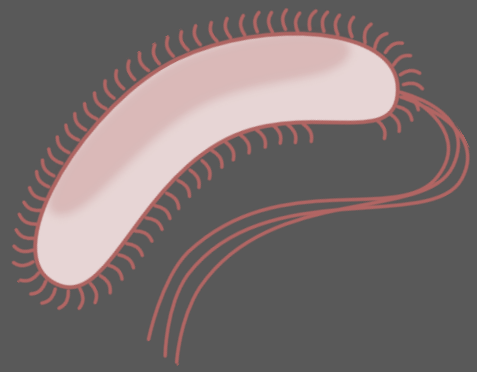


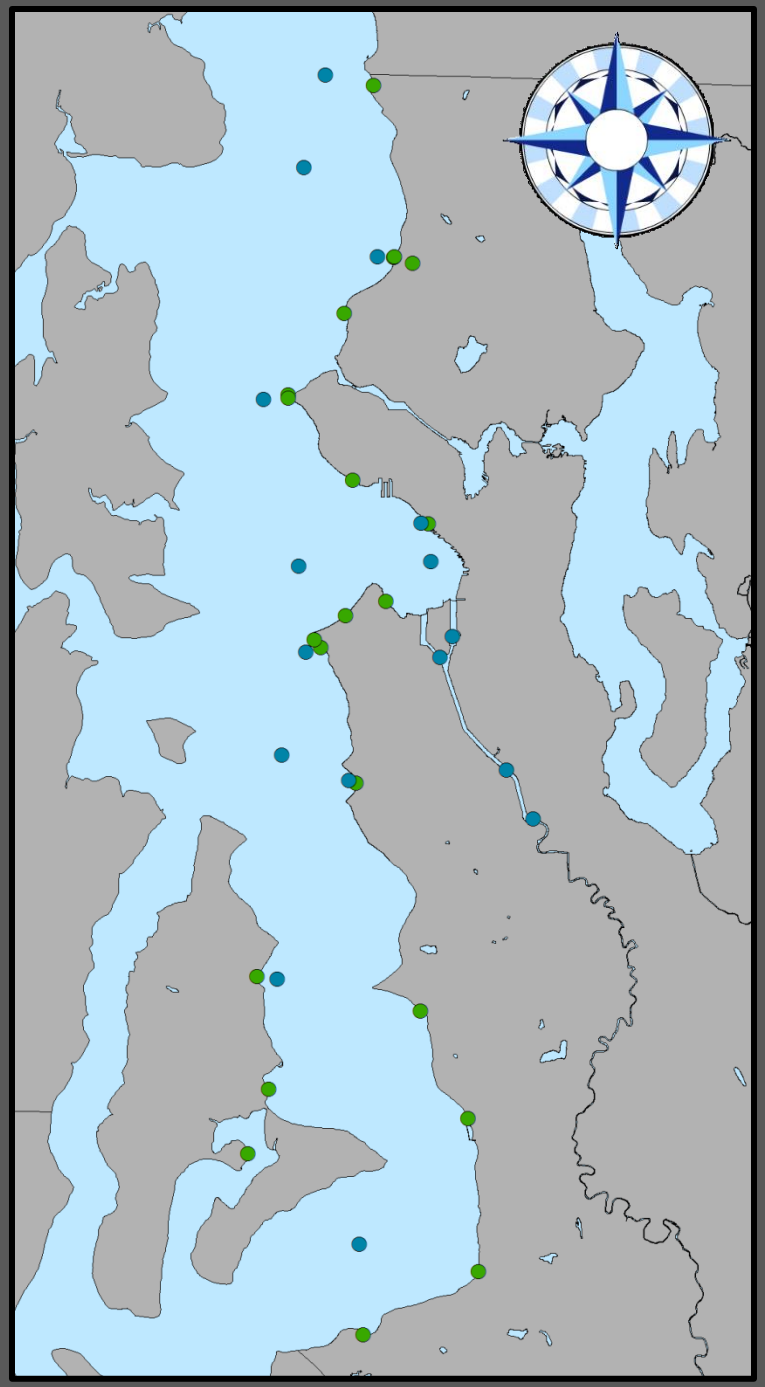
Rainfall, Salinity, and Bacteria in Central Puget Sound (2014)

King County, Department of Natural Resources and Parks & Environmental Lab

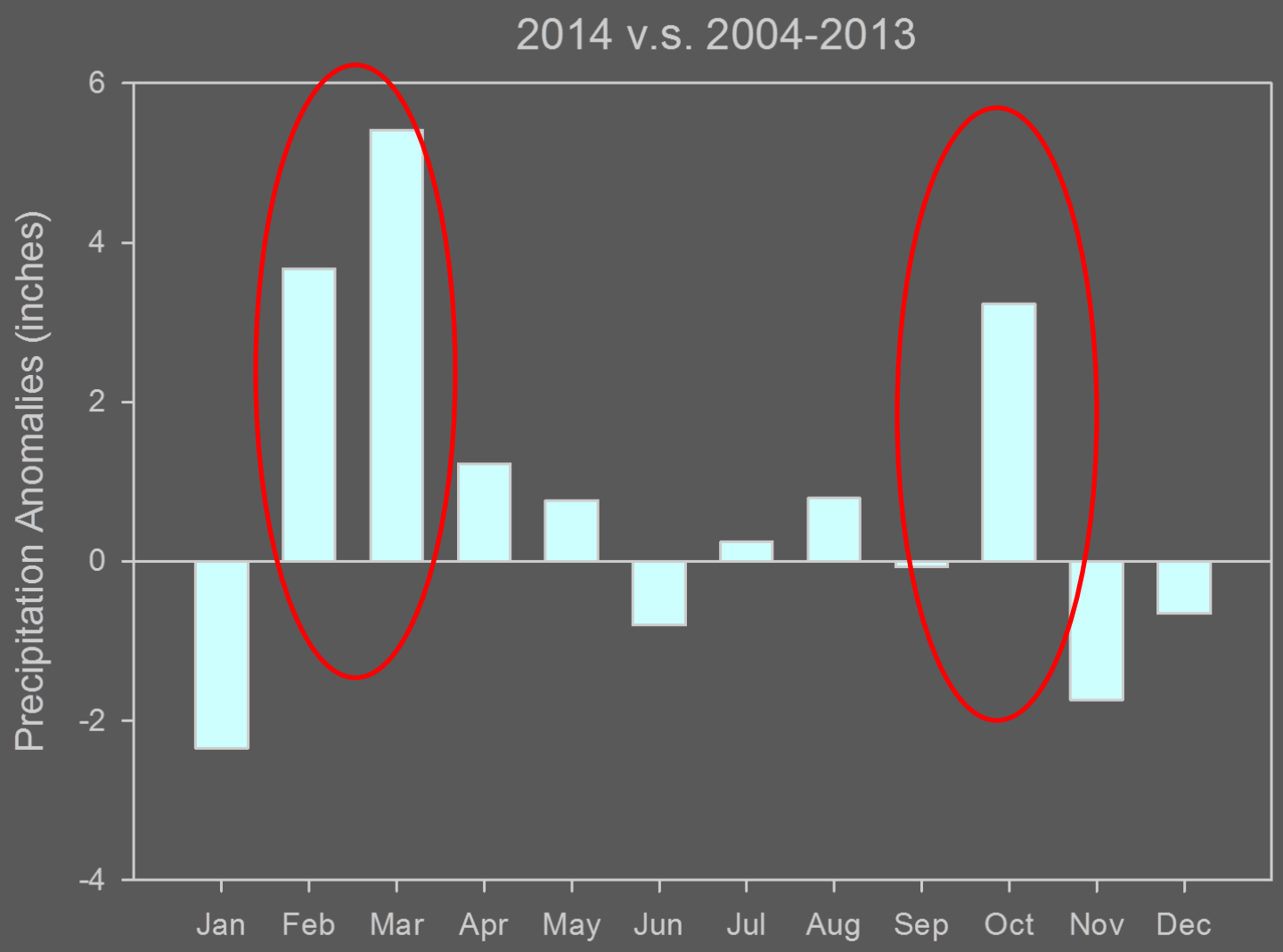
King County's Marine Monitoring Program

- Offshore Sites
  - 2x monthly from Feb – Nov
  - Monthly from Dec – Jan
  - CTD – Salinity
  - Niskin bottles – Bacteria
- Beach Sites
  - Monthly from Jan – Dec
  - Bottle grab samples – Salinity + Bacteria

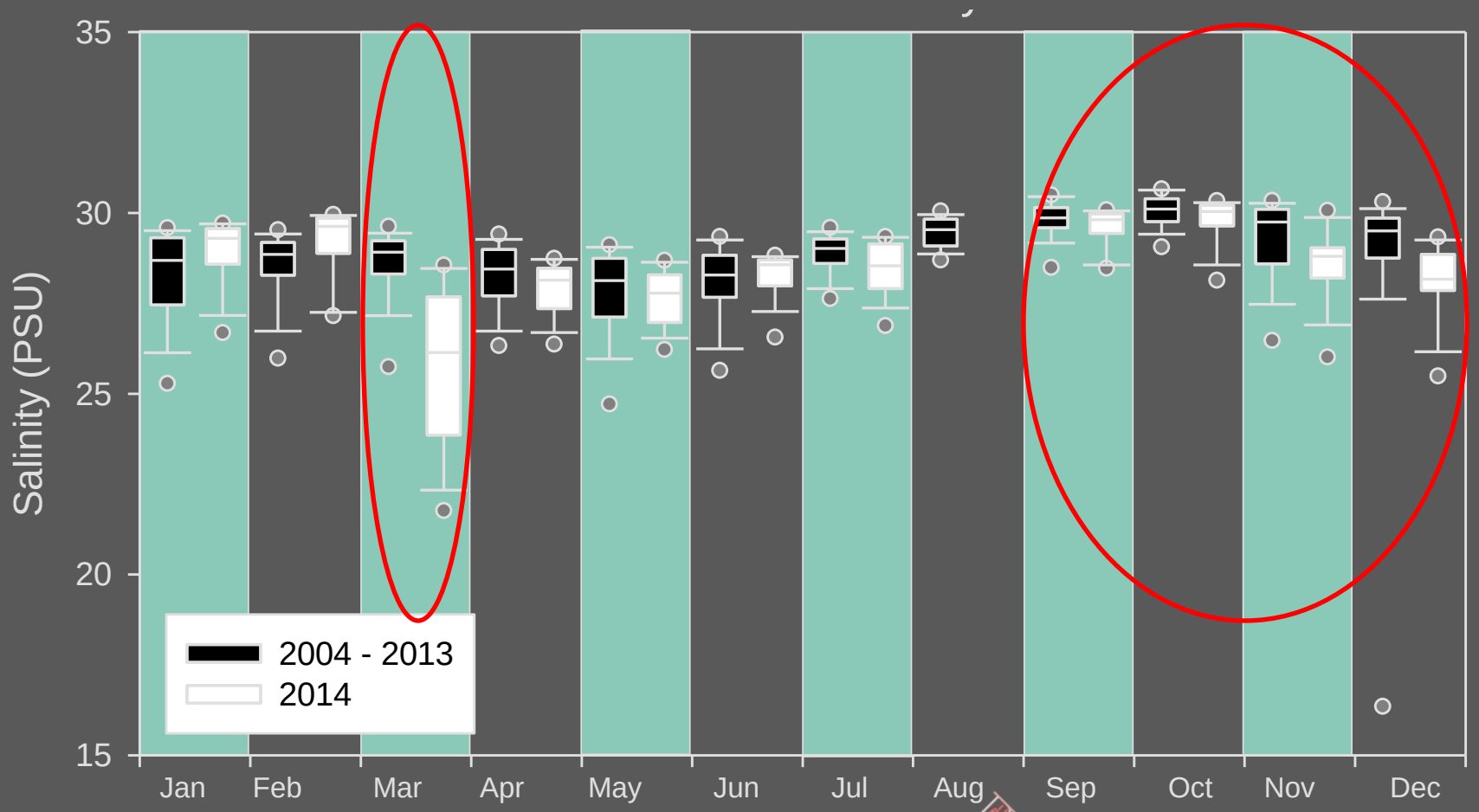
Bacteria = *Enterococcus* and Fecal Coliforms



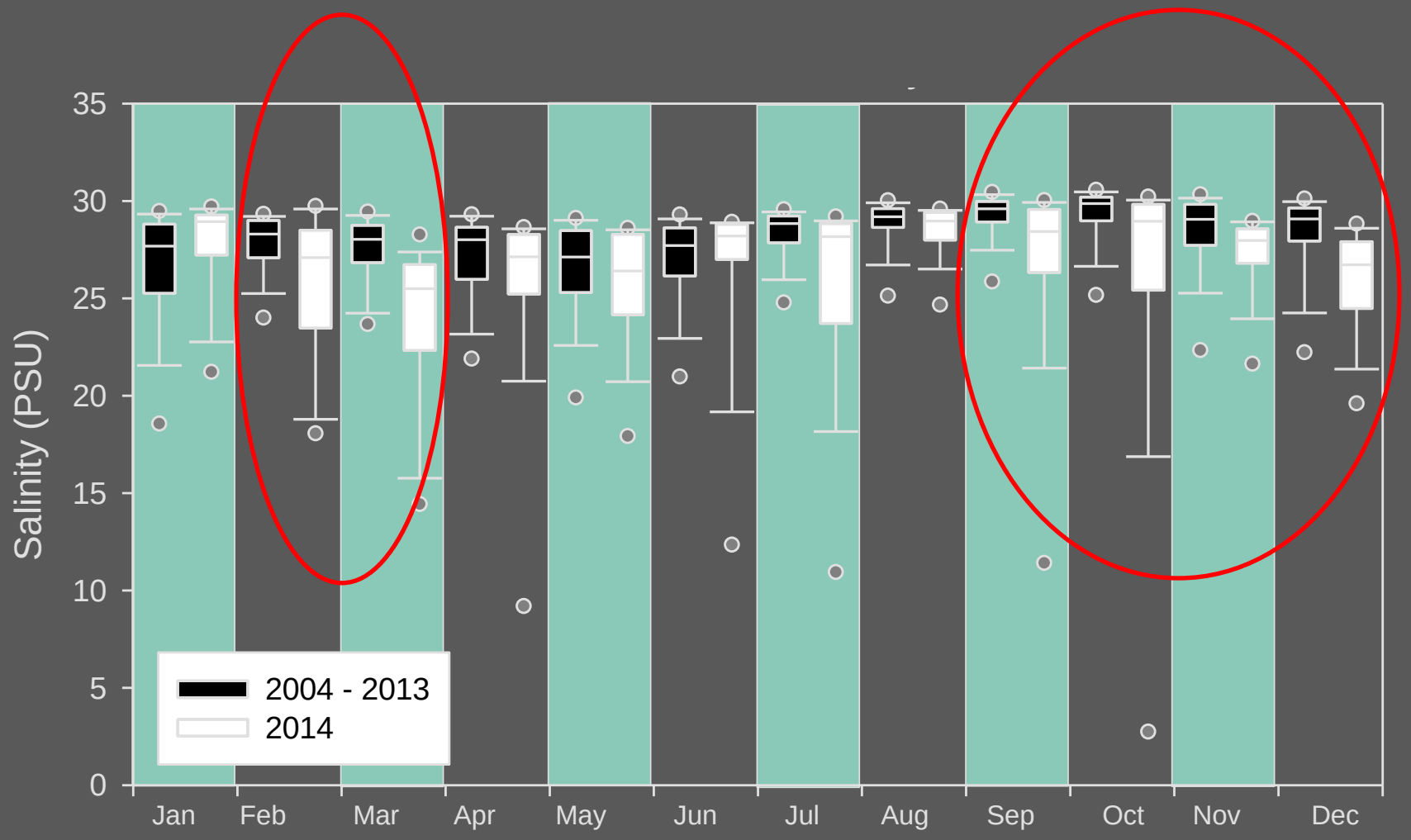
Rainfall in 2014



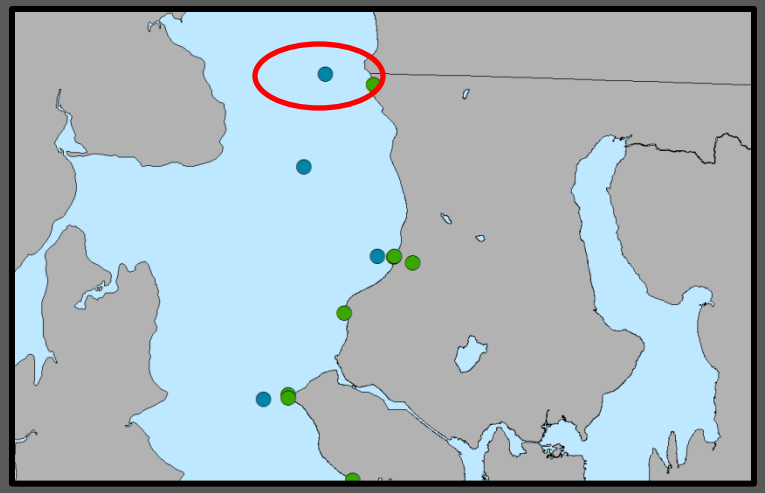
Offshore - Salinity

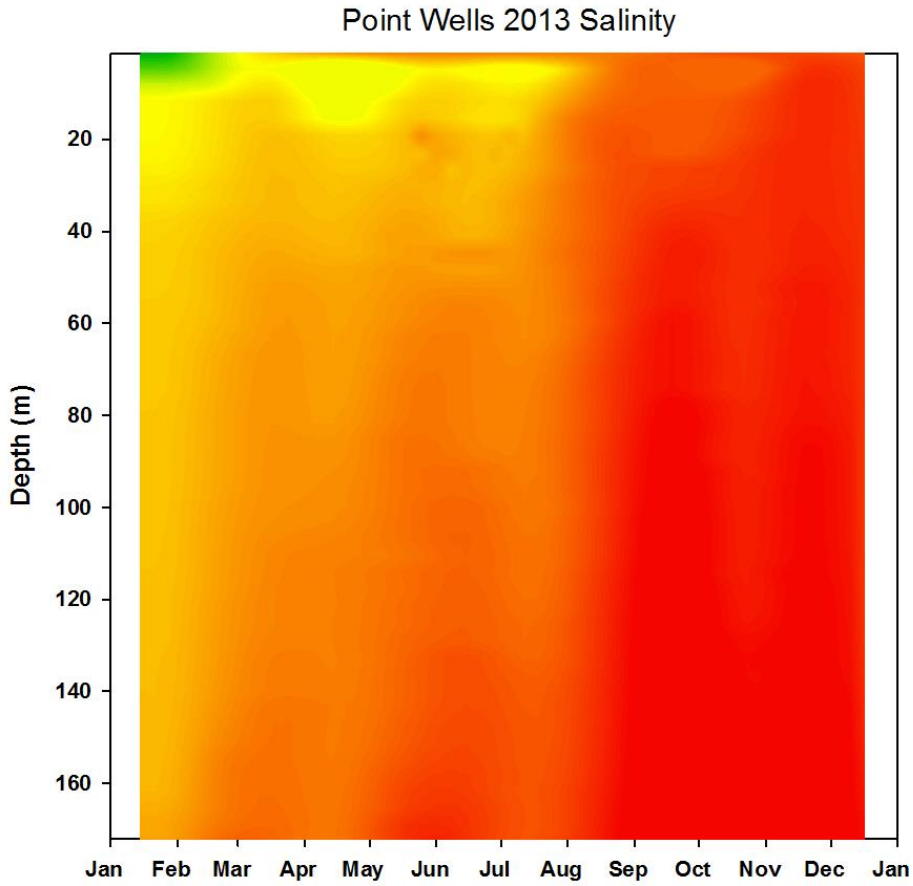


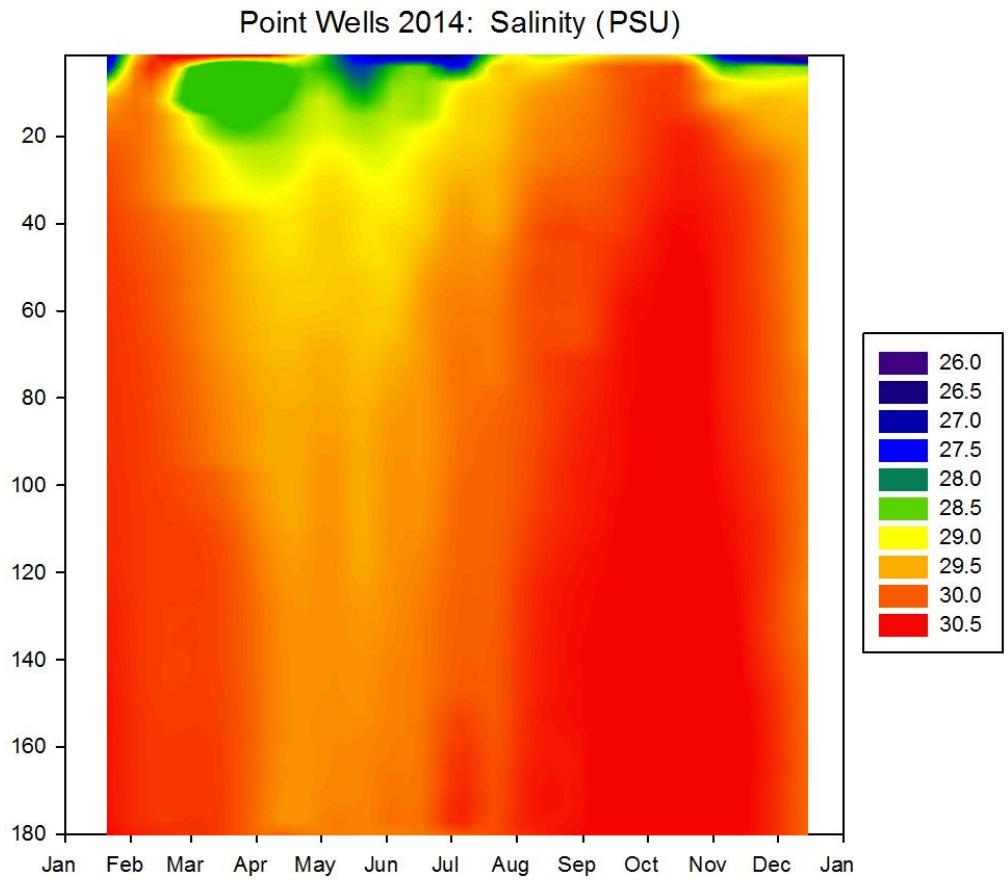
Beach - Salinity



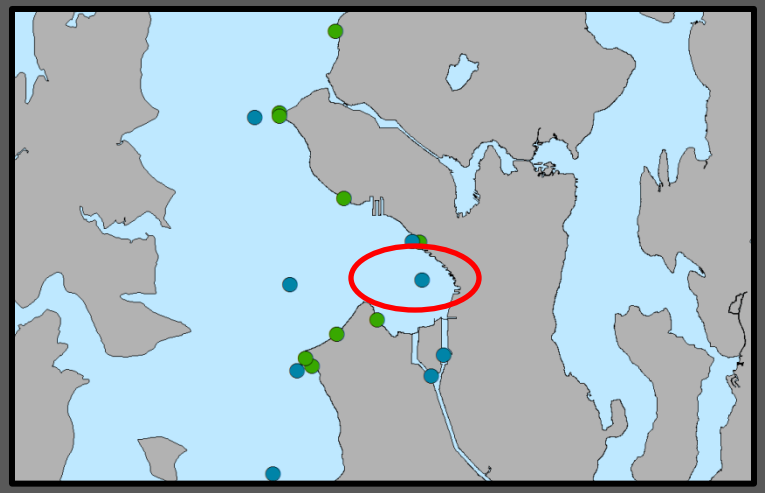
Salinity – Point Wells

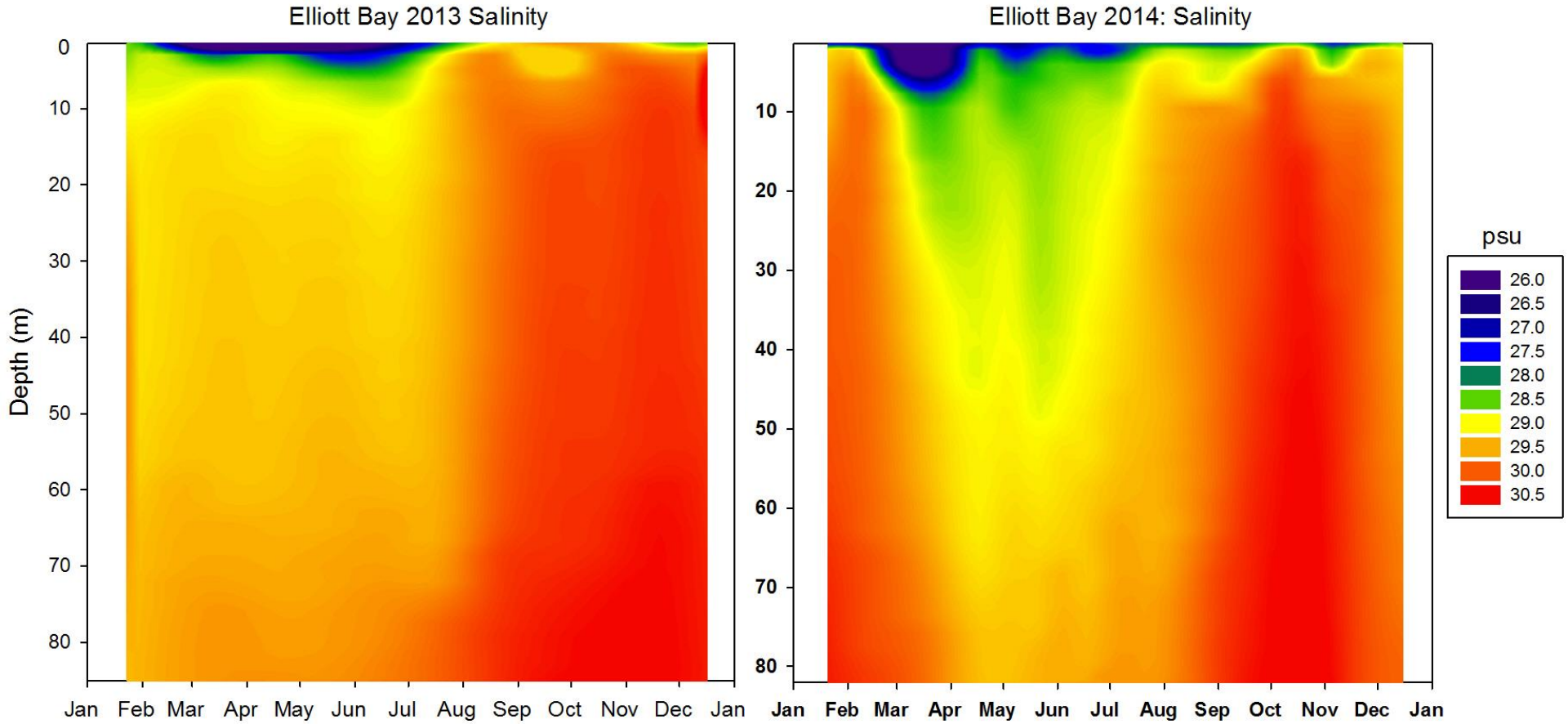




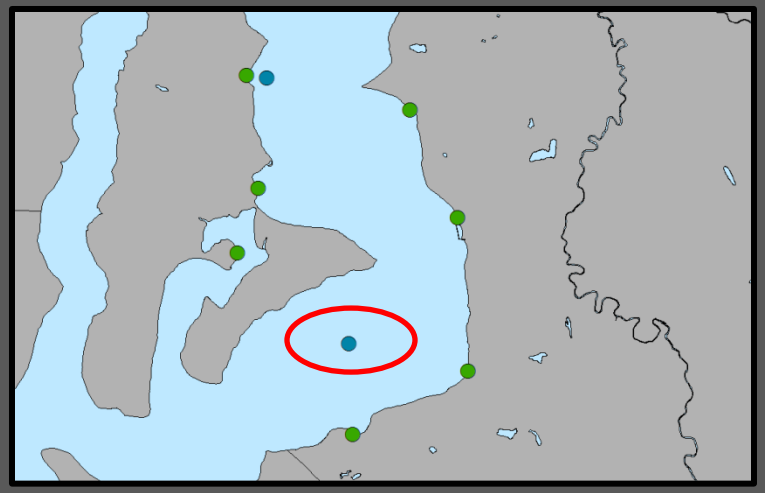


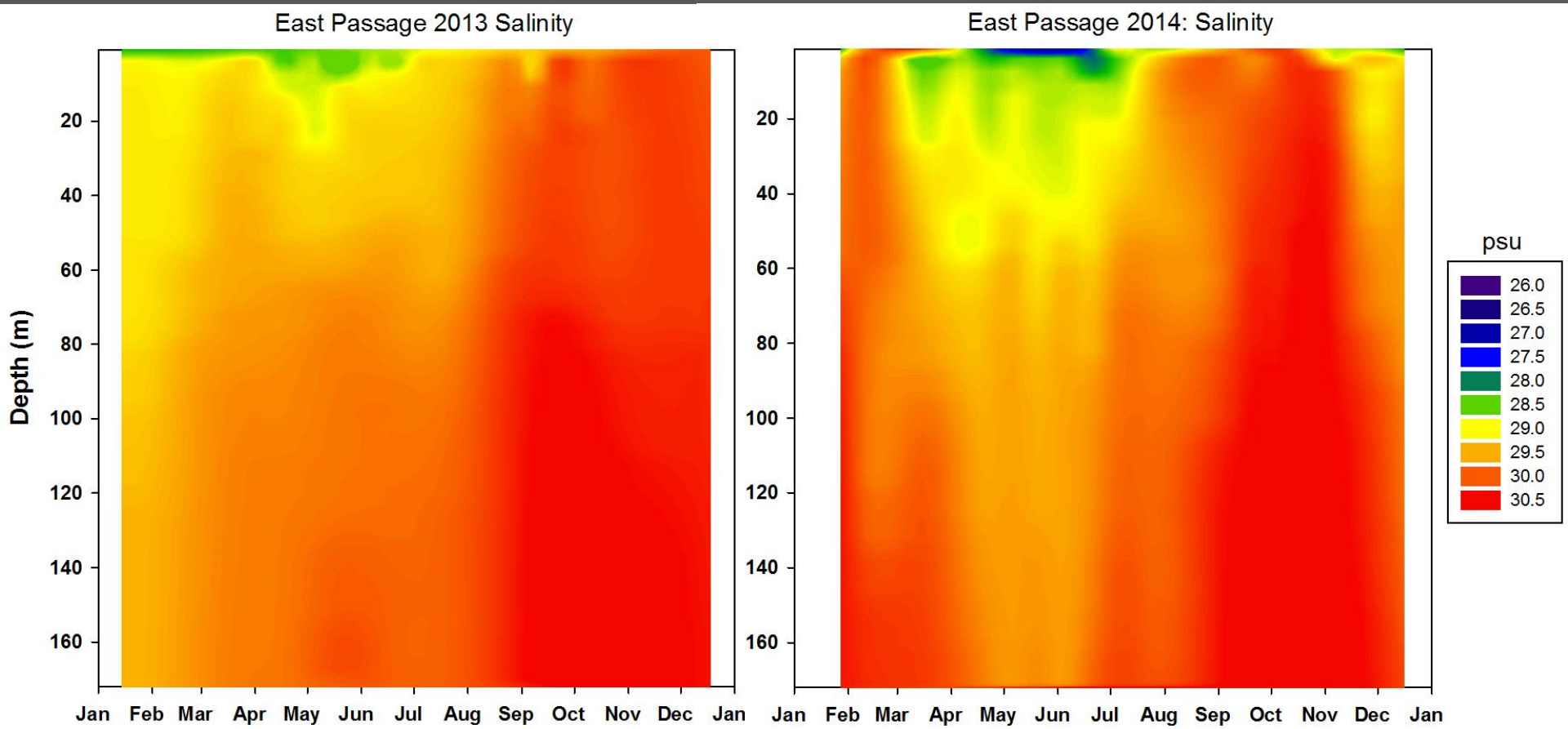
Salinity – Elliott Bay

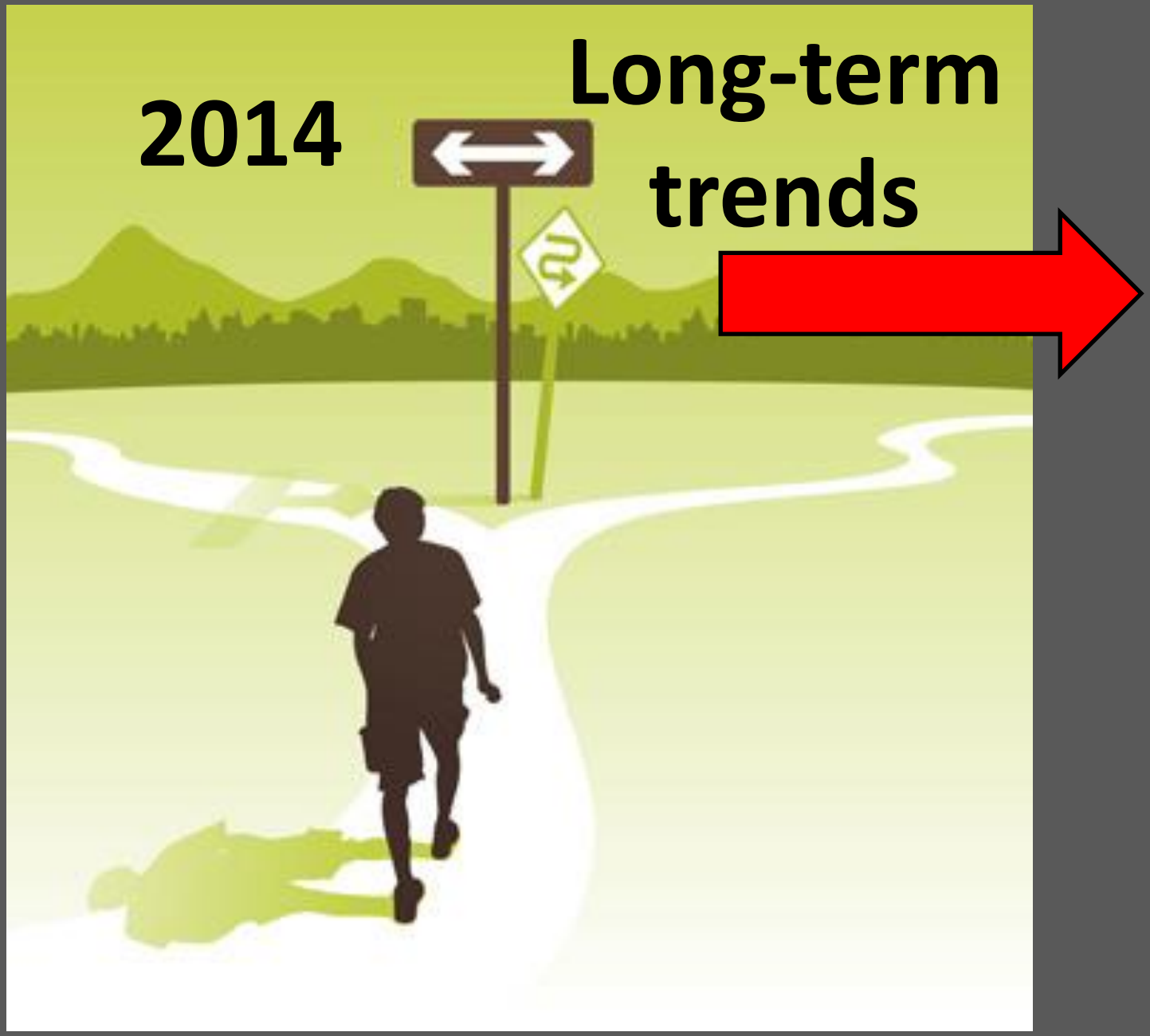




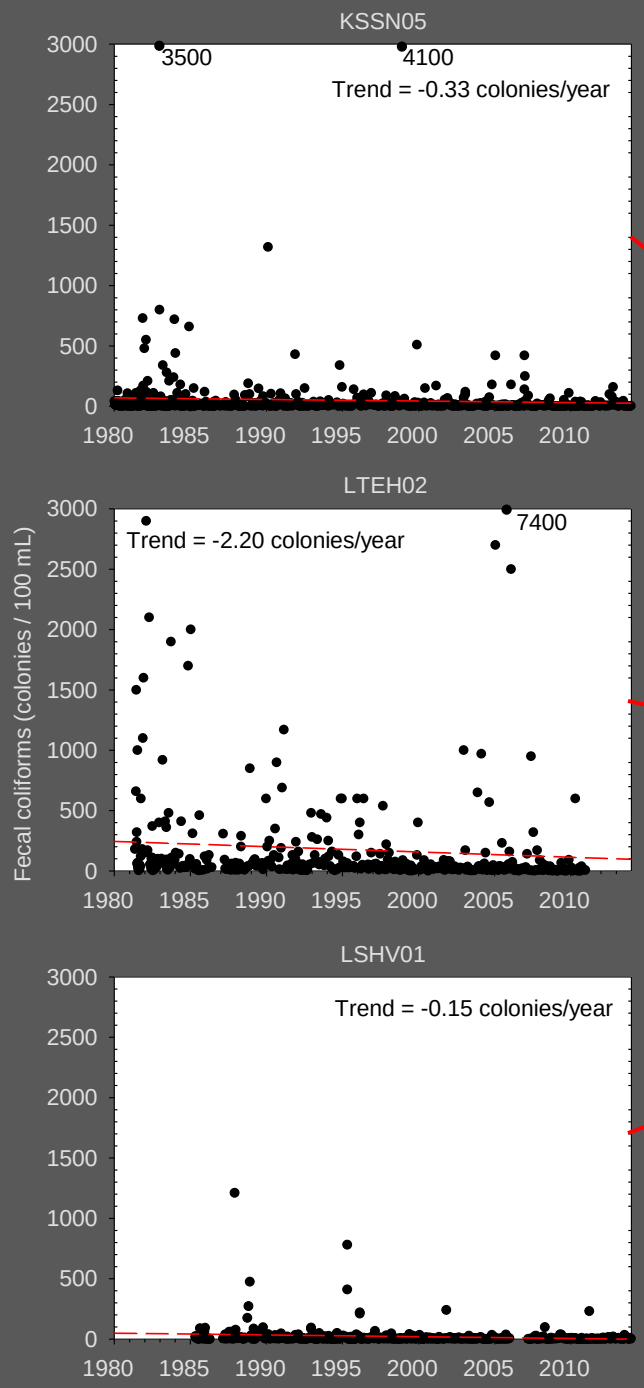
Salinity – East Passage

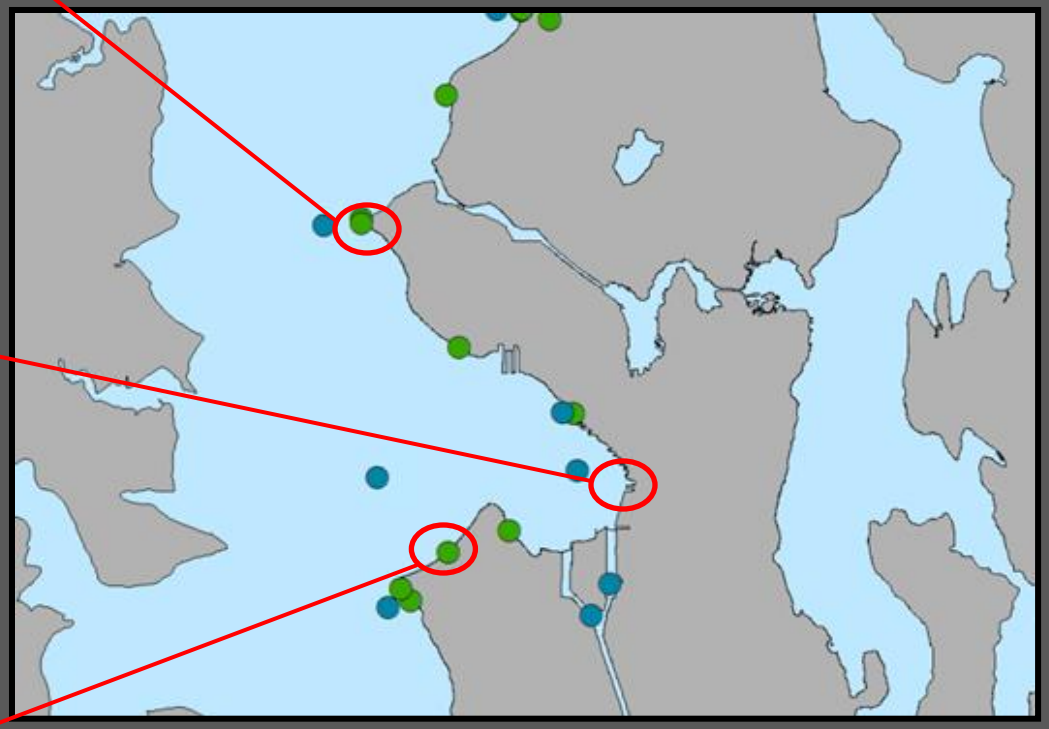




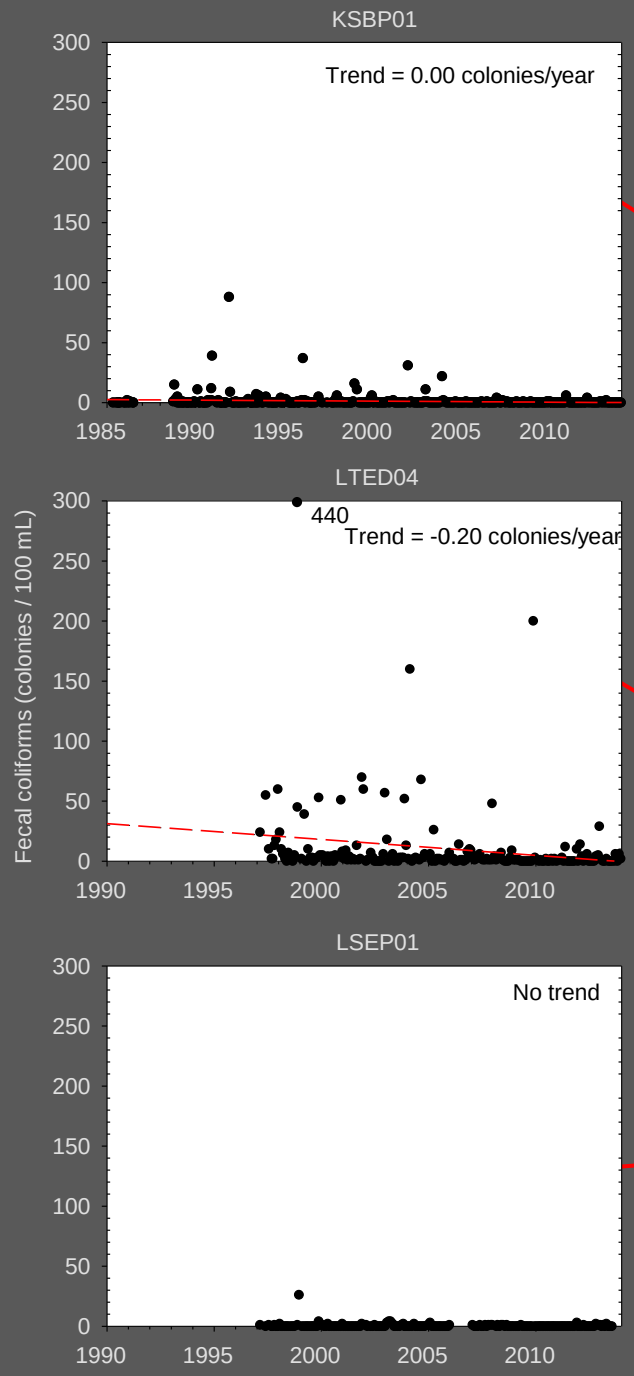

2014
Long-term trends

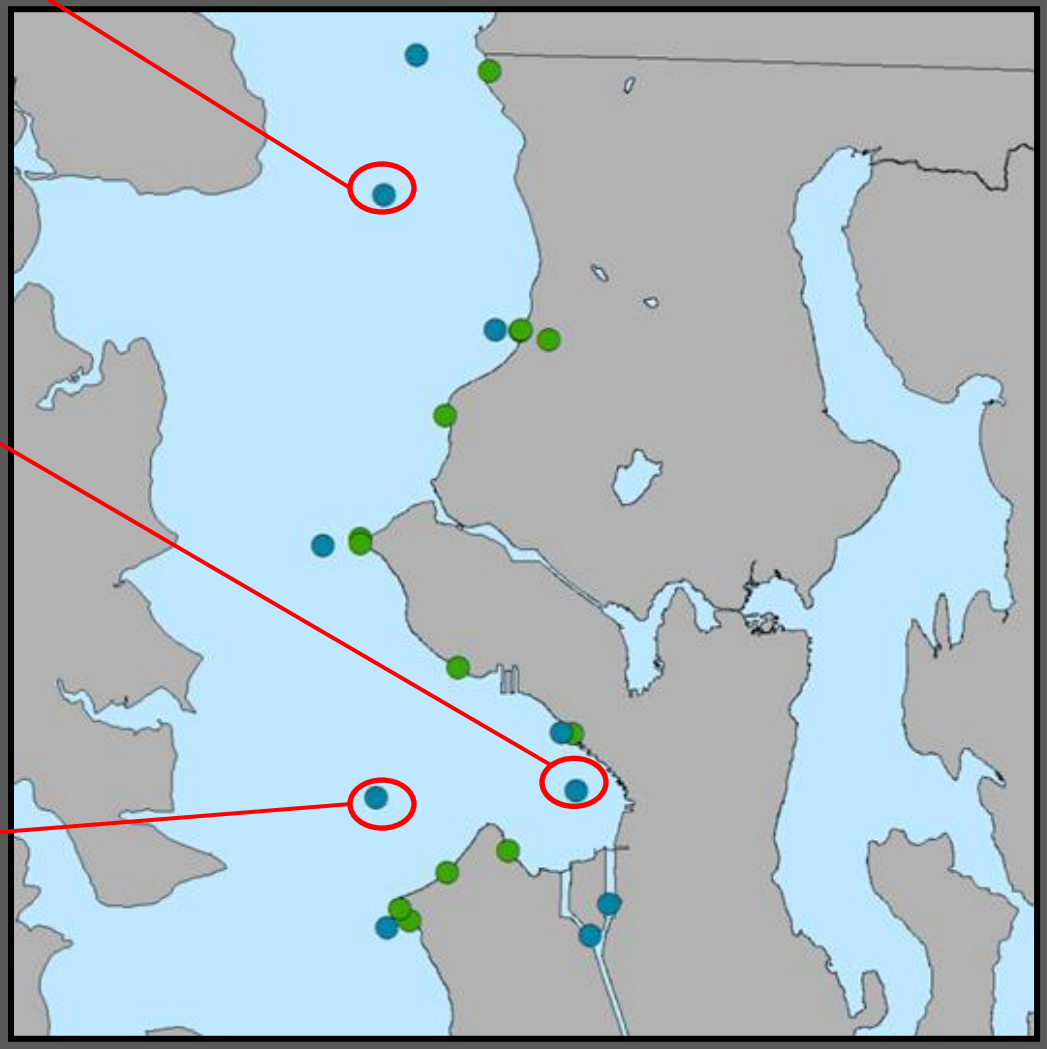
Bacteria Trends - Beaches



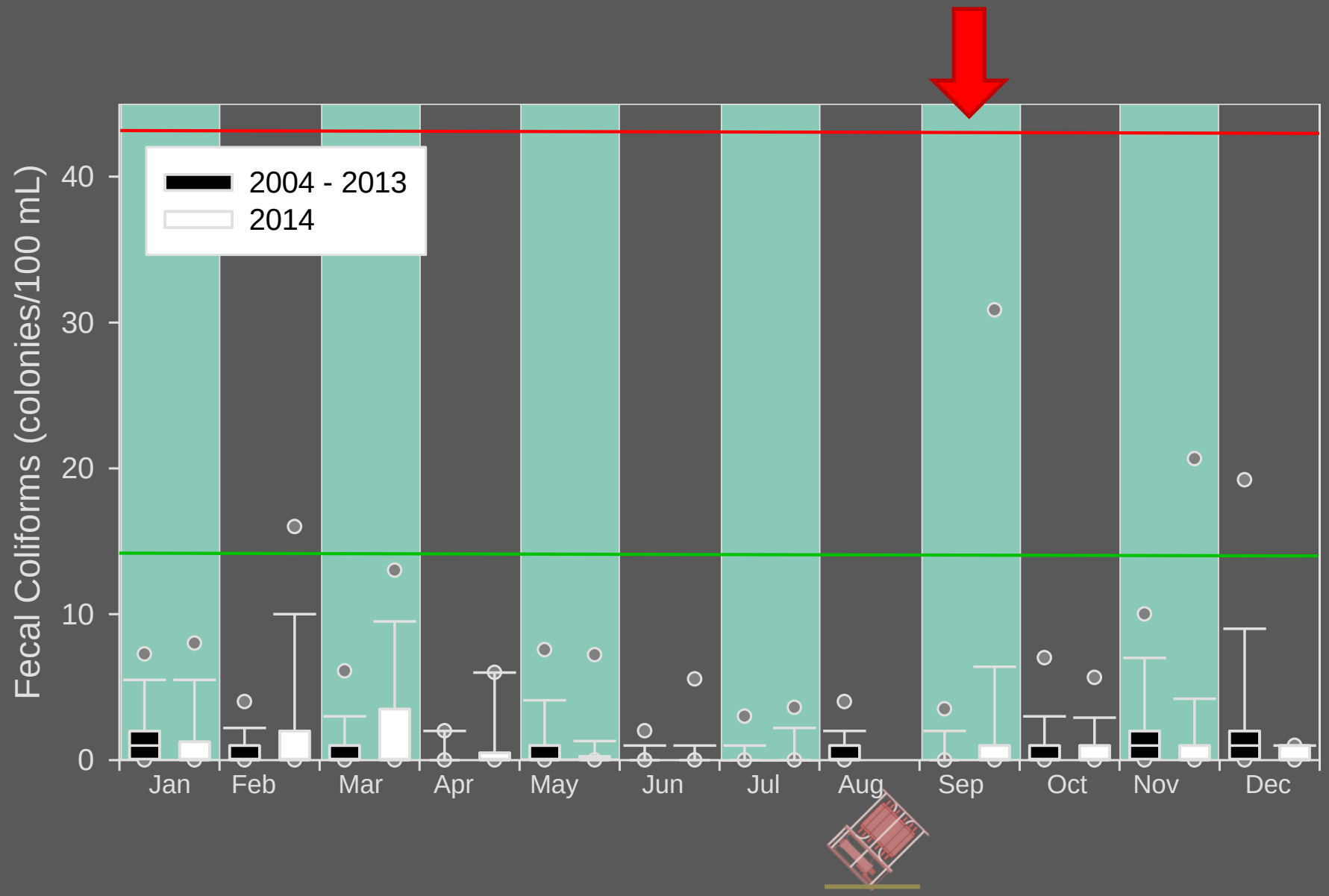


Bacteria Trends - Offshore

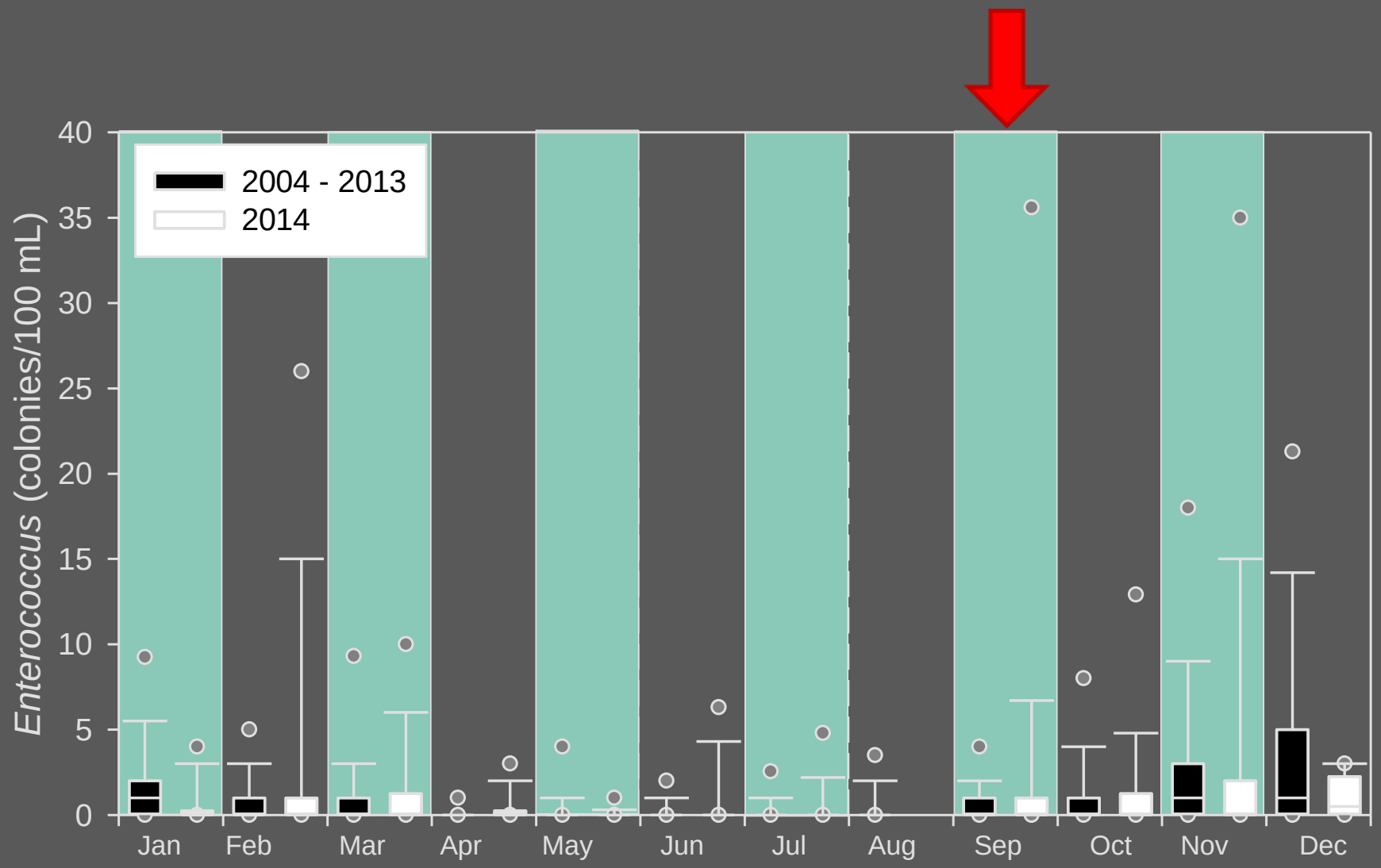




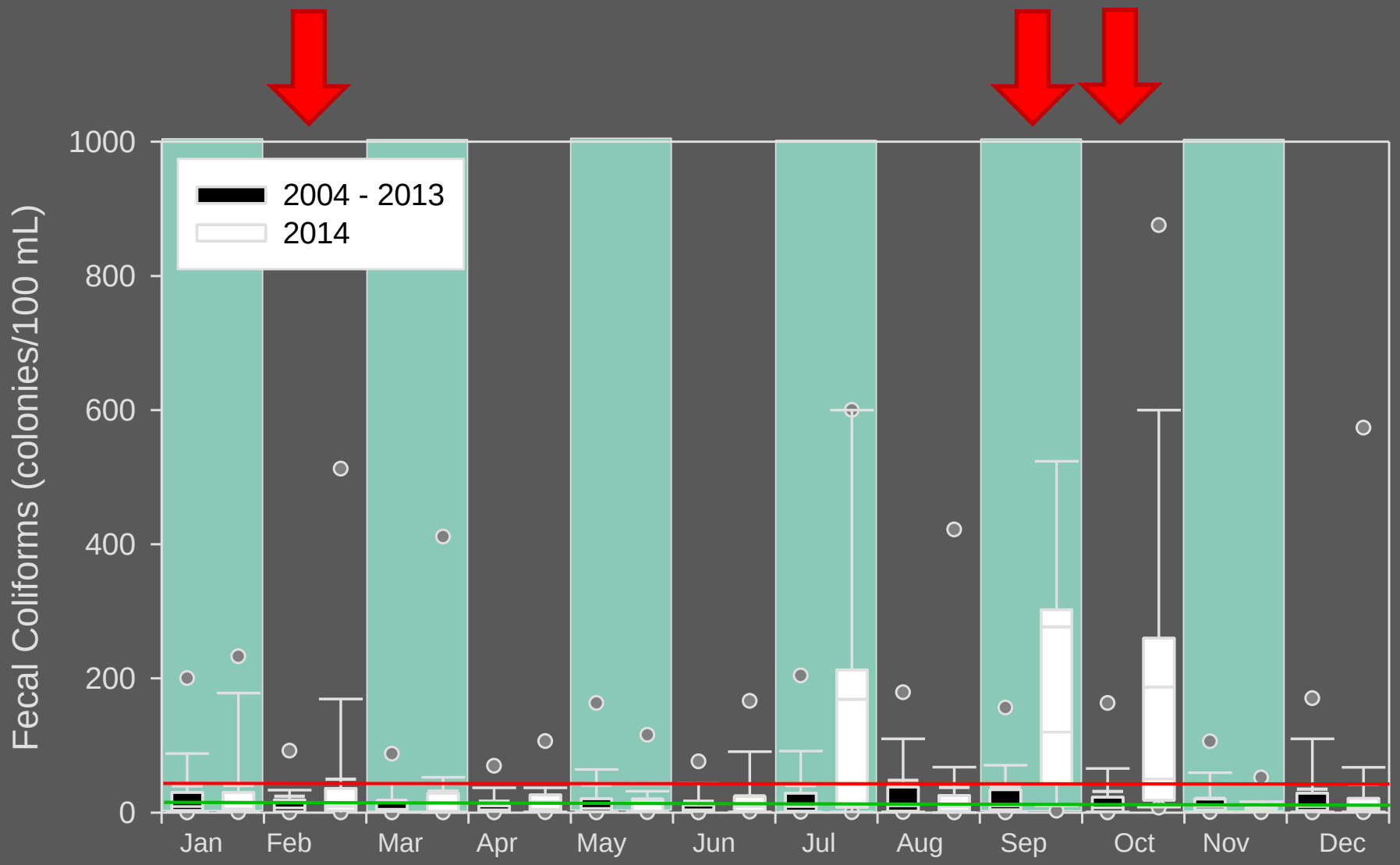
Offshore – Fecal Coliforms



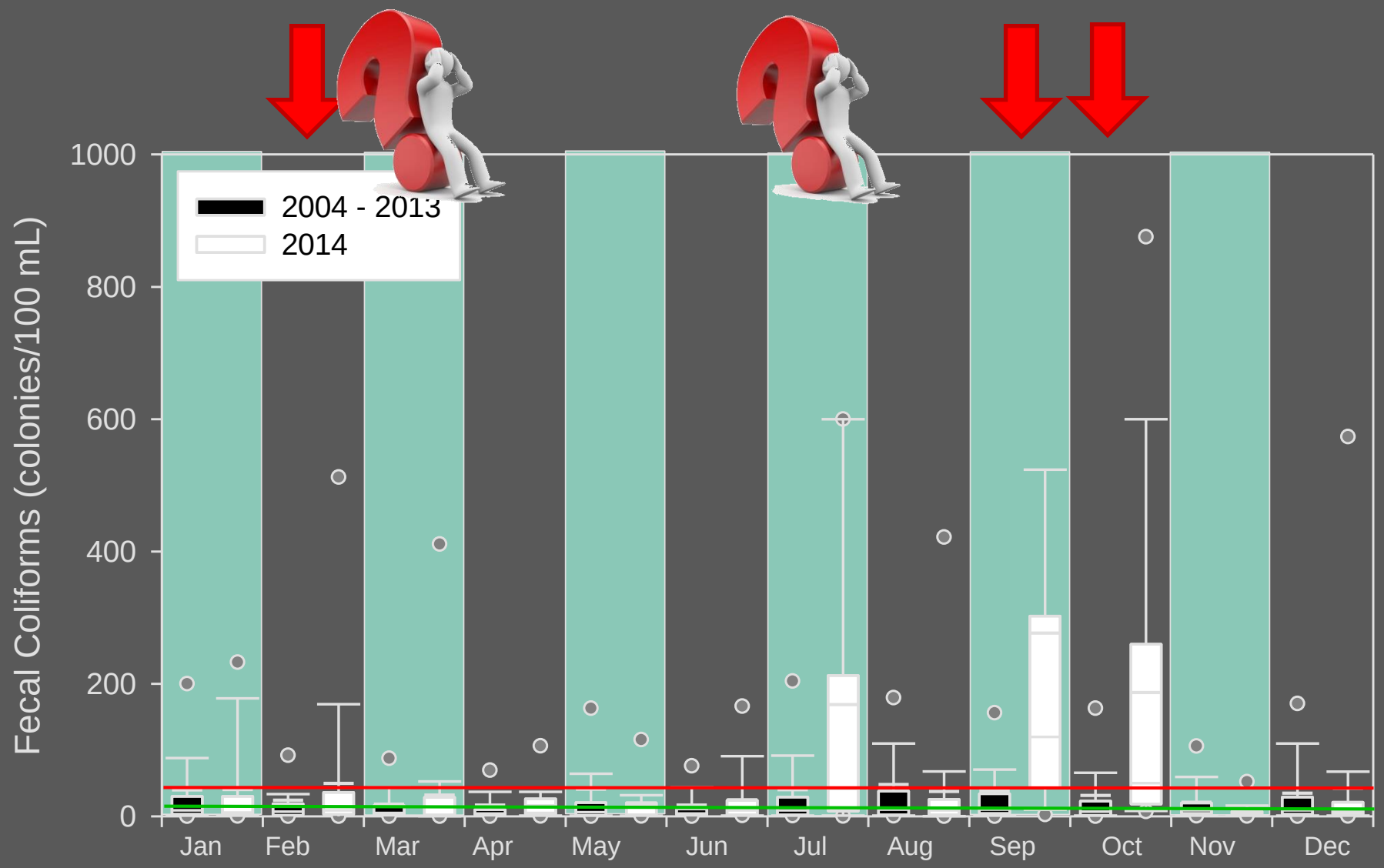
Offshore *Enterococcus*



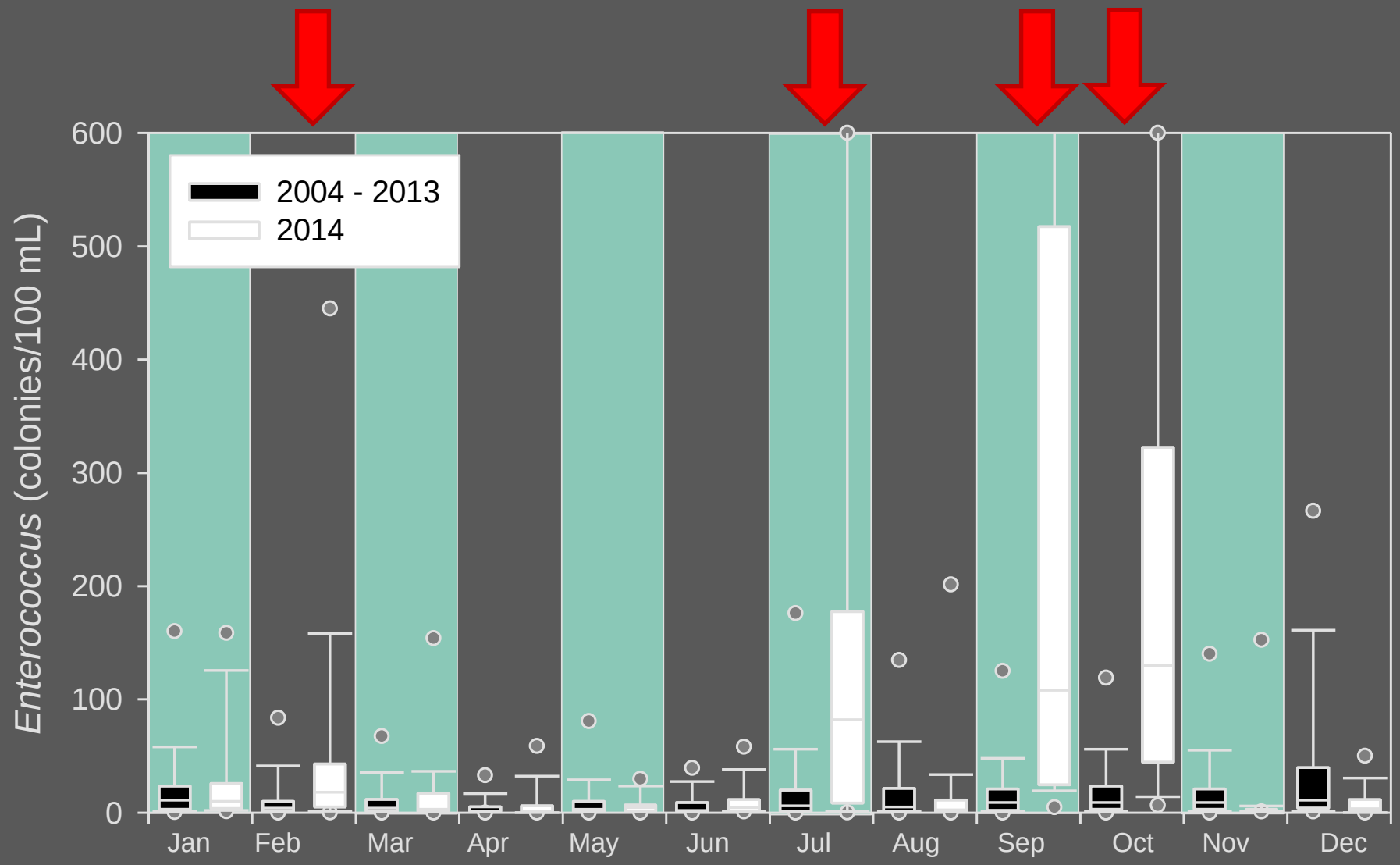
Beach – Fecal Coliforms



Beach – Fecal Coliforms



Beach - *Enterococcus*



Summary

- **Heavy rainfall** – particularly in February, March, and October
- **Decreased surface salinity** – February and March as well as September thru December
  - -Rainfall and river discharge due to lack of snow pack?
- **Increased bacteria** - during most rainy months
  - March had little bacteria probably due to flushing
  - July had high bacteria due to sampling after anomalous rain event