

Chehalis River Basin Flood Authority Flood Warning System 2023 Master Plan

David C. Curtis, PhD, F.EWRI
WEST Consultants

History

- 2010 Authorized Flood Warning System
- 2011 Flood Warning System Operational
- 2017 Master Plan
- 2022 Major Flood Event
- 2023 Master Plan

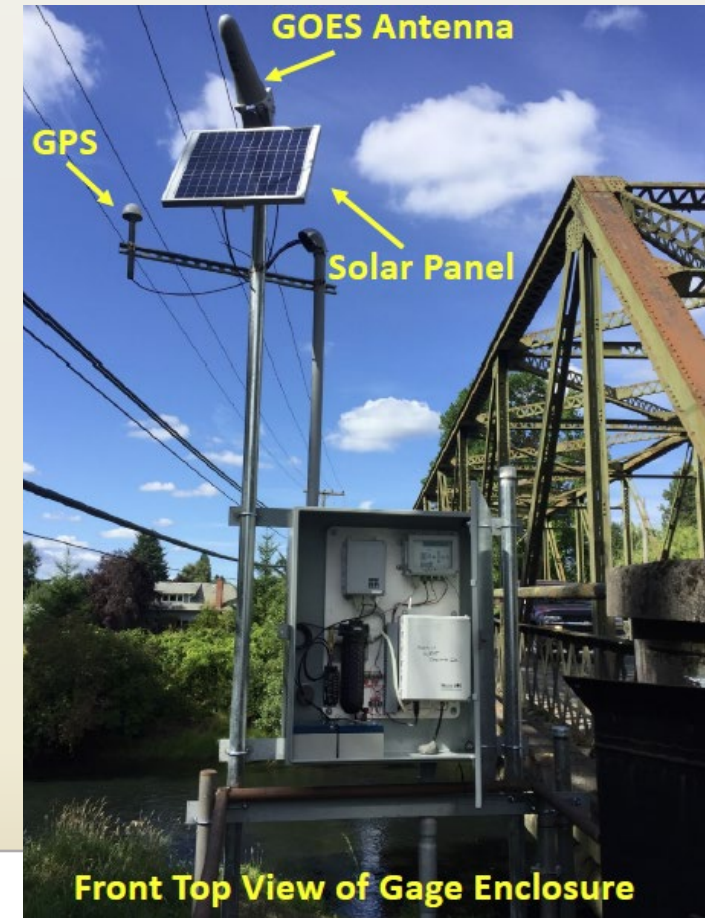


Beeville rain/temperature site

2017 Master Plan

- 2017
 - Add new existing gages
 - Upgrade 2 NWS stream gages
 - Convert to NAV88D Datum
 - Outreach
 - Update GOES transmitters
 - Consider adding GARR

Currently ~300 sensors



Skookumchuck at Centralia

Outreach

- Public engagement
 - Webinars
 - News articles
 - Flood preparedness meetings
 - Social media
 - User surveys
- Stakeholder awareness
 - Frequent updates to flood authority board
 - Governor's Office of the Chehalis Basin
 - Gages group

2023 Master Plan

- **Critical Updates**
- **Low-Cost Enhancements**
- **Important Upgrades**
- **Strategic Initiatives**



Critical Updates

- Move Chehalis below Thrash Creek Gage
 - Tree growth
 - Channel changes

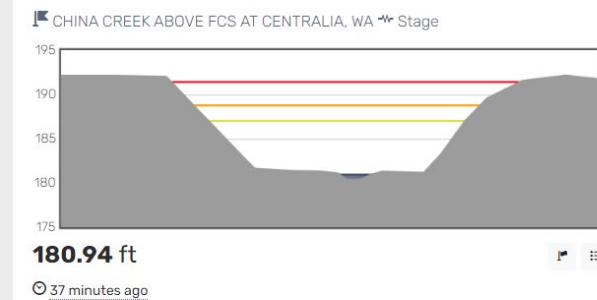


Low-Cost Enhancements

- Add new existing gages
- Improve high water alert messaging
- Add forecasted high-water alerts
- Website training
- Social media
- Post flood action plan

Website Training

China Creek at Flow Control Structure

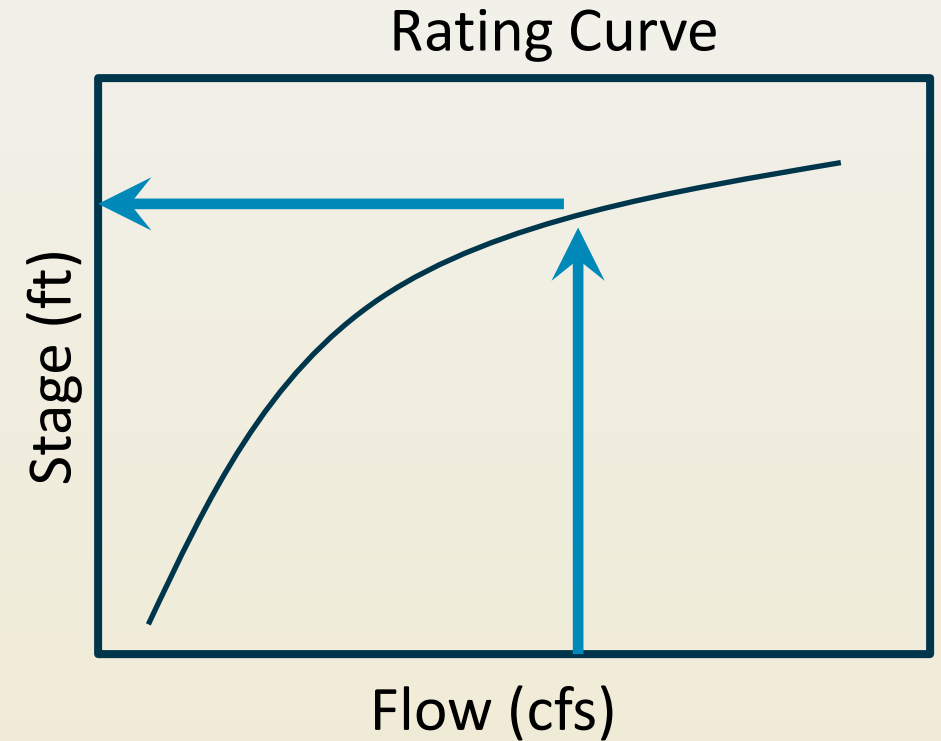


Reload



Important Upgrades

- Upgrade to Contrail Server
- Verify rating curves
- Add gap filling rain gages?
- Improve transient snowpack monitoring
- Communicate inundation map uncertainty



Strategic Initiatives

- **Strategic Initiatives**
 - Improve lower Chehalis forecasting
 - Improve Skookumchuck Reservoir forecasts



Chehalis Keys for Success

- Maintenance commitment
- Update technologies
- Annual improvements
- Public engagement
 - Webinars
 - News articles
 - Flood preparedness meetings
 - Social media
- User surveys
- Gages Group
- Stakeholder awareness
 - Frequent updates to the CRBFA board
 - Chehalis Basin Strategy Governor's Office of the Chehalis Basin.

