

Water Quality Monitoring in WRIA 23 for 2015

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Ecology's water quality tasks
to support evaluation of flood
control structures/activities
in the Upper Chehalis
Watershed

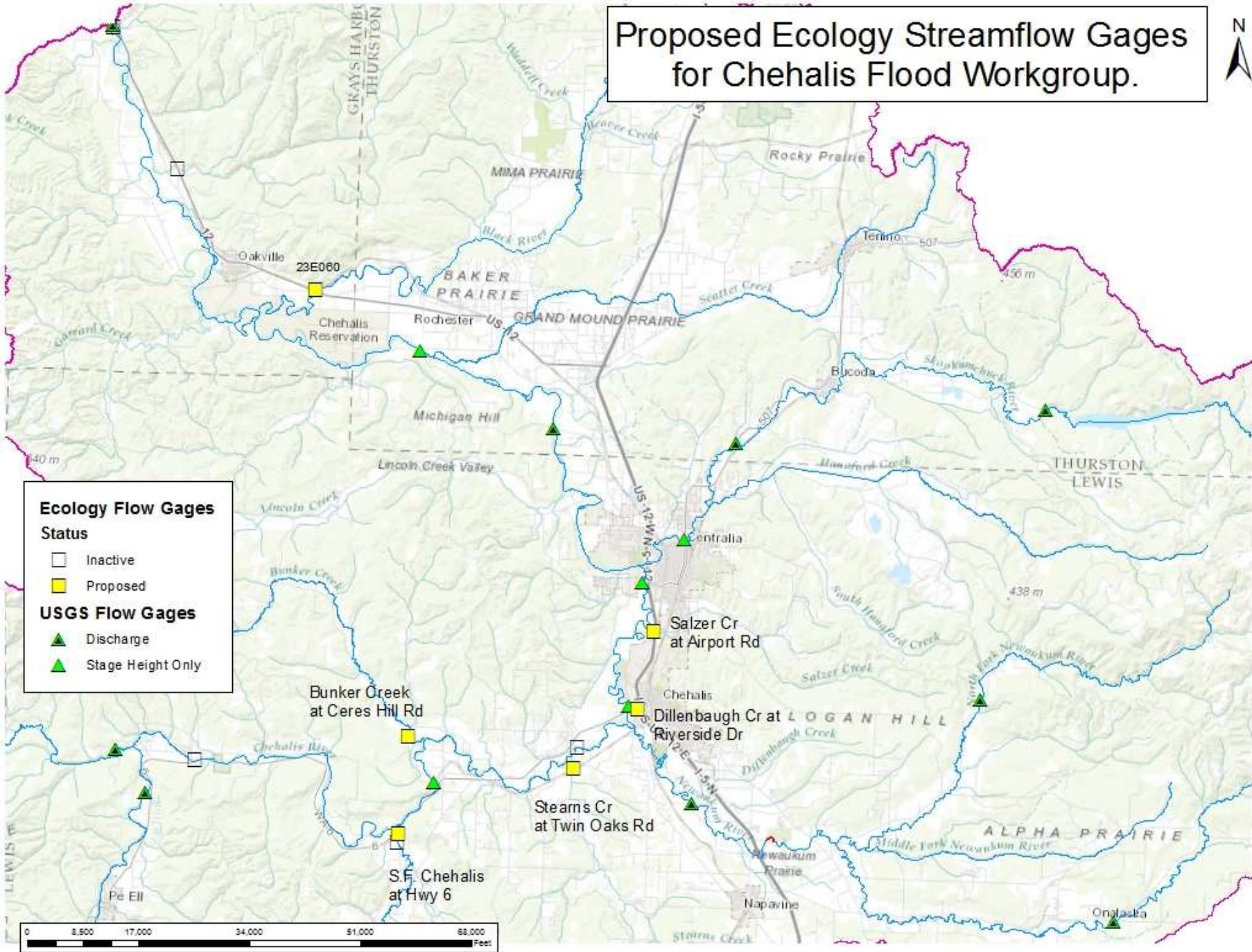


Monitoring Objectives

- Evaluate water quality effects of the proposed dam
- Gage 6 currently unmeasured tributaries to the Upper Chehalis River
- Collect continuous WQ data at gages
- Continuous Temperature monitoring at 15 additional stations
- WQ Model of Chehalis River from proposed dam structure to Porter



Proposed Ecology Streamflow Gages for Chehalis Flood Workgroup.

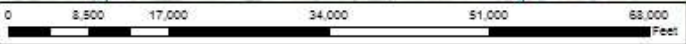


Ecology Flow Gages Status

- Inactive
- Proposed

USGS Flow Gages

- ▲ Discharge
- ▲ Stage Height Only



Stream Gage Locations

1. *South Fork Chehalis River* at Hwy 6
2. *Bunker Creek* at Ceres Hill Road
3. *Stearns Creek* at Twin Oaks Road
4. *Dillenbaugh Creek* at Riverside Drive
5. *Salzer Creek* at Airport Road
6. *Black River* at Hwy12



Streamflow Gages

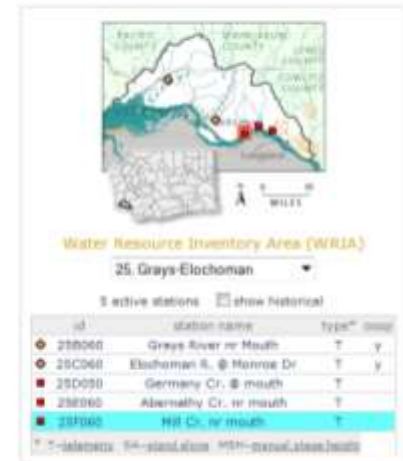
- Telemetry style gages
- Real-time data available on the web
- Hoping for reasonable level of accuracy (not great, but not terrible)



River & Stream Flow Monitoring

assessment > flow_monitoring > state_network >

station
outh
monitoring station



ID	23F060
type	telemetry
Latitude	46° 11' 26" N
Longitude	123° 10' 43" W
Stream class	A
River mile	0.5
Staff lead	Casey Clishe Casey.Clishe@scs.ca.gov
County	Cowlitz
Ecoregion	Voltares
Period of record	June 2004 - Present

This station is subject to severe backwater effects when the stage on the Columbia River exceeds 10.50 feet. (USGS stream page 14144700, Columbia River at Vancouver)

General Flow Stage Water Temp. Air Temp. Turbidity Diss. Oxygen Conductivity



Water Quality Data Collection

- WQ Sondes co-located with streamflow gages
- Parameters include:
 - Dissolved Oxygen
 - Temperature
 - pH
 - Conductivity



Current Status

- Funding is in all 3 legislative budget proposals; this task will move forward
- Shoreline Permitting with Lewis County is complete and permissions have been obtained for multiple sites so far.
- Installations slated to begin week of June 22

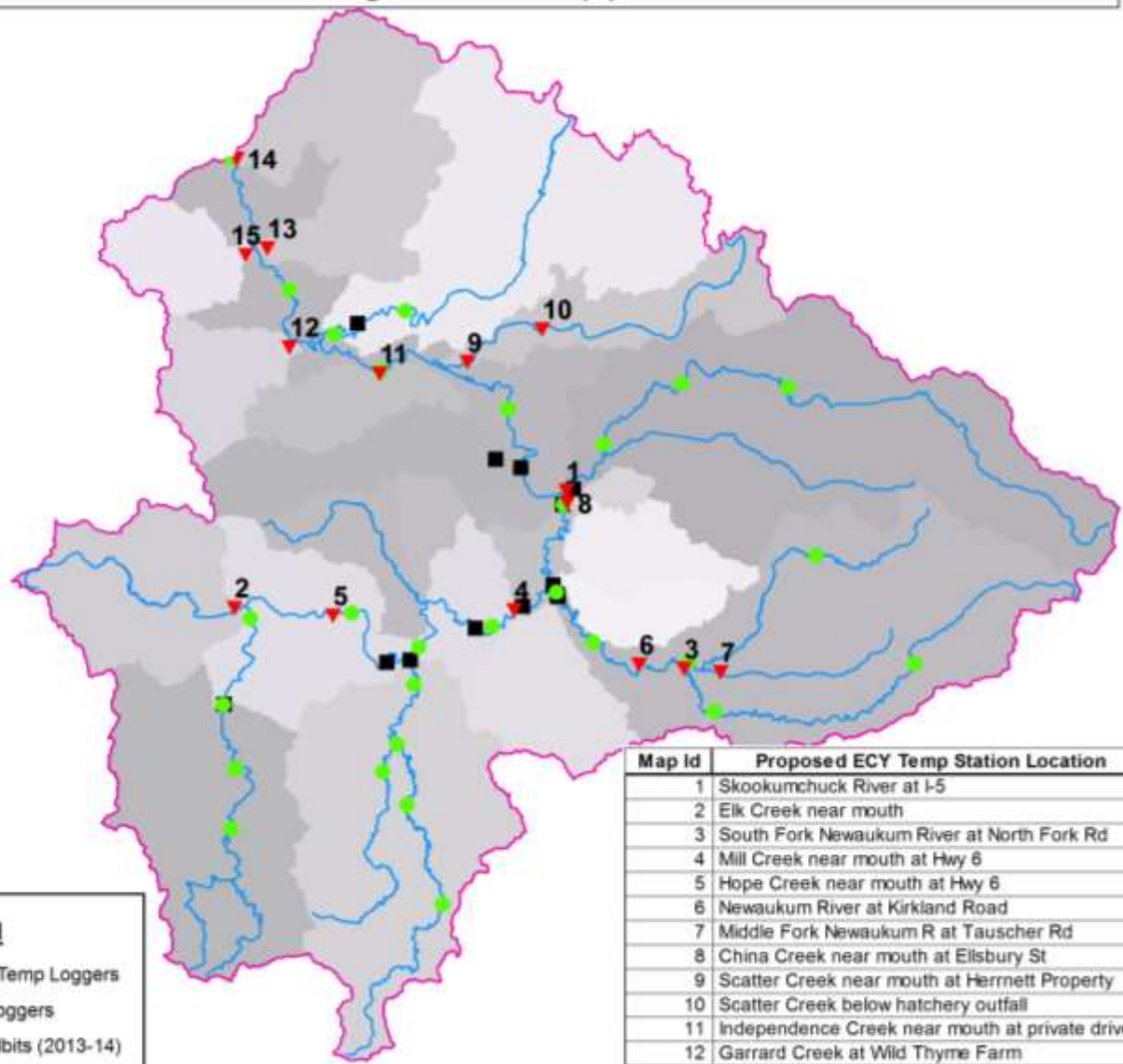


Continuous Water Temperature

- Ecology Monitoring ~15 sites
- WDFW Monitoring ~30 sites
- Temperature Measurements every 30 minutes.



Temperature Monitoring for the Upper Chehalis Watershed



Legend

- ▼ Proposed ECY Temp Loggers
- WDFW Temp Loggers
- Anchor QEA Tidbits (2013-14)



Map Id	Proposed ECY Temp Station Location
1	Skookumchuck River at I-5
2	Elk Creek near mouth
3	South Fork Newaukum River at North Fork Rd
4	Mill Creek near mouth at Hwy 6
5	Hope Creek near mouth at Hwy 6
6	Newaukum River at Kirkland Road
7	Middle Fork Newaukum R at Tauscher Rd
8	China Creek near mouth at Ellsbury St
9	Scatter Creek near mouth at Herrnett Property
10	Scatter Creek below hatchery outfall
11	Independence Creek near mouth at private drive
12	Garrard Creek at Wild Thyme Farm
13	Cedar Creek near mouth at Elma Gate Rd
14	Porter Creek near mouth at Hwy 12
15	Rock Creek near mouth at South Bank Rd

