

Gobata Wadawurrung dja



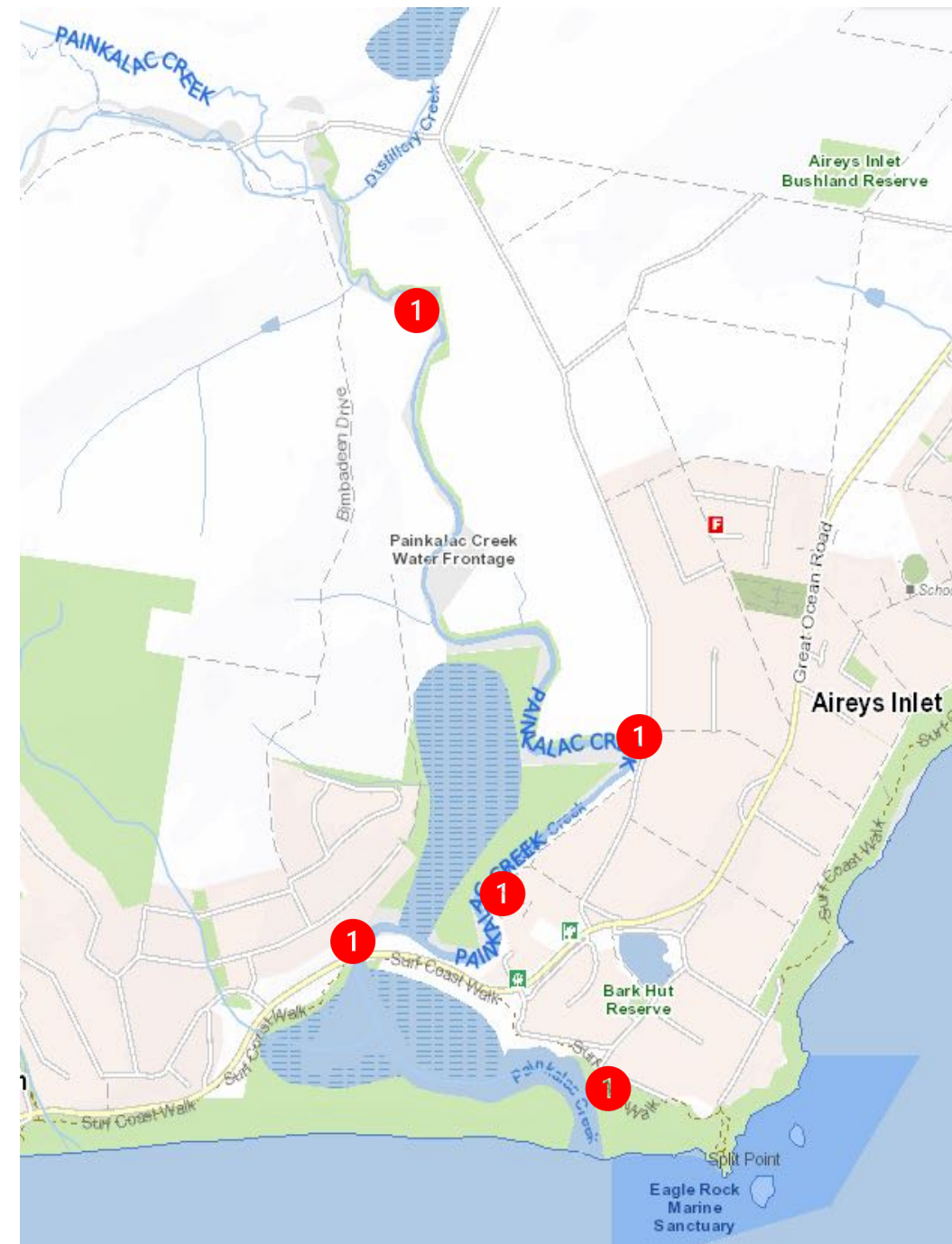
EstuaryWatch

Citizen science project (volunteers)

- Take water quality measurements
- Upload results to database
- Data to monitor trends, answer questions & decision making

Monthly monitoring since 2007

5 sites





Questions for today

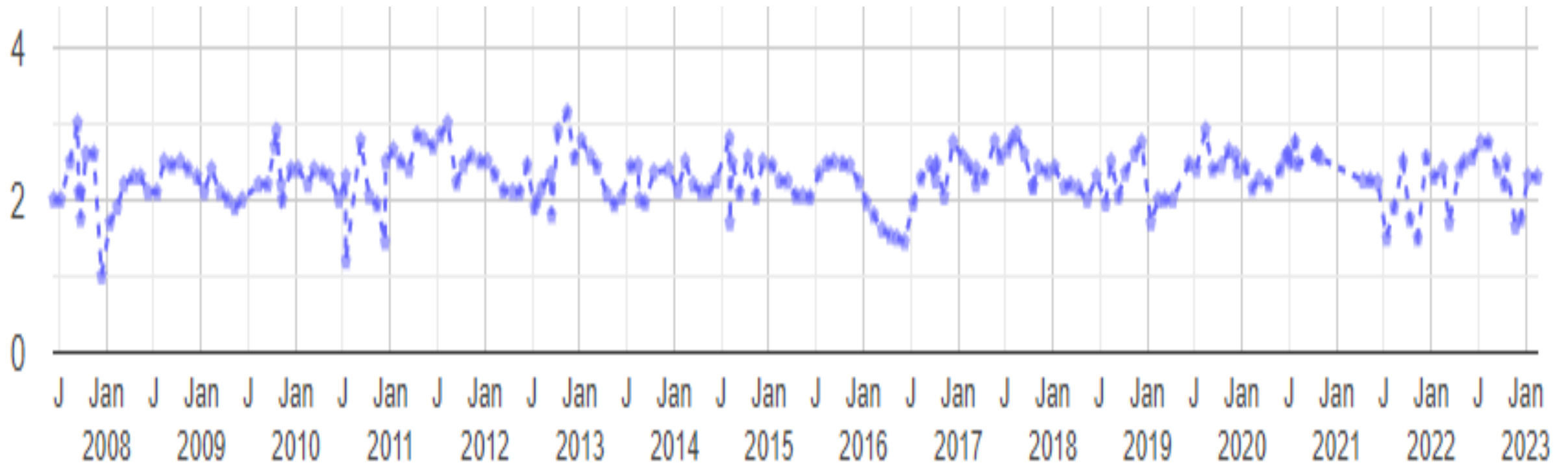
- **How does last year compare to the previous 14 years?**
 - **7 official openings and possibly 1 illegal opening**
 - **Average is 2-4 openings per year**

Let's look at the data!

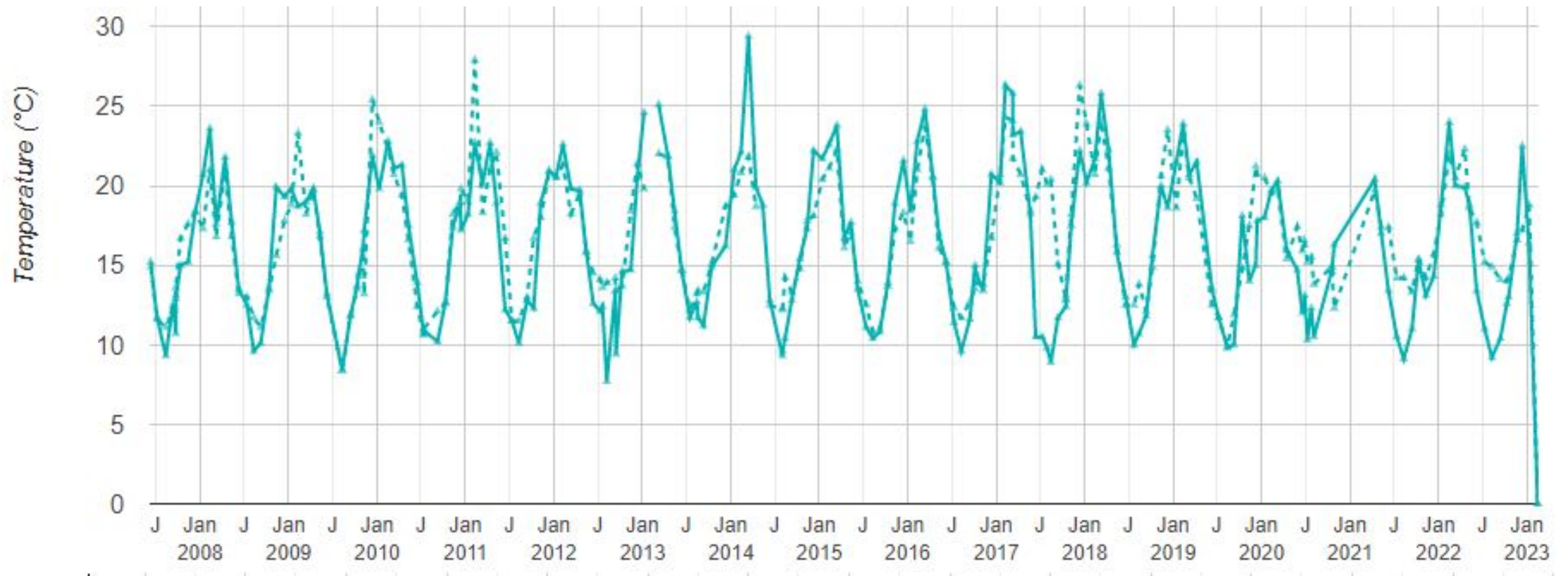
15 years of data in 7 minutes

- Dynamic conditions in estuary where creek meets sea
- Dam at one end and Artificial openings the norm at the other end (first reported in 1880s)
- Trends more important than individual readings

Water depth (bridge)

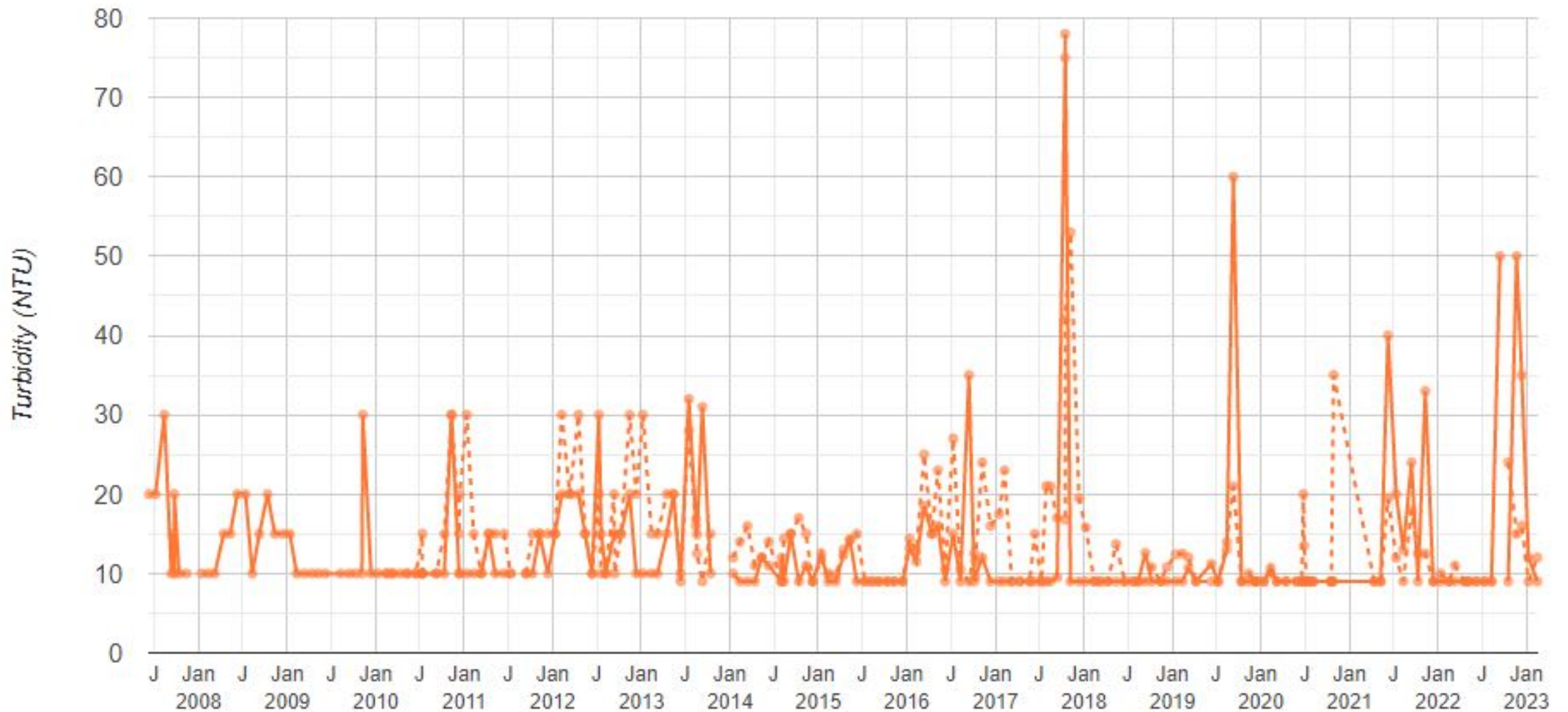


Temperature



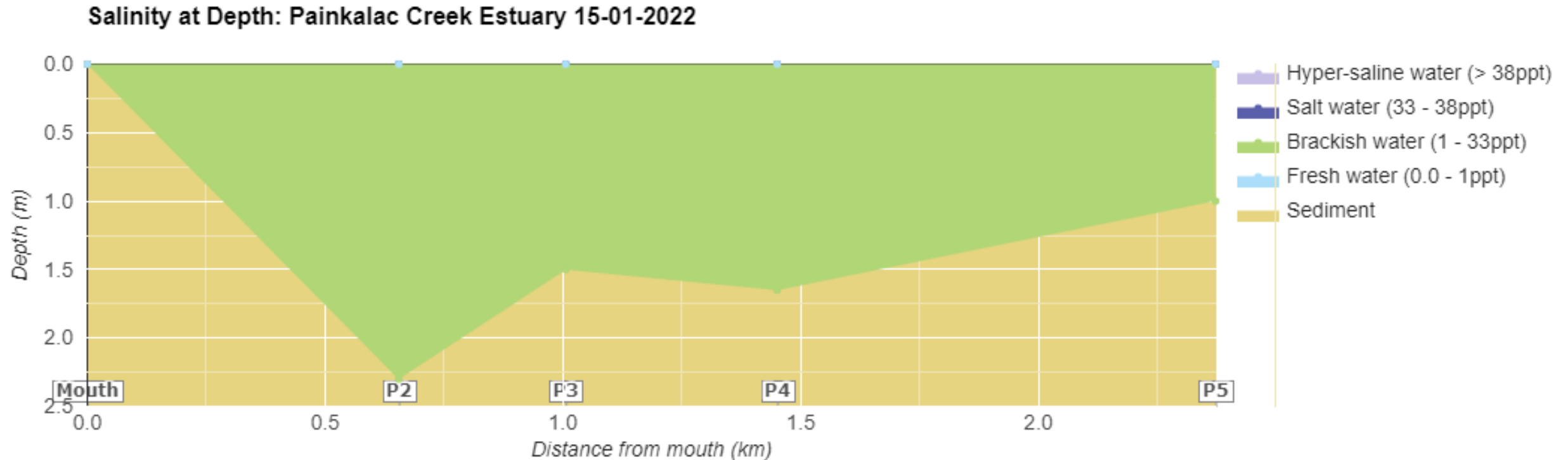
Turbidity (clear vs cloudy with sediment)

Top

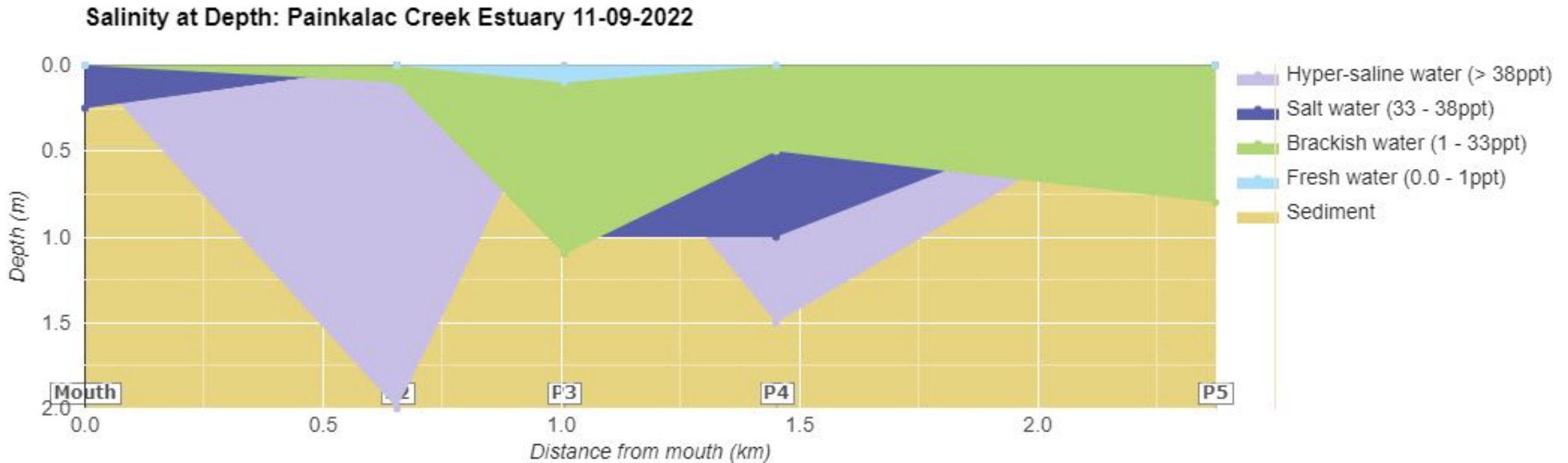


Salinity (salt) – cross section of estuary

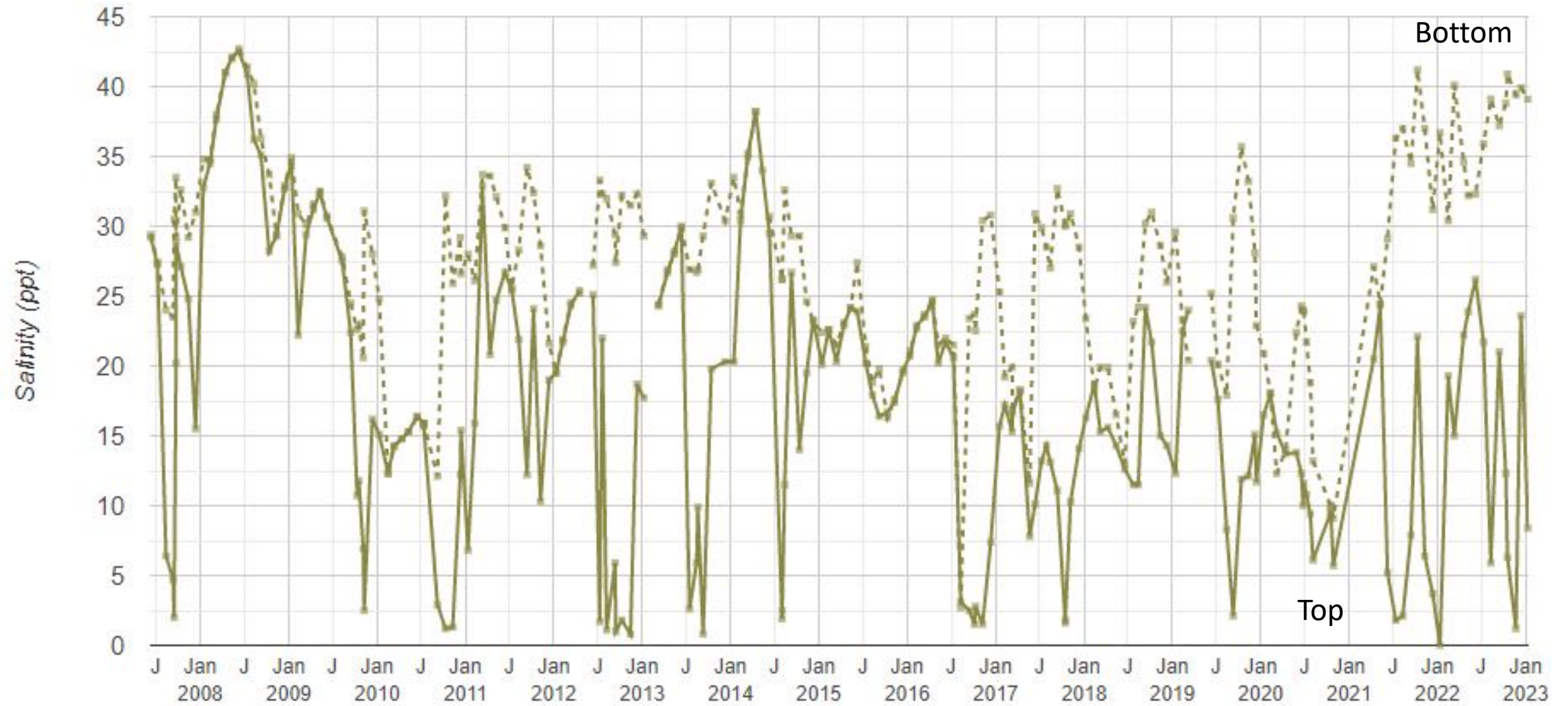
Mixed water (January)



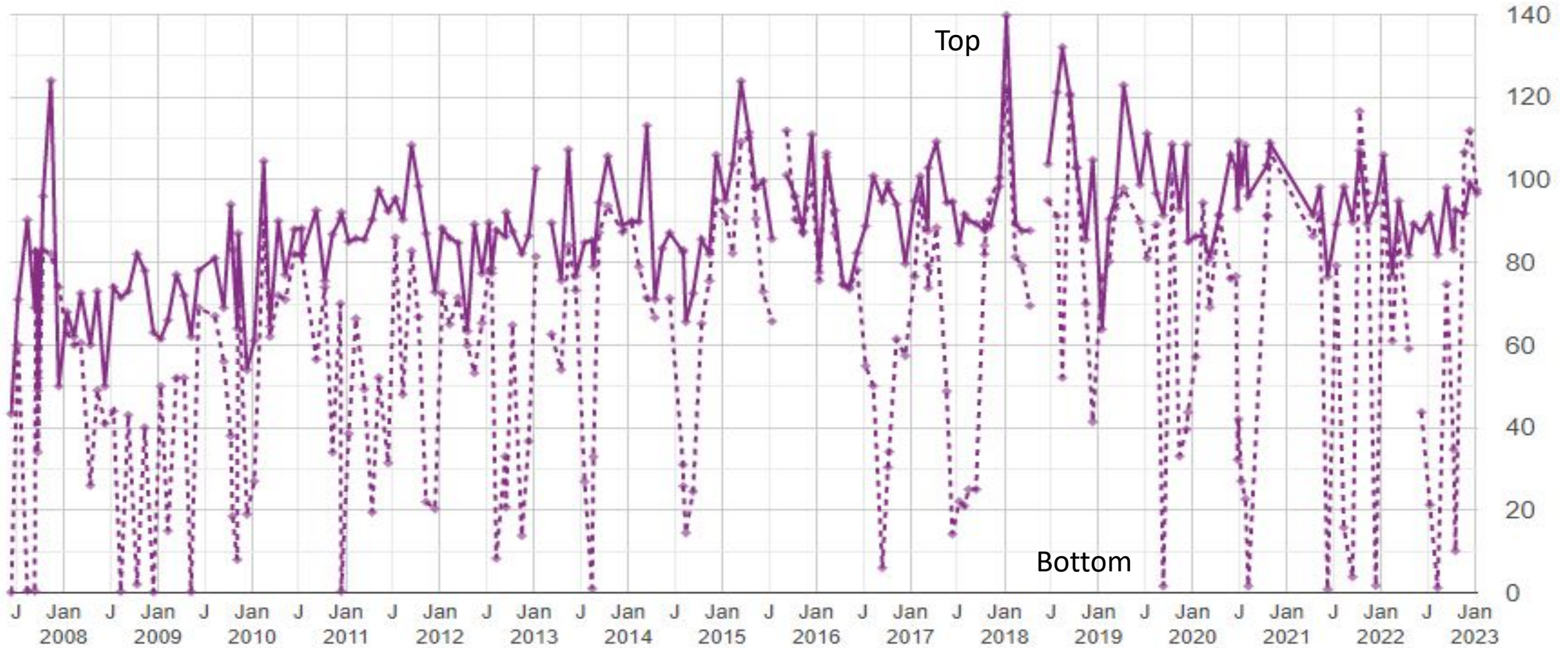
Stratified water (September)



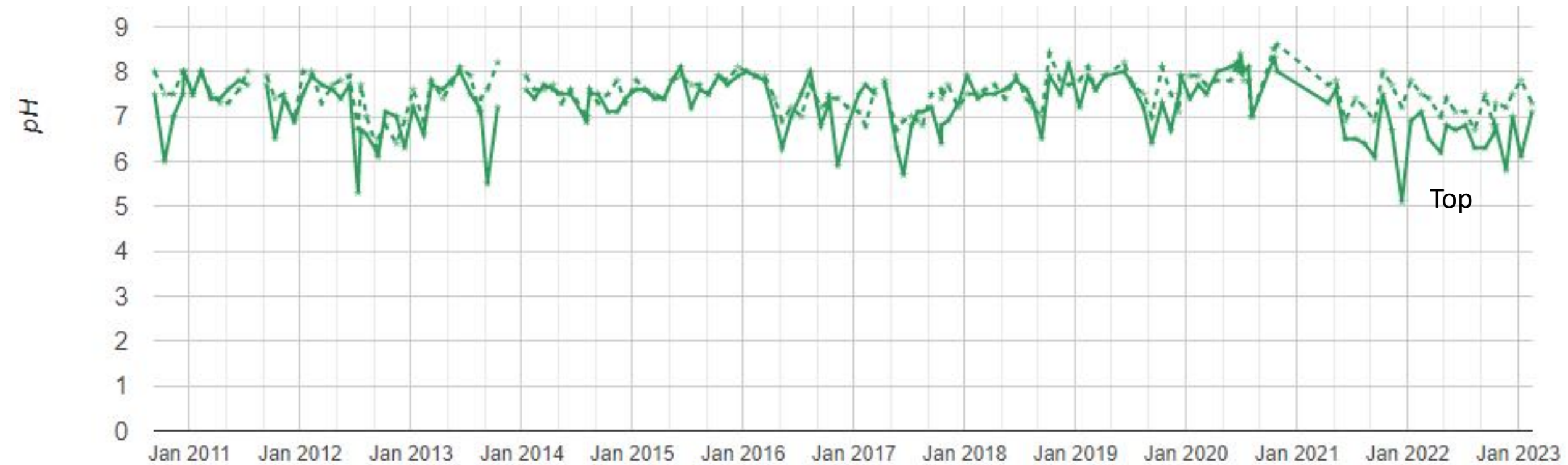
Salinity (salt)



Dissolved Oxygen



pH (acid)



Summary of differences in 2022

- Periods of low pH in top layer = acidity from sulphate soils - associated with high rainfall
- More turbidity – due to high rainfall
- Higher salinity (sea water) at bottom of estuary due to mouth being open for longer than in more normal years
- But top and bottom not affected equally

Estuary health

- Estuary health and swimming safety mostly good over 15 years based on physical/chemical data
- Suggests reasonable management of openings
- Resilient estuary within constraints of dam and artificial openings
- E. coli data from Surf Coast Shire completes picture re safety for recreation/swimming



Nyatne