

CHEHALIS RIVER BASIN FLOOD WARNING SYSTEM

OCTOBER 25, 2021

SCOTT BOETTCHER

CHEHALIS RIVER BASIN FLOOD AUTHORITY STAFF



WHAT?



CHEHALIS RIVER BASIN FLOOD WARNING SYSTEM

- INFORMATION SYSTEM
- ALERT/NOTIFICATION SYSTEM
- 1ST LINE OF DEFENSE SYSTEM
- WWW.CHEHALISRIVERFLOOD.COM (WEB SYSTEM)

WHY?



December 2007



Photo by Bob Walter

WHY?

January 2009



<http://www.katu.com/news/37243024.html>

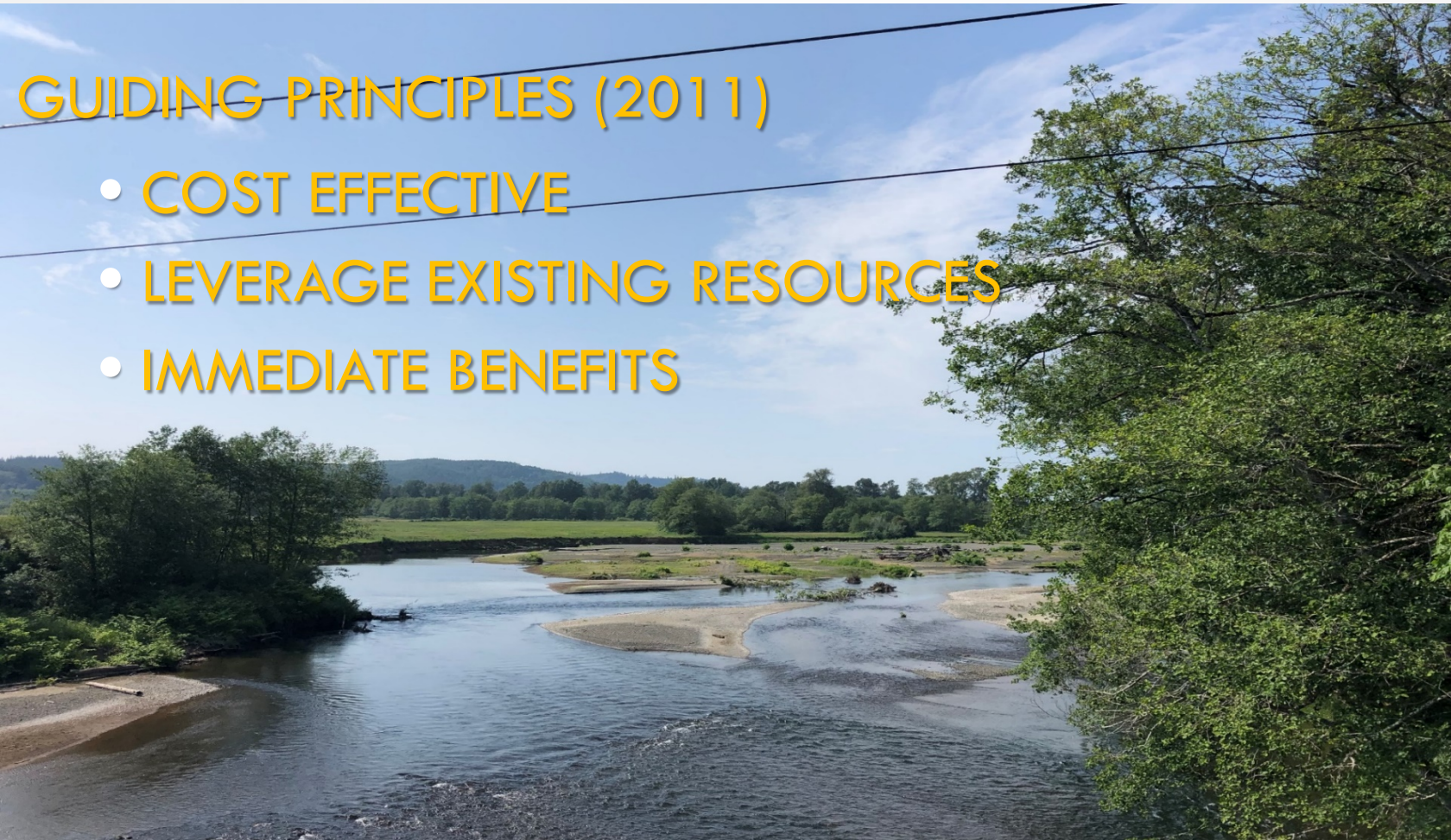
<http://www.komonews.com/weather/blogs/scott/37346554.html>

WHY?

2007 AND 2009 SHOWED NEED FOR:

- IMPROVED ACCESS TO INFORMATION
 - ACCURATE
 - ACCESSIBLE
 - EASY-TO-UNDERSTAND
- NO SURPRISES

BUILD!



GUIDING PRINCIPLES (2011)

- COST EFFECTIVE
- LEVERAGE EXISTING RESOURCES
- IMMEDIATE BENEFITS

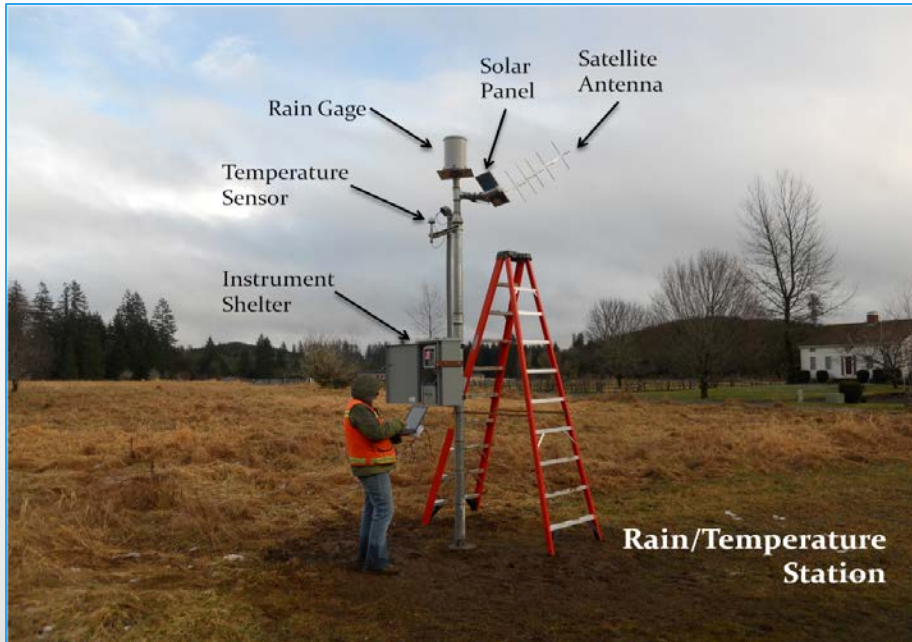


BUILD!

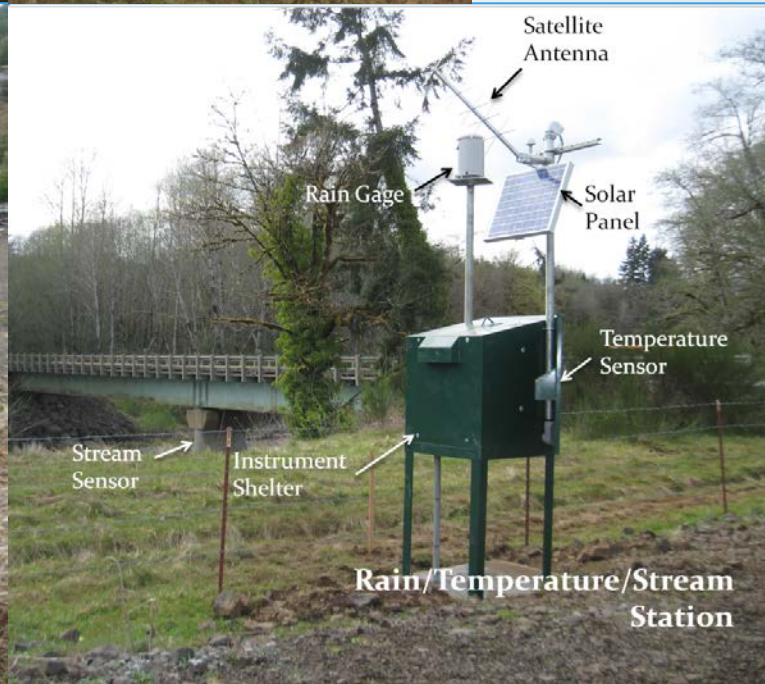


- IMPROVE ON-THE-GROUND MONITORING NETWORK
 - ✓ 8 RAIN/TEMPERATURE STATIONS
 - ✓ 2 RAIN/TEMPERATURE/STREAM STATIONS
- INTERNET DATA AND WARNING
- INUNDATION MAPPING
- WWW.CHEHALISRIVERFLOOD.COM

BUILD!



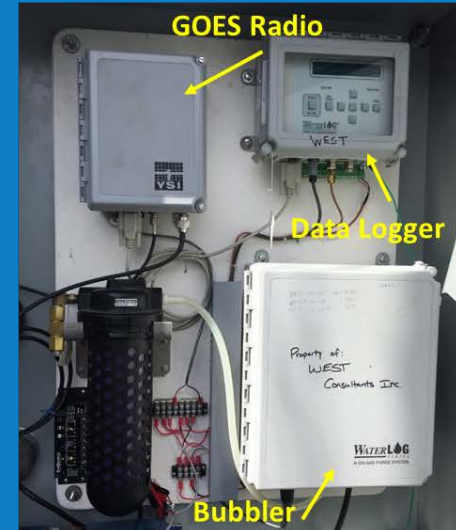
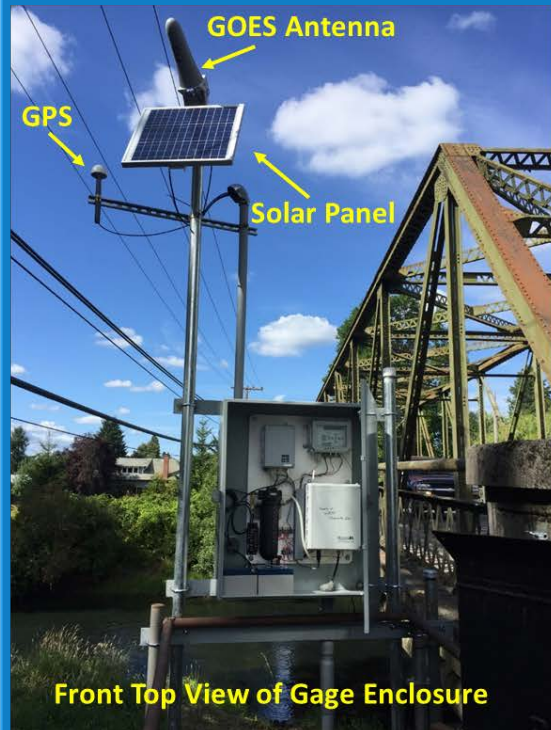
ADD NEW GAGE SITES (INITIALLY)



BUILD!



NWS GAGE UPGRADE – SKOOKUMCHUCK RIVER AT CENTRALIA, WA - 12026600

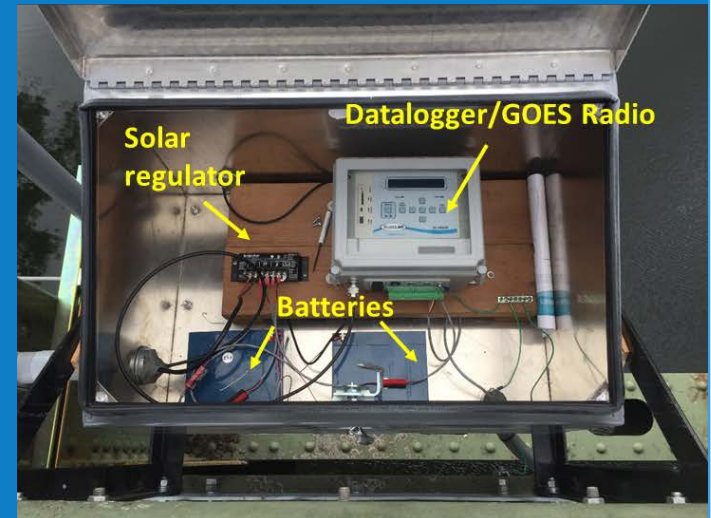


REPLACE NWS GAGES

BUILD!



NWS GAGE UPGRADE - CHEHALIS RIVER AT CENTRALIA, WA - 12025500



REPLACE NWS GAGES

BUILD!



ADD NEW GAGE SITES, THURSTON
COUNTY (2019/20)

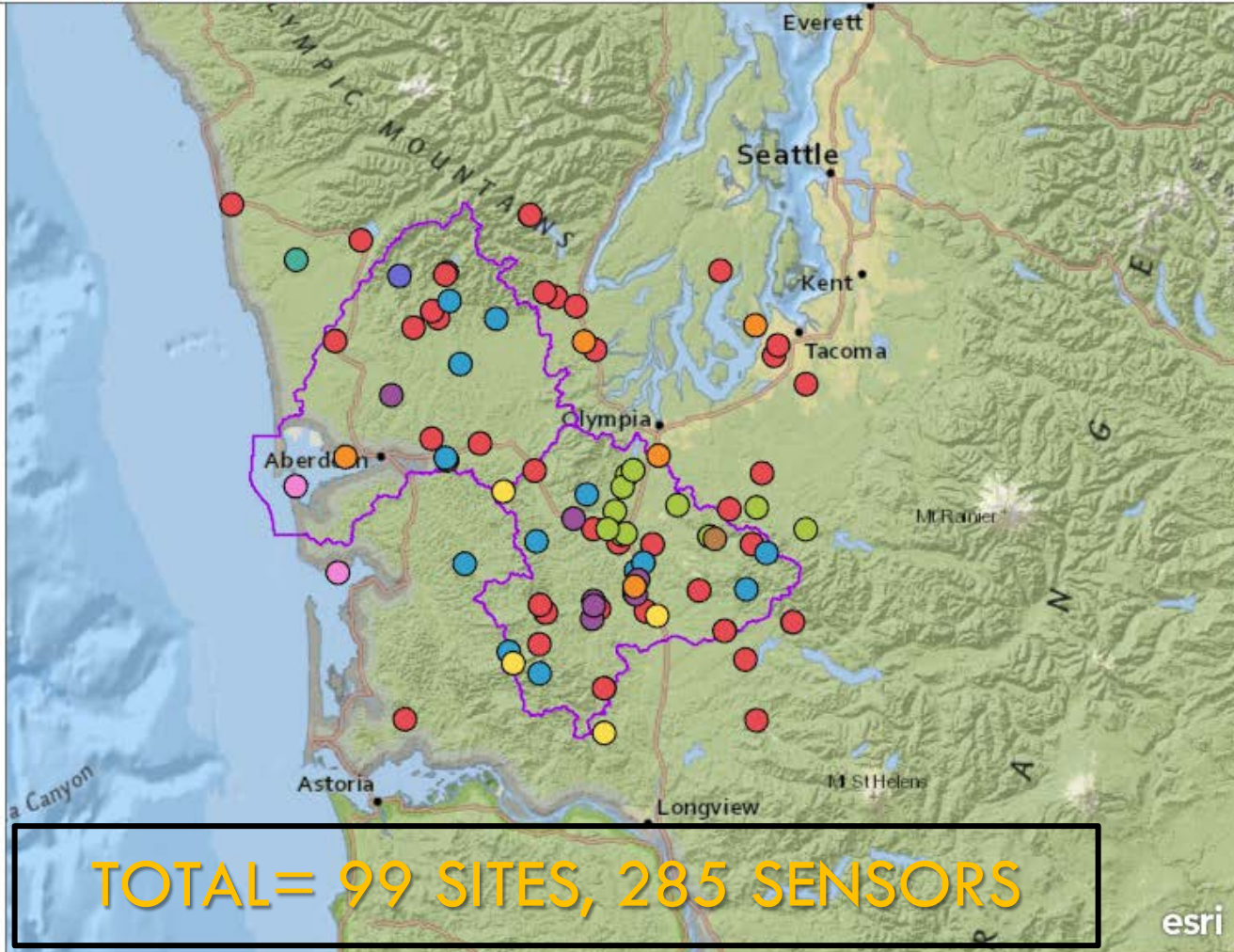
BUILD!



Chehalis Basin Flood Warning System Gages

All Flood Warning System Gages 05-15-2019

- U.S. Geological Survey
- Chehalis River Basin Flood Authority
- Thurston County
- WA State Department of Ecology
- National Weather Service/Federal Aviation Administration
- WA State Department of Natural Resources
- National Oceanic and Atmospheric Administration TIDES
- TransAlta
- U.S. Bureau of Indian Affairs
- U.S. Forest Service



Displays Chehalis Basin flood warning system gages by ownership.

BUILD!

Looking upriver from Montesano WWTP

Images limited to daylight hours.

Wynoochee River at Montesano, WA

Latest



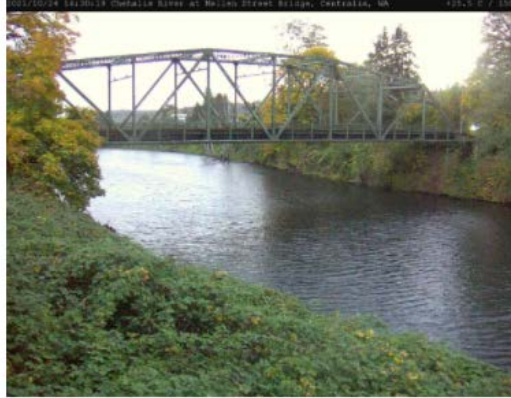
2021-10-24 12:17:35

Looking upriver at Mellen Street bridge

Images provided throughout the day.

Chehalis River at Centralia, WA

Latest



2021-10-24 17:30:57

Looking downriver from Chapman Farms

Lower Satsop River near Satsop, WA

Latest



2021-10-24 15:02:56

ADD THREE WEBCAMS (2019)

BUILD!



The screenshot shows the website interface for the Chehalis River Basin Flood Authority. At the top, there is a navigation bar with the following elements: the Chehalis River Basin Flood Authority logo, the URL WWW.CHEHALISRIVERFLOOD.COM, and a user profile icon. Below the navigation bar is a main menu with links for Home, Map, Sites, News, and Dashboards. The main content area features a large banner image of a river valley with mountains in the background. Below the banner are three navigation tabs: Rainfall Summary, River Summary, and Additional Resources. The central part of the page is a grid of 12 icons, each representing a different service or data source. The icons are arranged in two rows of six. The first row includes Weather Forecast, Rainfall Forecast, River Forecast, Flood Maps, Plot Gage Data, and Gage Data Maps. The second row includes Landslide, Radar Rainfall, Road Conditions, USGS Gages, Atmospheric Rivers, and Chehalis Basin Gage Height Conversion Project. At the bottom left of the page, there is a photo credit: Photo Credit: www.chehalisbasinstrategy.com.

Photo Credit:
www.chehalisbasinstrategy.com

BUILD!



Chehalis River Near Doty (DOTW1)

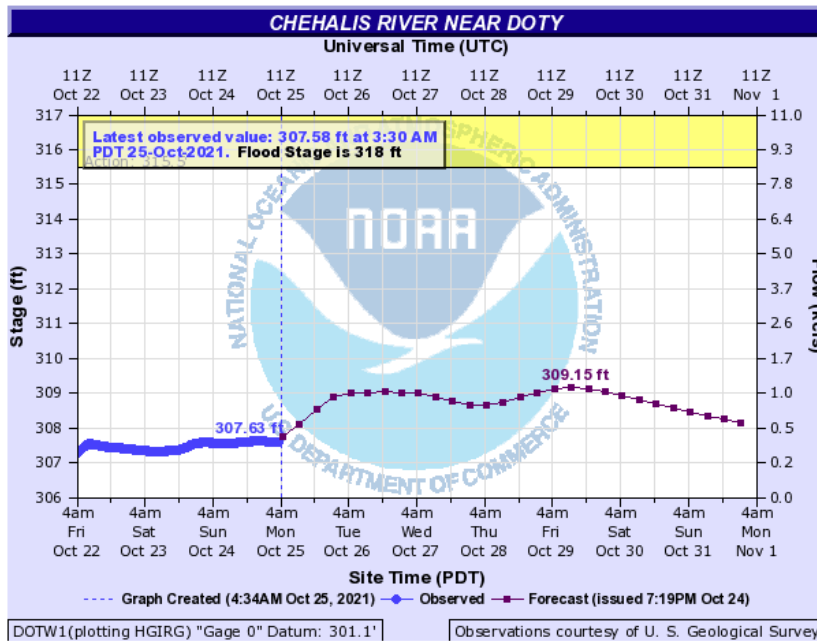
[Return to Top](#)

NOTE: River forecasts for this location take into account past and future precipitation. The stages/flows that will occur may be different if future rainfall is different than forecast.

Flood Stage: 318 Feet Latest Stage: 307.58

Current Warnings/Statements/Advisories: None currently.

Complete information about the Chehalis River near Doty available from NWS Seattle, WA



EMAIL GAGE ALERTS -- RISING RIVER LEVELS

Flood Categories (in feet)

Major Flood Stage:	324.5
Moderate Flood Stage:	323.5
Flood Stage:	318
Action Stage:	315.5
Low Stage (in feet):	0

Historic Crests

- 336.26 ft on 12/03/2007
- 319.66 ft on 12/20/2019 (P)
- 318.55 ft on 01/13/2021 (P)
- 318.28 ft on 01/03/2021 (P)
- 31.36 ft on 12/03/2007

[Show More Historic Crests](#)

Recent Crests

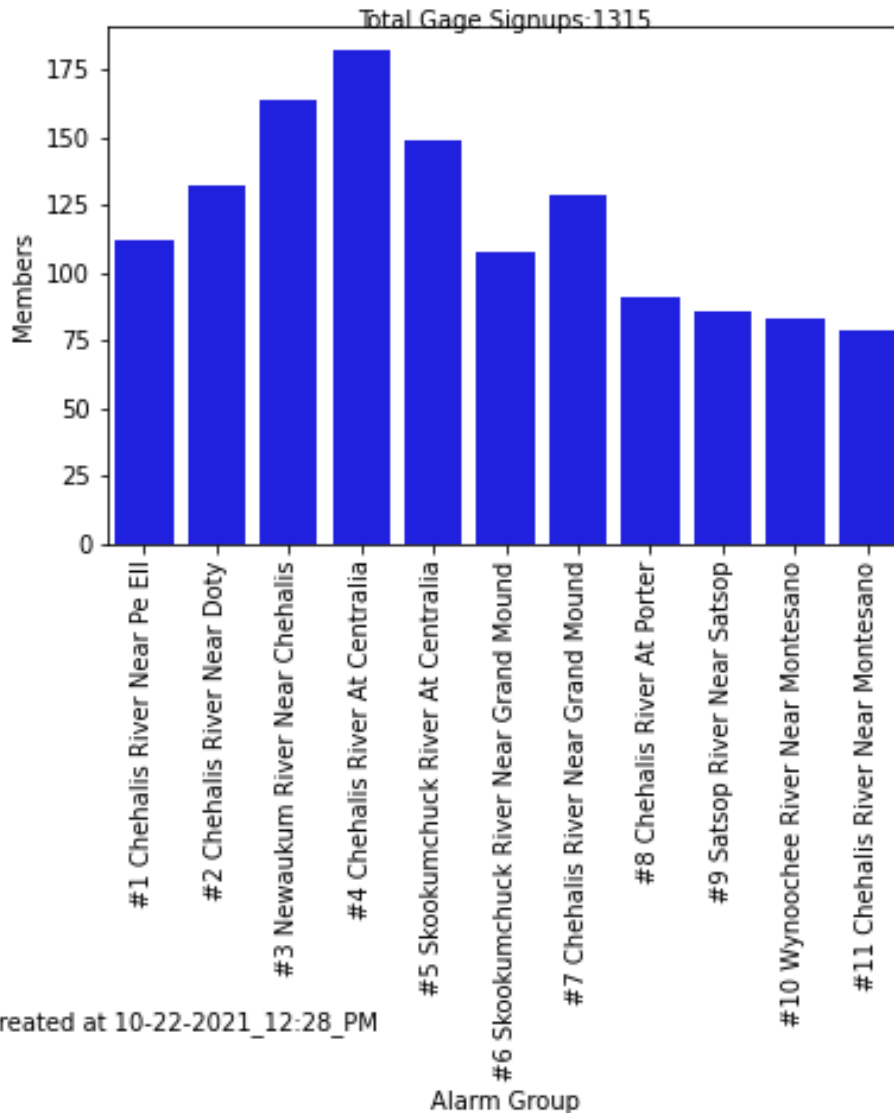
- 318.55 ft on 01/13/2021 (P)
- 318.28 ft on 01/03/2021 (P)
- 319.66 ft on 12/20/2019 (P)
- 14.32 ft on 02/09/2017 (P)
- 14.42 ft on 11/17/2015 (P)

[Show More Recent Crests](#)

(P): Preliminary values subject to further review.

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BUILD!



EMAIL GAGE ALERTS -- SIGN-UPS

- ✓ SITUATIONAL AWARENESS
- ✓ EMPLOYEE/STAFF SAFETY
- ✓ RESIDENCE SAFETY
- ✓ TRAVEL PLANNING

BUILD!

No Flood



Moderate



Action



Major



Minor



Major



BUILD!



← → ↻ ⚠ Not secure | chehalisriverflood.org

CHEHALIS RIVER BASIN FLOOD AUTHORITY

Flood Inundation Maps

Select a gage location:

Chehalis River at Centralia, WA

Current NWS Forecast
152.86 ft
10/25/2021 4:00 AM (observed value)
River Stage (ft)
164.3
164.9
165.9
166.9
167.9
Minor Flood Stage
168.9
169.9
170.9
Moderate Flood Stage
171.9
172.9
173.9
174.9
Major Flood Stage
175.9
176.9
177.9
179.9

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.

Keyboard shortcuts | Map data ©2021 Imagery ©2021, Maxar Technologies, U.S. Geological Survey, USDA Farm Service Agency | Terms of Use | Report a map error.

INUNDATION MAPPING

EXAMPLE:
INUNDATED AREA AT
172.9 FT.

BUILD!



Home



Seasonal Outlook for Temperature and Precipitation

Check out the latest outlook from the NWS Climate Prediction Center. Chances are that above average precipitation and below average temperature may be in store for western Washington. Click **HERE** for additional information.

10/21/2021 11:52:07



Chehalis River Basin Maintenance Activity

Various maintenance items have been completed this summer and fall. A number of rain gages have been relocated due to tree growth on timberland, a webcam has been reinstalled, and a USGS gage was reinstalled after bridge construction:

- Satsop River Webcam has been reinstalled, click **here** to view images from the three webcams in the basin.
- Skookumchuck Rain Gage has been relocated to a nearby location, click **here** to view site data and information.
- Brooklyn Rain Gage has been relocated to Doty Hills, click **here** to view site data and information.
- A new site, Willapa Hills Rain Gage, has been installed, click **here** to view site data and information.
- The United States Geological Survey has reinstalled the Chehalis near Montesano gage, click **here** to view site data and information.
- Meteorological sensors were removed from the Chehalis River below Thrash Creek near Pe Ell, WA site.
- Haywire Ridge Rain Gage has been relocated to a nearby location, click **here** to view site data and information.
- Rock-Weyco Rain Gage has been relocated to the Mason County Fire District 13 Station, click **here** to view site data and information.

What's next?

- One more rain gage remains to be relocated due to tree growth. The Newaukum Rain Gage will be moved in the spring of 2022. The current location is satisfactory for another year.
- The City of Aberdeen is providing access to water level data they collect on the lower Wishkah River in Aberdeen at Heron St Bridge. We are in the process of acquiring the data and posting it on the website.
- The gages operated by the Flood Authority are routinely maintained throughout the year to ensure performance. Heightened monitoring is performed during flood season.

10/21/2021 14:38:46



Sign up for 2021-22 High Water ALERTS

Flood season is here. The Chehalis River Basin Flood Warning System (www.chehalisriverflood.com) is a tool to help you be aware, be prepared. The Chehalis River Basin Flood Authority calls your attention to the following opportunity:

- **Sign-Up Now To Receive 2021/22 Email High Water Alerts** -- The Chehalis River Basin Flood Warning System has the capability to send email alerts to anyone interested in receiving notification about rising river levels from key river gages in the Chehalis Basin. To sign-up for email alerts for the 2021/22 flood season please follow the directions **here**. Comments or questions can be directed to Scott Boettcher, Chehalis River Basin Flood Authority, 360/480-6600. scottb@sbgh-partners.com.

06/30/2021 15:40:34

REGULAR NEWS AND COMMUNICATION

2021 / 22 FLOOD SEASON

2021/22 Flood Season: Flood Warning System Email Alerts Sign-Up Today!



Chehalis River Basin Flood Warning System sends automatic email alerts about rising river levels from the following gage sites:

- #1 Chehalis River Below Thrash Creek -- <https://bit.ly/2JV5zuj>.
- #2 Chehalis River near Doty -- <https://bit.ly/38HTeKq>.
- #3 Newaukum River near Chehalis -- <https://bit.ly/3pzrmhF>.
- #4 Chehalis River at Centralia -- <https://bit.ly/2lq8SPW>.
- #5 Skookumchuck River at Centralia -- <https://bit.ly/3plwO2>.
- #6 Skookumchuck River near Bucoda -- <https://bit.ly/2H3IATY>.
- #7 Chehalis River near Grand Mound -- <https://bit.ly/36zBoqj>.
- #8 Chehalis River at Porter -- <https://bit.ly/3ktep4Y>.
- #9 Satsop River near Satsop -- <https://bit.ly/2Us4emC>.
- #10 Wynoochee River near Montesano -- <https://bit.ly/3zHnuB3>.
- #11 Chehalis River near Montesano -- <https://bit.ly/36CLqEd>. [Note: Gage out-of-service due to bridge construction.]



(Click [here](#) to open gage alerts map.)

Sign-Up to receive email alerts from any of the above gage sites by emailing scottb@sbgh-partners.com and dcurtis@westconsultants.com:

- Your name.
- Your email.
- The gage site number(s) you are interested in.

Questions can be directed to Scott Boettcher (Staff, Chehalis River Basin Flood Authority), scottb@sbgh-partners.com, 360/480-6600.

More Information:

Chehalis River Basin Flood Authority
www.ezview.wa.gov/chehalisfloodauthority

Flood Warning System
www.chehalisriverflood.com

Gage Alerts Map
<http://arcg.is/2fbhZyX>

SIGN-UP NOW!

WWW.CHEHALISRIVERFLOOD.COM

2021 / 22 FLOOD SEASON

CHEHALIS RIVER BASIN FLOOD WARNING SYSTEM TRAINING

- 11/10/2021 (12-1 PST)
- 11/17/2021 (12-1 PST)
- SIGN-UP AT WWW.CHEHALISRIVERFLOOD.COM (STARTING 10/26/2021)

THANK YOU!

SCOTT BOETTCHER

CHEHALIS RIVER BASIN FLOOD AUTHORITY STAFF

360/480-6600

SCOTTB@SBGH-PARTNERS.COM

BE AWARE, BE PREPARED