

Cowichan River Water Quality Update – July 26, 2024

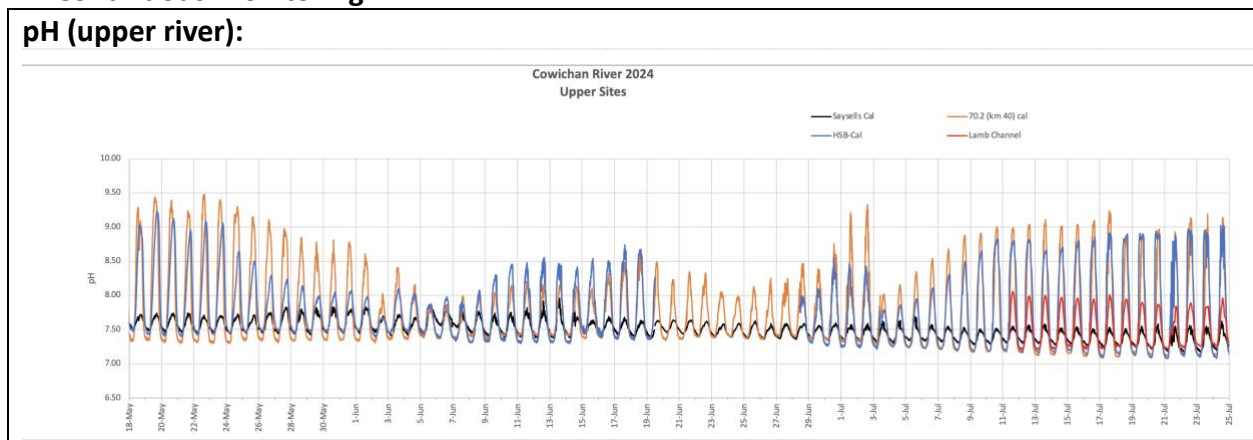
The following information summarizes water quality results for the upper and lower sections of the Cowichan River beginning May 2024. A rigorous monitoring program was put in place as part of a multi-partner plan to avoid another fish mortality event as observed in the summer of 2023. Partners include Cowichan Tribes, BC Fisheries, DFO, CVRD, Town of Lake Cowichan, Municipality of North Cowichan, and the Cowichan Watershed Board. Water quality results are used by the partners to make decisions on required responses to protect fish health and their habitat.

Continuous monitoring equipment has been installed at various locations in each of the upper and lower sections of the river to assess daily fluctuations in water temperature, pH, and dissolved oxygen. Grab samples are collected every 2 weeks at several sites along the river to assess various parameters including nutrient levels and E. coli.

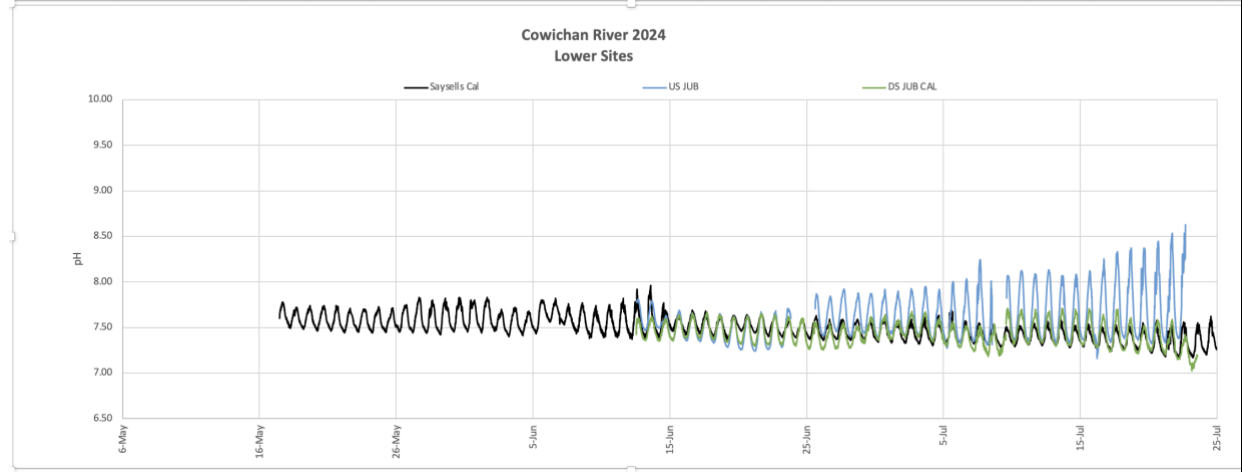
1. Highlights for the week

- Sunny hot weather to July 26th continued to affect water quality
- Flows remain at 7 cms
- Large diurnal swings in pH reaching daytime values over 9.0 in the upper river and 8.5 in the lower river
- Dissolved oxygen levels have increased in the upper river to over 14 ppm
- Water temperatures have increased over the previous week, reaching 24° to 26° C on some days in upper river sites
- No fish mortality was observed in a recent swim of the upper river
- Monitoring temperature of known cold water refuges in the river is underway

2. Continuous Monitoring:

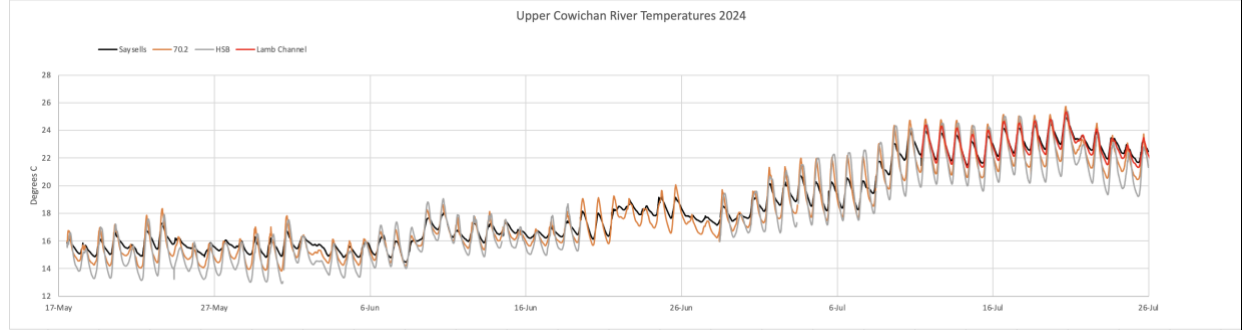


pH (lower river):

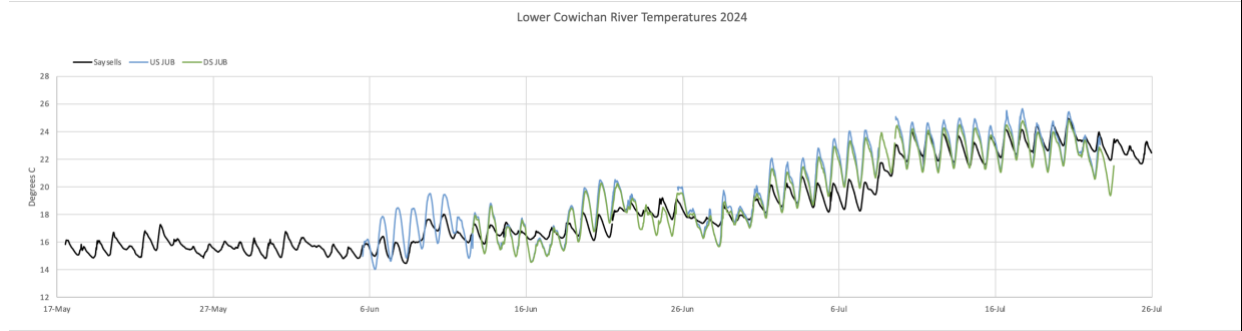


Note: JUB-Joint Utility Board sewage outfall. U/S-upstream. D/S-downstream. HSB-Horseshoe Bend. 70.2-70.2 Mile Trestle. Lamb – Lamb Creek side channel
 Diurnal pH fluctuations result from algal respiration. The Saysell Site is located in the upper river above the Town of Lake Cowichan sewage outfall and represents preferred range in pH diurnal fluctuations. Wide diurnal fluctuations indicate excessive algal growth which is harmful and can be lethal to fish populations.

Temperature (upper river):

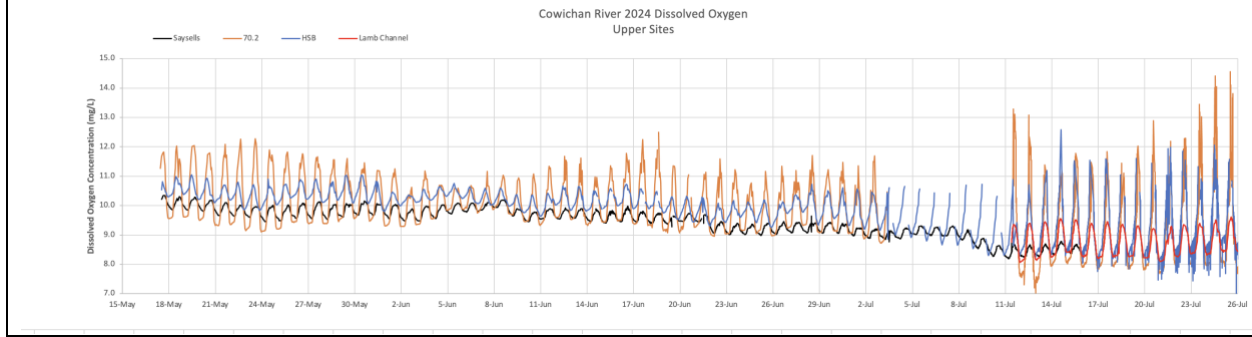


Temperature (lower river):

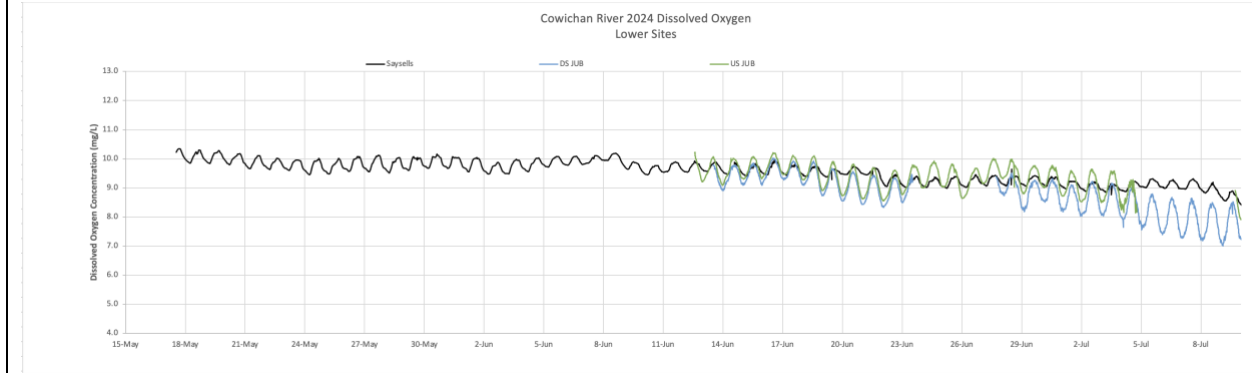


Note: Water temperatures above 16° C are stressful to salmon and trout. Temperatures above 20° C are extremely stressful and temperatures approaching 24° C can be lethal. Note: Data from Saysell's site from upper river added for comparison.

Dissolved Oxygen (upper river):



Dissolved oxygen (lower river): (No new data available since July 10th)



Note: Diurnal DO fluctuations result from algal respiration. The Sarsell Site is located in the upper river above the sewage outfall and represents preferred range in DO diurnal fluctuations. Wide diurnal fluctuations indicate excessive algal growth which can be stressful and in extreme cases lethal to fish populations.

3. Fish Health:

- No reported observations of fish mortality in upper or lower river sections.
- A July 24th fish swim found healthy trout populations though low numbers of steelhead fry and par

Note: Observations of dead fish are to be reported to:

- RAPP: 1-877-952-RAPP (7277)
- DFO: 1-800-465-4336
- CWB: admin@cowichanwatershedboard.com