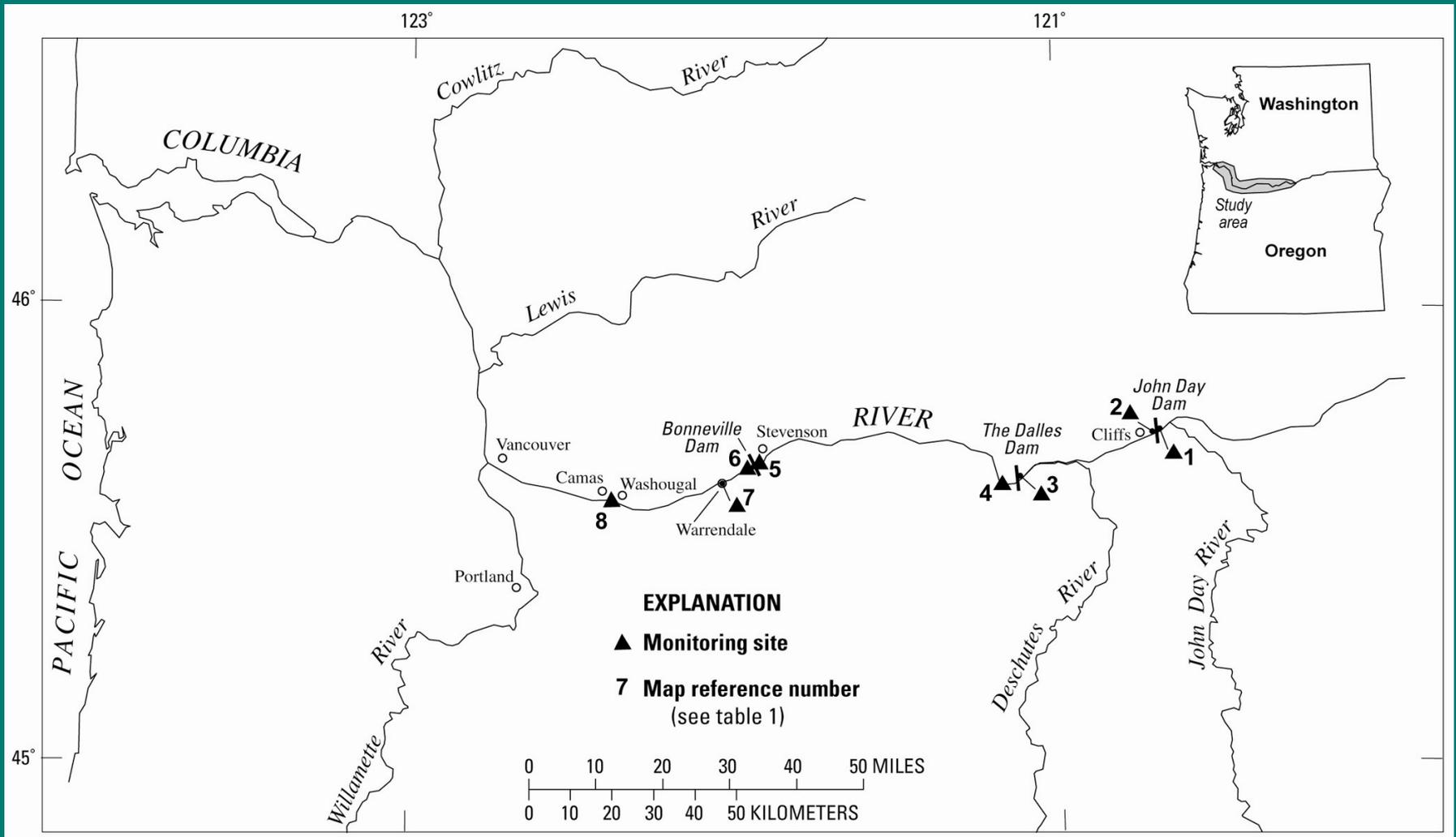


# TOTAL DISSOLVED GAS MONITORING Lower Columbia River

2014 Annual Review Meeting  
December 4, 2014

# Monitoring Stations



# Monitoring stations

Station Code	Station name	Monitoring period
JDY	John Day forebay	March – September
JHAW	John Day tailwater	Year-round
TDA	The Dalles forebay	March – September
TDDO	The Dalles tailwater	Year-round
BON	Bonneville forebay	March – September *
CCIW	Cascade Island	March – September
WRNO	Warrendale	Year-round
CWMW *	Camas	March – September

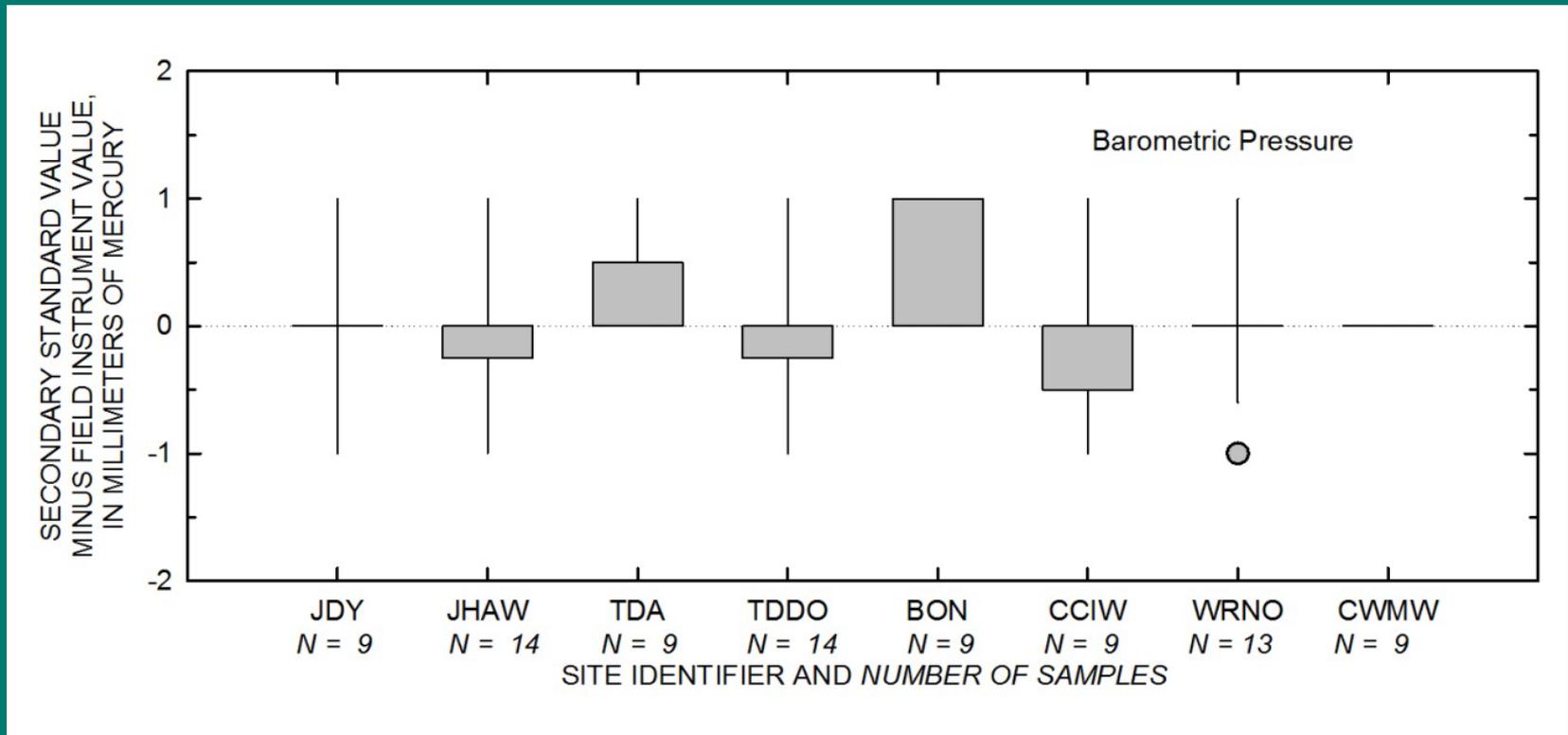
# Field Equipment

- Hydrolab Minisonde(s)
- Vaisala analog barometer
- Sutron Satlink2 DCP (transitioning to V2)
- Solar panels (primary or backup power)

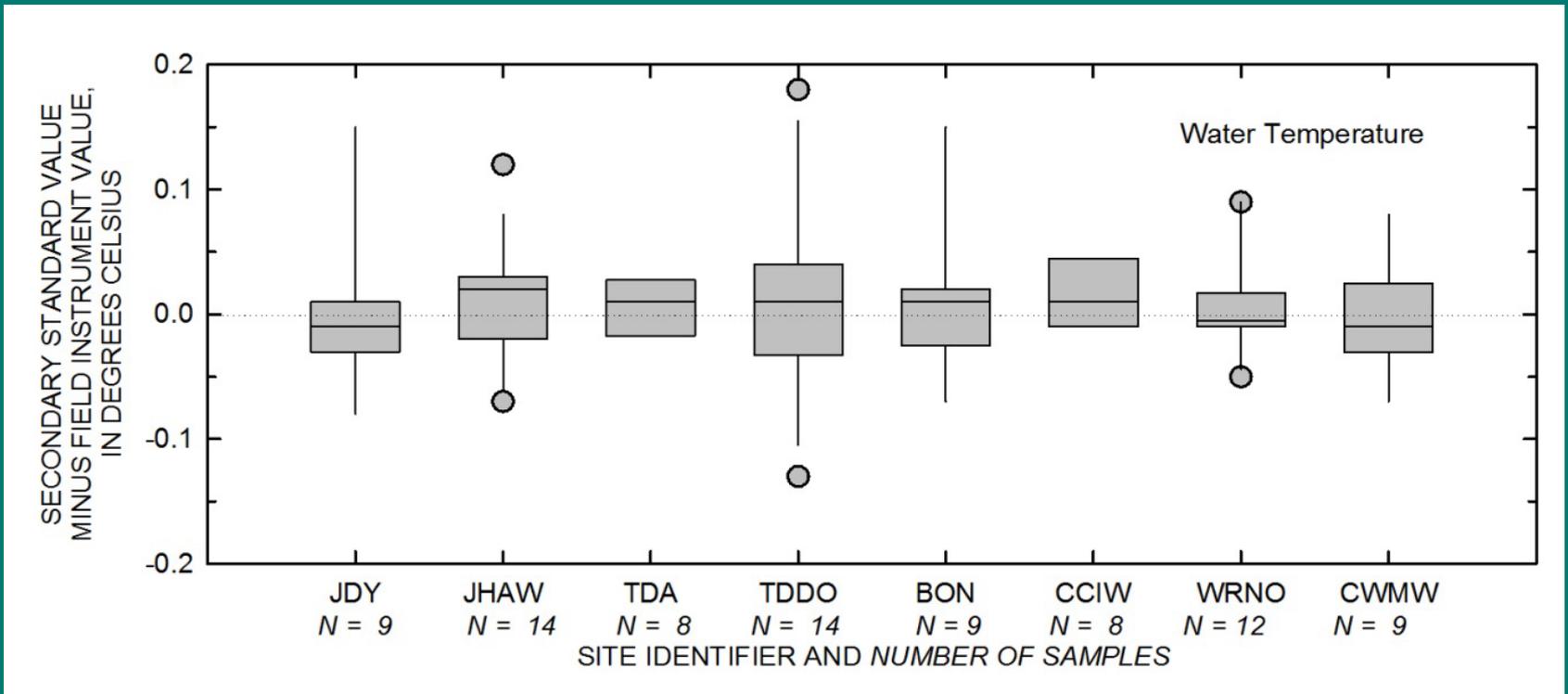
# Lab Equipment

- NovaLynx digital barometer
- Digimano pressure gage
- Club soda

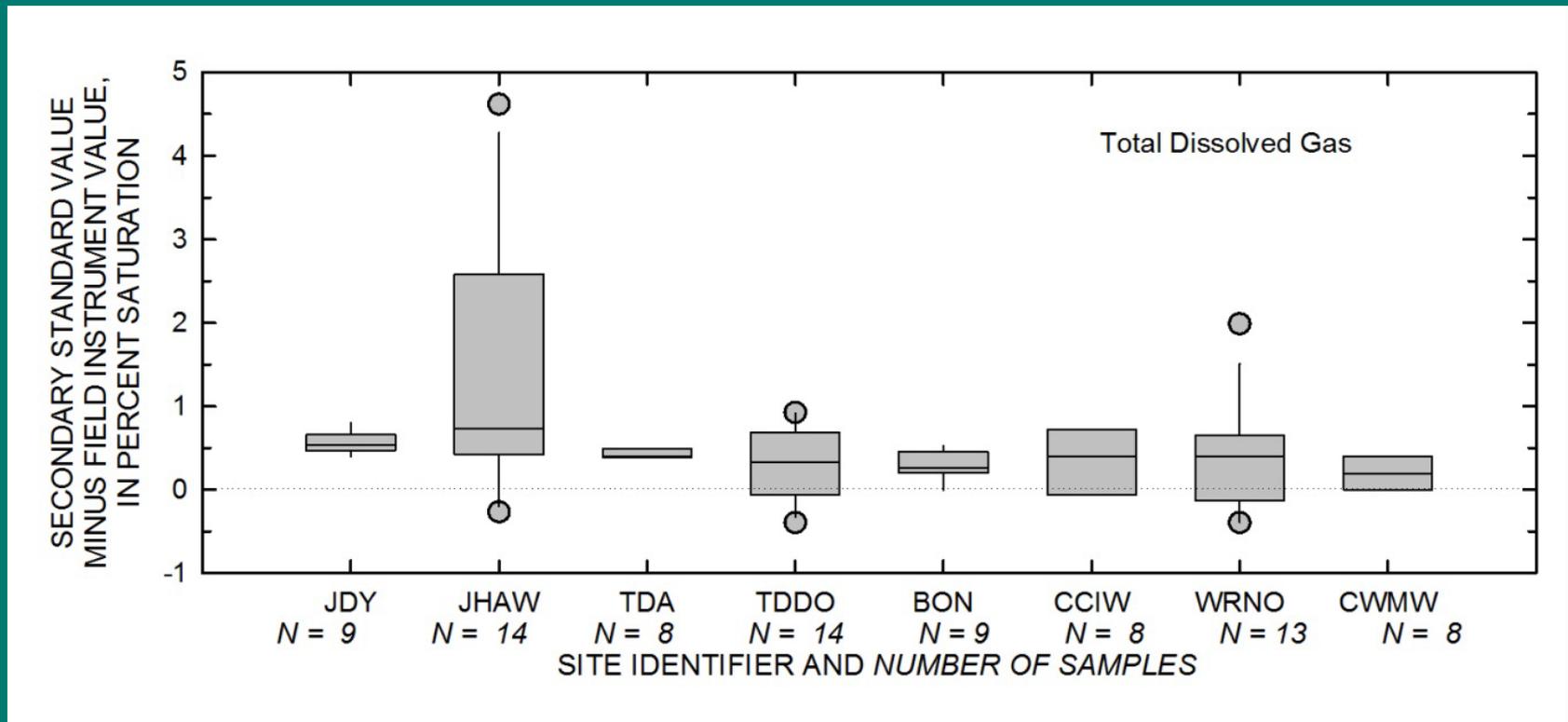
# FIELD CHECKS: Barometric Pressure



# FIELD CHECKS: Water Temperature



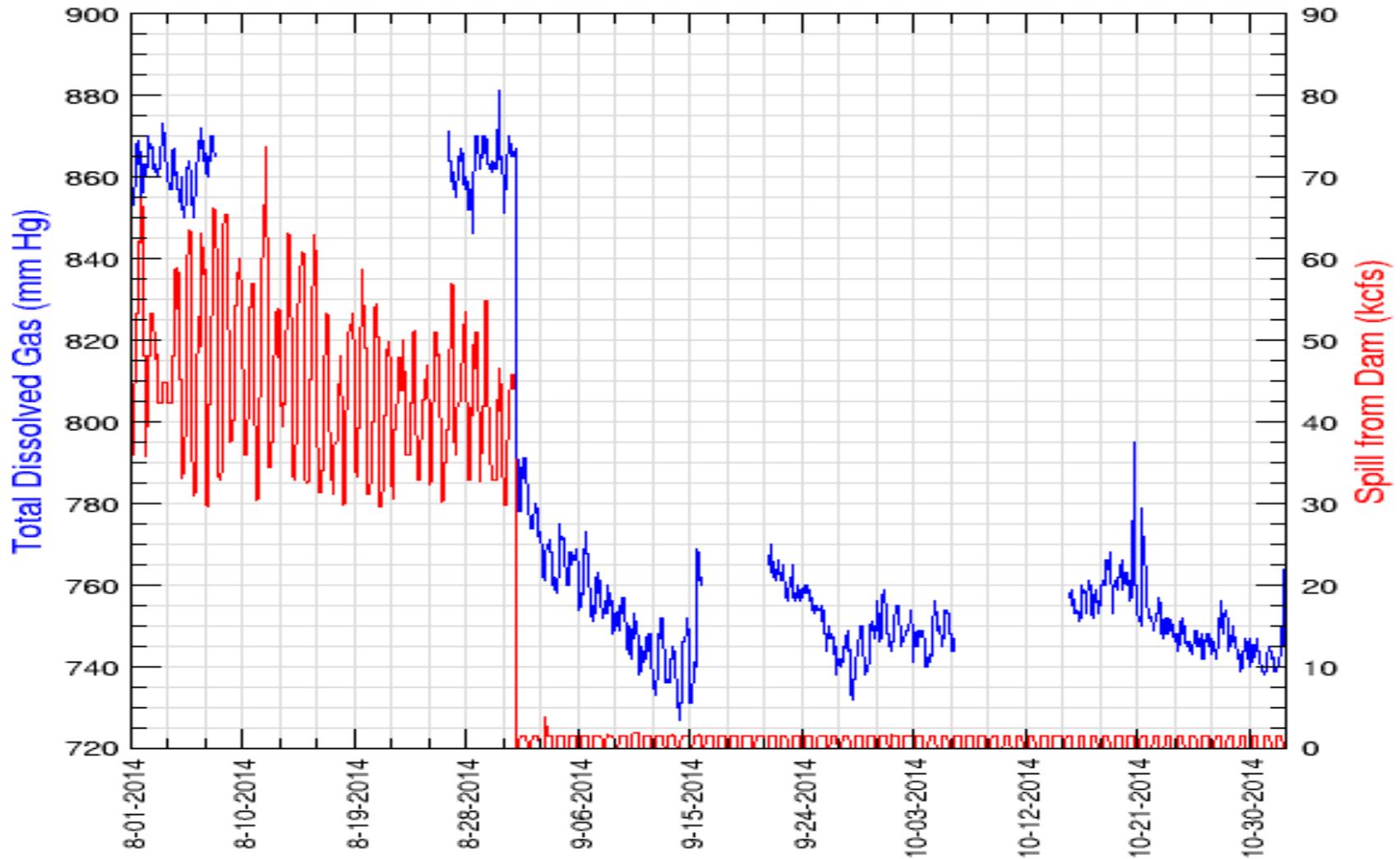
# FIELD CHECKS: Total Dissolved Gas



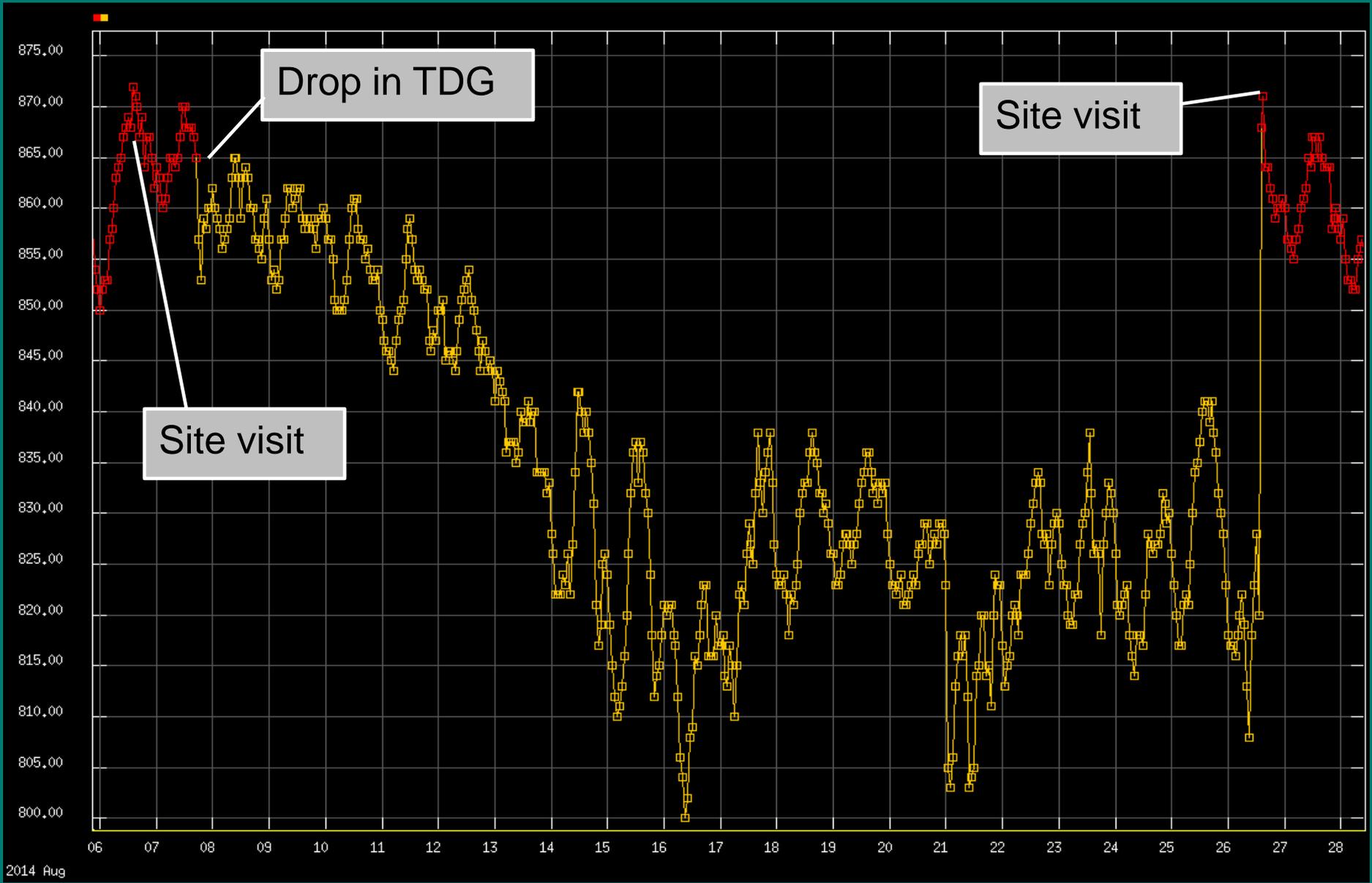
# Data Issues: JHAW

Columbia River, right bank, near Cliffs, WA (454249120423500)

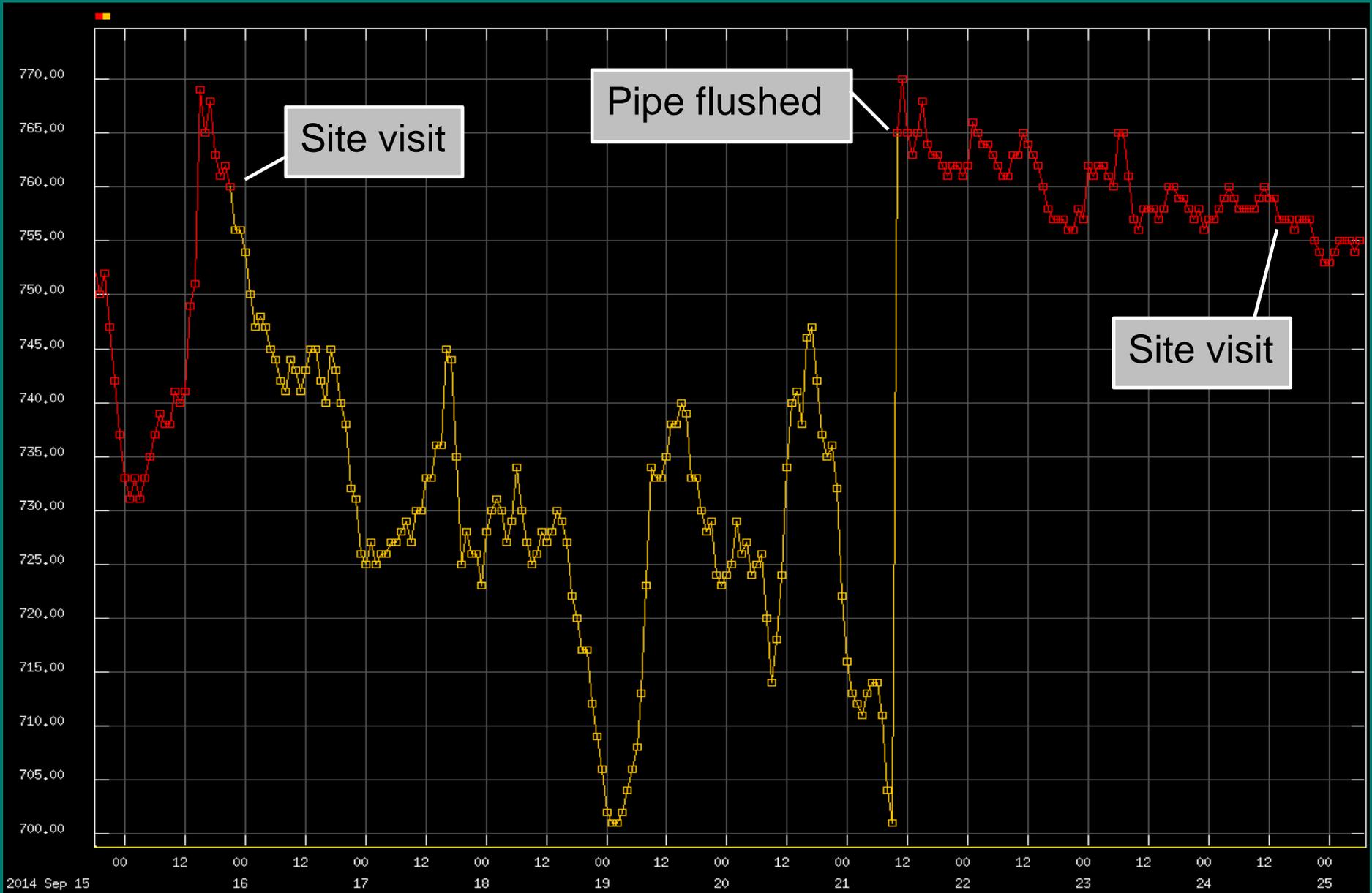
Data from USGS and USACE



# Data Issues: JHAW



# Data Issues: JHAW





# Data Issues

- **JHAW erroneous data**
  - Low data values during and after spill season (more common after spill ends)
  - Flushing pipe seems to help, but maybe only temporarily
- **TDA missing data**
  - Crane blocking transmission antenna
  - Instrument communications failed during that period
- **CWMW erroneous / missing data**
  - Failed transmissions (DCP)
  - Membrane ruptured during that period, one other period

# Data completeness

Site code	Number of missing hours	Reason(s)	Percent complete
JDY	1	Routine site visit	100%
JHAW	1517	Erroneously low TDG values (cause unknown)	82.7%
TDA	141	Failed communication between datalogger and instrument	96.9%
TDDO	6	Routine site visits; Instrument removed during pipe maintenance	99.9%
BON	1	Routine site visit	100%
CCIW	4	Routine site visits	99.9%
WRNO	31	Failed transmissions (weather)	99.6%
CWMW	985	Failed transmissions (DCP); Ruptured membranes	78.2%
<b>TOTAL</b>	<b>2686</b>		<b>94.5%</b>

# Questions?

