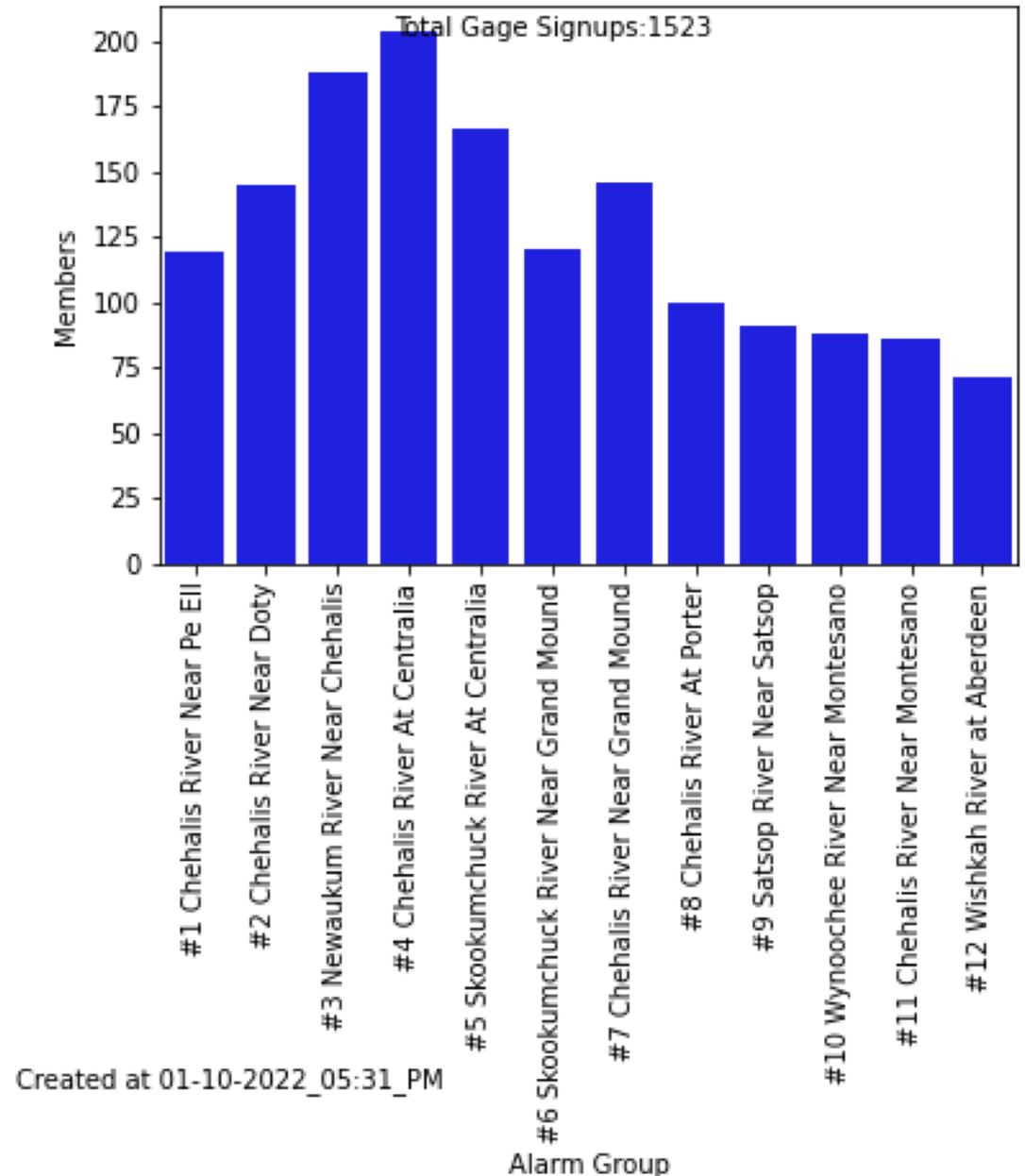
EXAMPLE: LIVE WEB CAMS



Chapman Farms

EXAMPLE: HIGH WATER ALERTS

- 13 high water alert gages
 - Each have a unique link
- Sign up for email alerts for specific river level gages
- Email Scott Boettcher at **scottb@sbgh-partners.com**



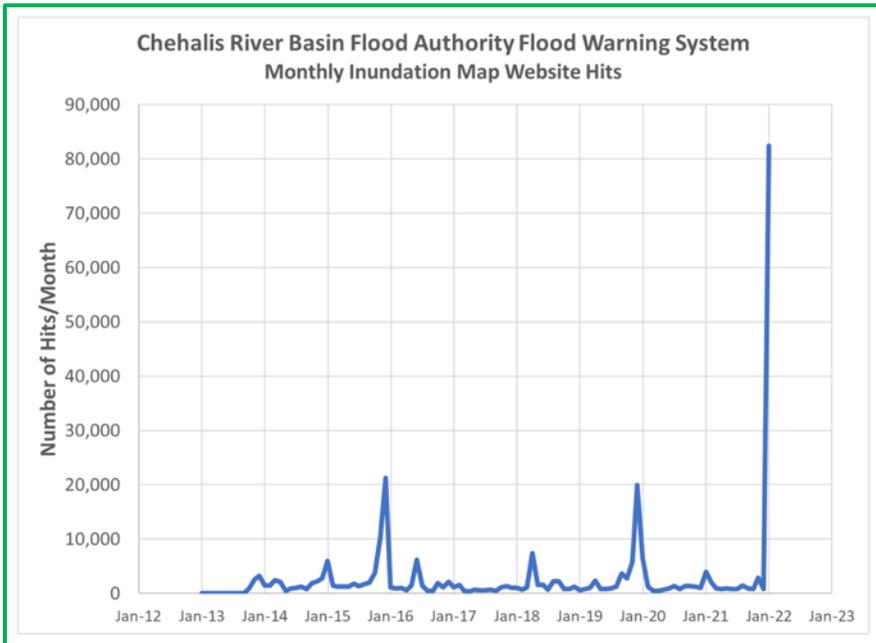


FARM PADS

WEBSITE DEMO

WWW.CHEHALISRIVERFLOOD.COM

USAGE: JANUARY 2022 FLOODS



The Chronicle
January 6 · 🌐

If you're trying to decide to stay or go, this tool might be able to help inform your decision. The image below reflects the best projection as to what areas will be flooded if the Skookumchuck River at Centralia reaches 192.4 feet. It is projected to reach 193.1 feet.

Check out predictions in this Chehalis River Basin Flood Authority online tool here: <http://chehalisriverflood.org/>

Disclaimer from the site: Inundation maps show estimated areas of flooding associated with ... See more

CHEHALIS RIVER BASIN FLOOD AUTHORITY

Flood Inundation Maps

Select a gage location: Skookumchuck River at Centralia

Skookumchuck River at Centralia, WA

Current NWS Forecast: 185.73 ft (observed value)

River Stage (ft):

184.4
185.4
186.4
187.4
188.4
189.4
190.4
191.4
192.4

Minor Flood Stage: 189.4
Moderate Flood Stage: 190.4
Major Flood Stage: 191.4

Disclaimer: Inundation maps show estimated areas of flooding associated with river stages reported or forecast at National Weather Service forecast points. These maps are prepared in advance using assumed storm conditions. The exact extent of flooding during an actual event for an observed or forecast elevation may vary due to specific local storm conditions.

202 Comments 388 Shares

Washington Emergency Management Division
January 6 · 🌐

There's lots of flooding potential in Western Washington in the coming days. One area of concern is the Chehalis River and the Skookumchuck River. The Chehalis Basin Flood Authority has potential flood maps & alert systems in place for residents to get warnings. You can find river gages near you and sign up to get notified about flooding issues near you. If flooding impacts you, sign up. You can also look at what areas are forecasted to be impacted by floods using Flood Inun... See more

CHEHALIS RIVER BASIN FLOOD AUTHORITY

Home Map Sites News Dashboards

- Weather Forecast
- Rainfall Forecast
- River Forecast
- Flood Maps
- Plot Gage Data
- Gage Data Maps
- Landslide
- Radar Rainfall
- Road Conditions
- USGS Gages
- Atmospheric Rivers
- Chehalis Basin Gage Height Conversion Project

Photo Credit:

👍 🥰 🙏 148 10 Comments 110 Shares

Like Comment Share

FEBRUARY 2022 USER SURVEY

Why sign-up for email high-water alerts?

- “In 2007 I was caught unaware in the flood!”
- “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.”
- “I’m a school superintendent. We have to decide on the safe passage of students.”
- “To be informed and to ensure that tenants are aware of issues.”

What are benefits of inundation maps?

- “They provide a visual representation of where problems are and are anticipated.”

ACTIONS YOU CAN TAKE TO PREPARE

- Familiarize yourself with the Flood Warning System and sign up for high water alerts
- Visit <https://chehalisbasinstrategy.com/flood-assistance/> and download its guides on protecting your property
- Carry flood insurance

UPCOMING EVENTS

- Nov. 3: Lewis County Emergency Management in-person meeting
 - 1pm, 321 Hamilton Road
- Nov. 30: Chehalis Basin Strategy webinar on flood risk and resources
 - [Sign up](#)

QUESTIONS?

Please type in the Q&A.

FOR MORE INFORMATION:

- Email Scott Boettcher at scottb@sbgh-partners.com
- ChehalisRiverFlood.com
- ChehalisBasinStrategy.com

