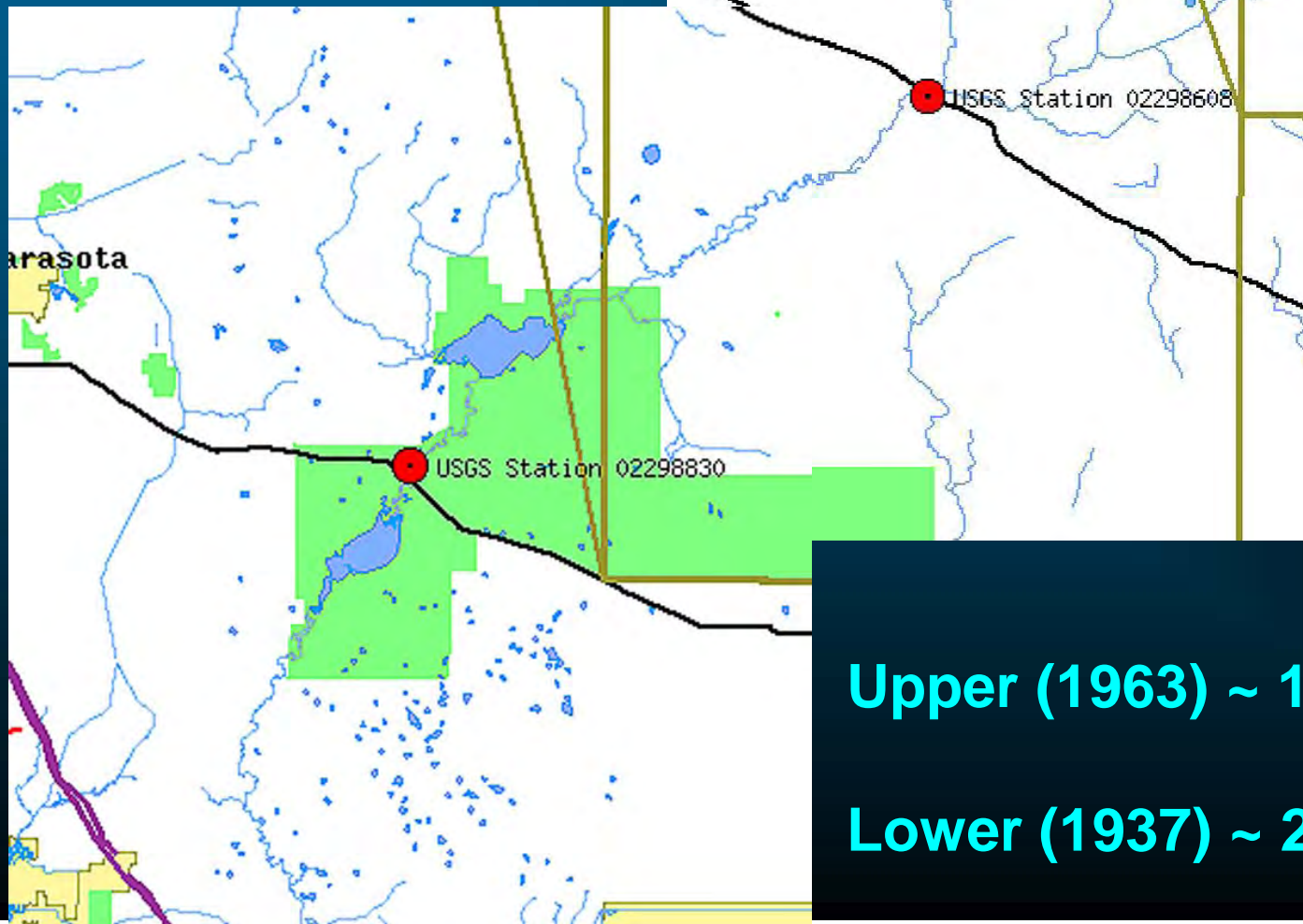
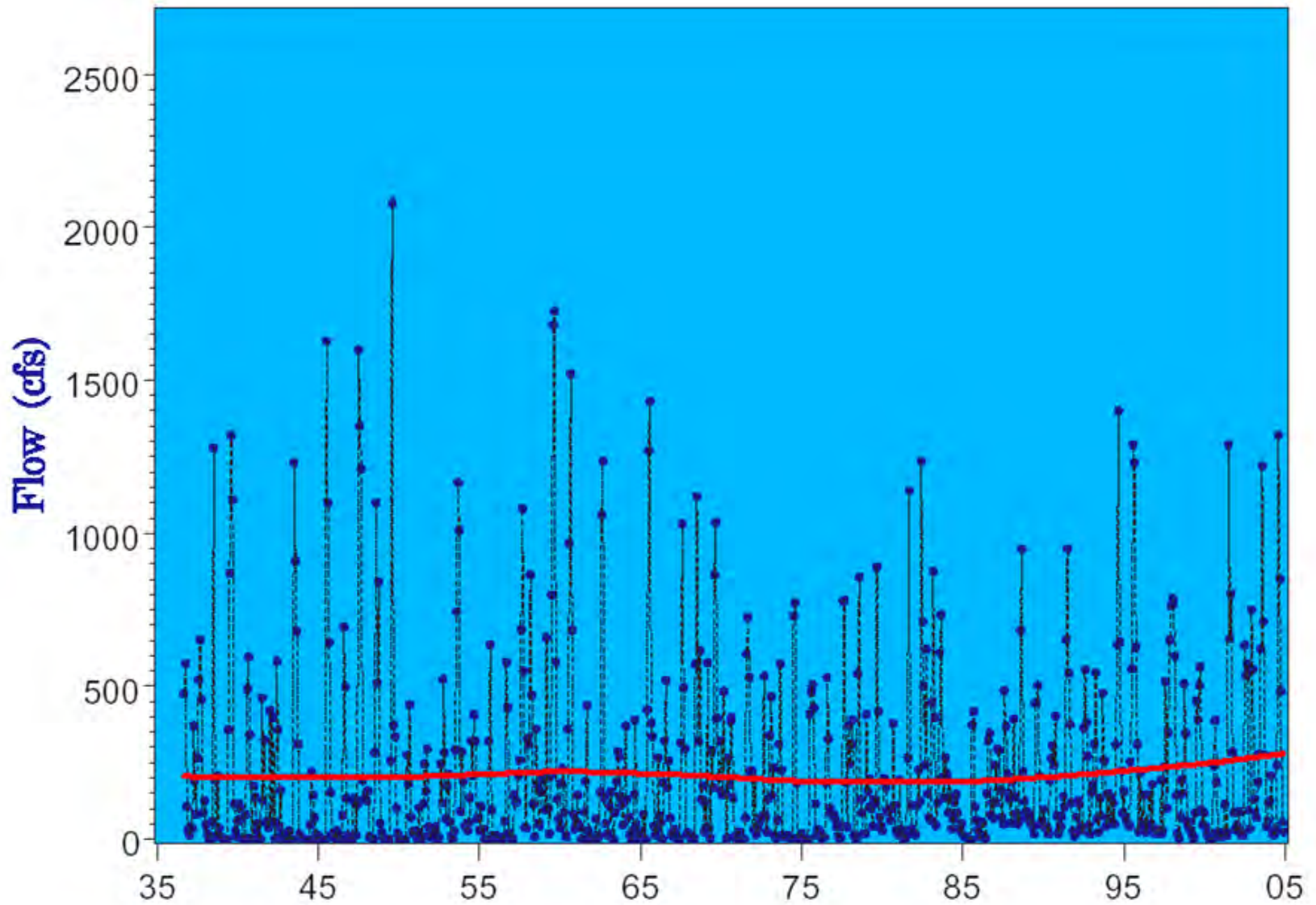


Water Quality Characteristic

- **Existing Long-term Data** (problems)
- **Water Quality Questions**
 - Differences along river and among sub-basins
 - Historical changes in lower estuarine reach

Long-Term USGS Myakka River Gages

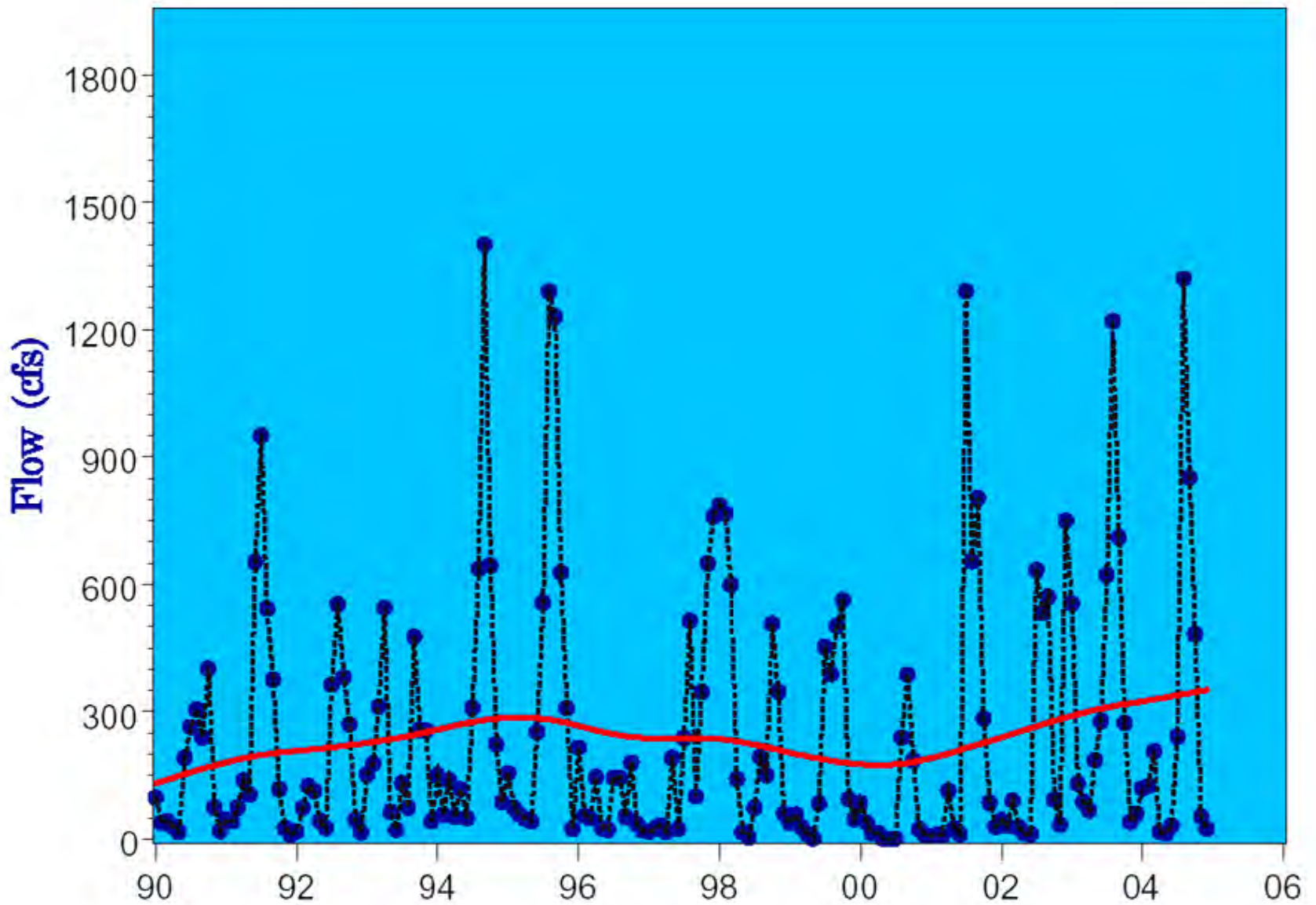




Monthly median flow at long-term lower Myakka River gage (1937-2004)

Trends in Myakka River at Sarasota USGS Gage

	1937	1990
Month Means	Slope = 0.45 P = 0.005	N.S.
Monthly Medians	Slope = 0.43 P = 0.001	N.S.

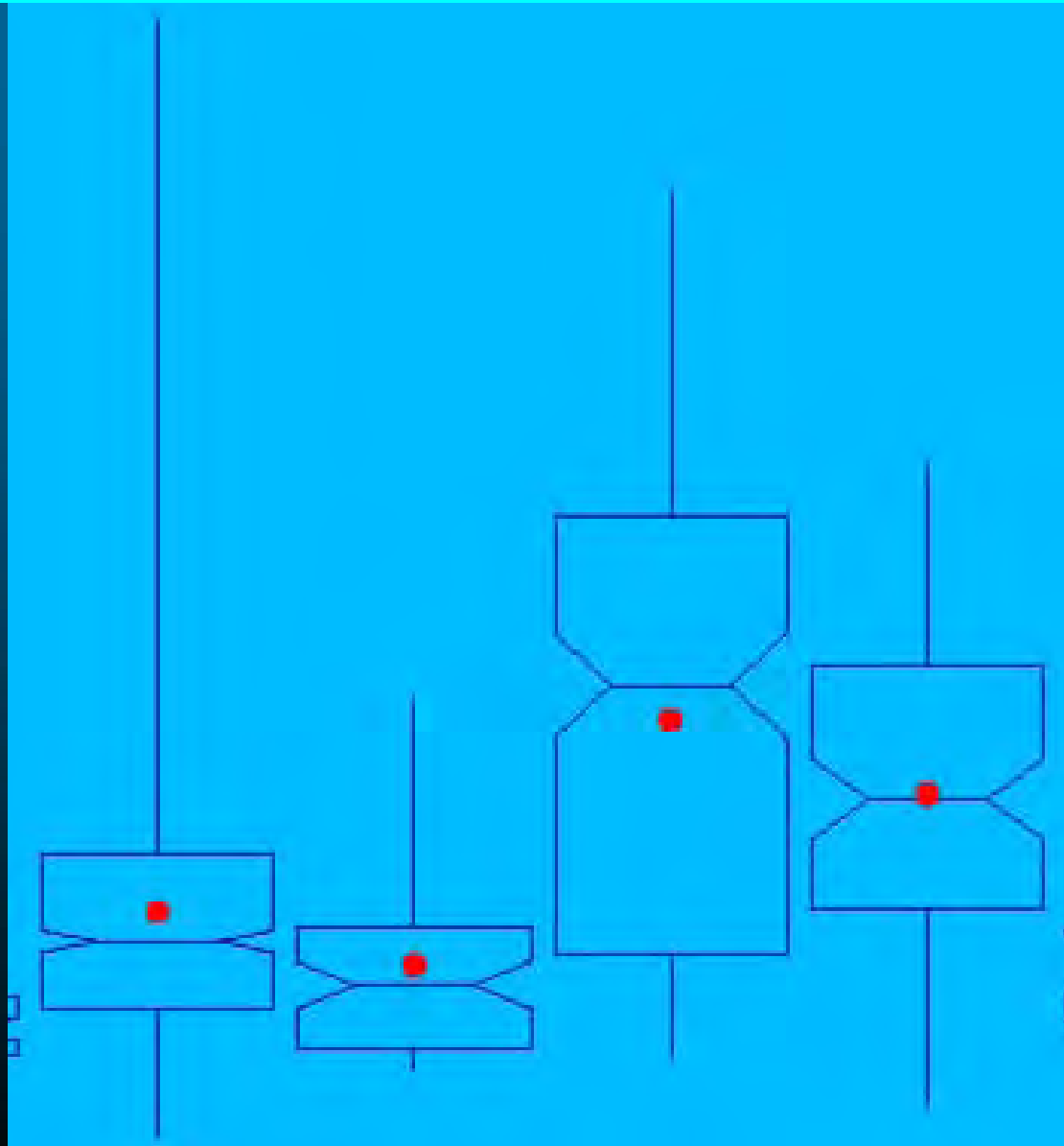


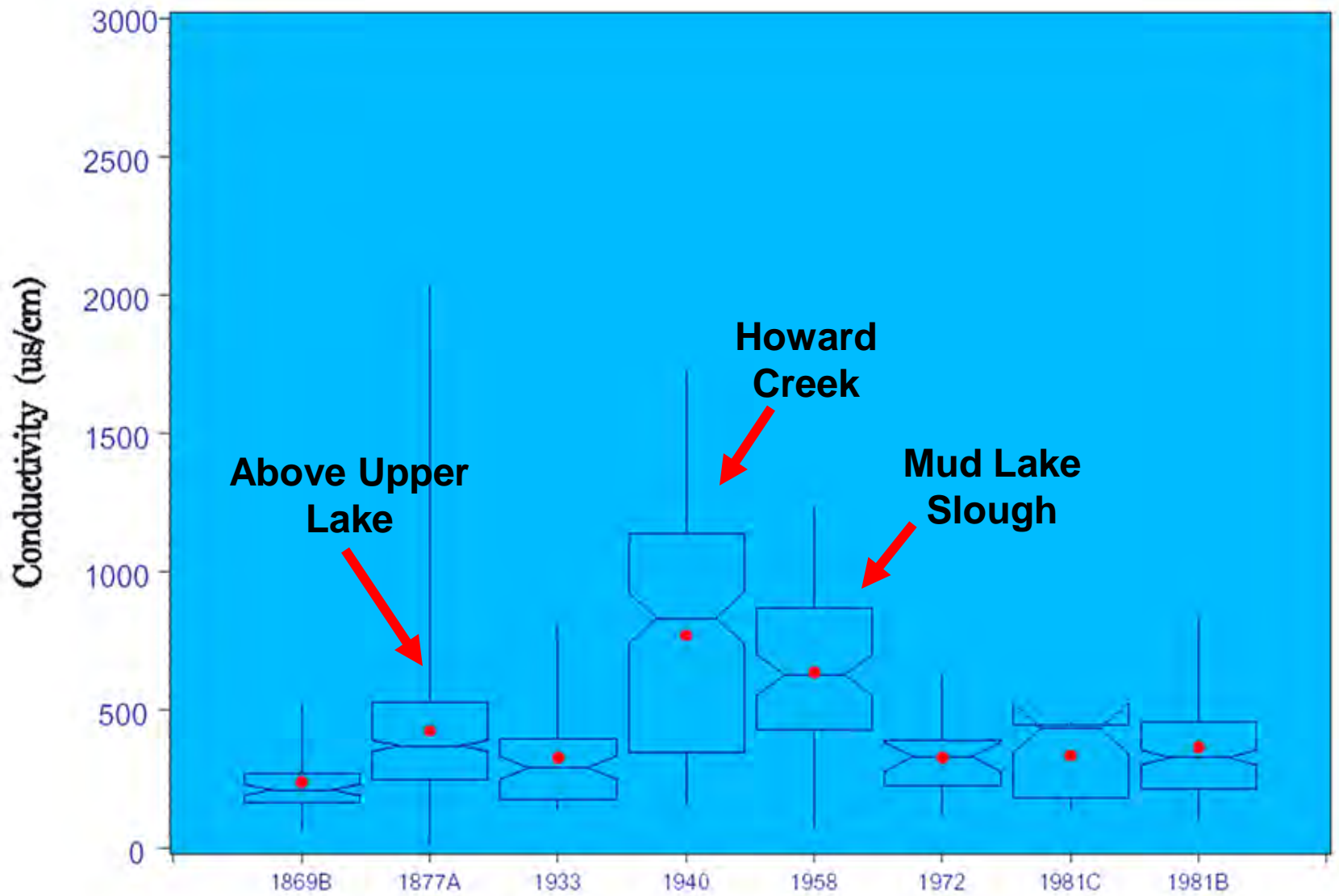
Monthly median flow at lower Myakka River gage (1990-2004)

Water Quality Characteristic Patterns within the Watershed

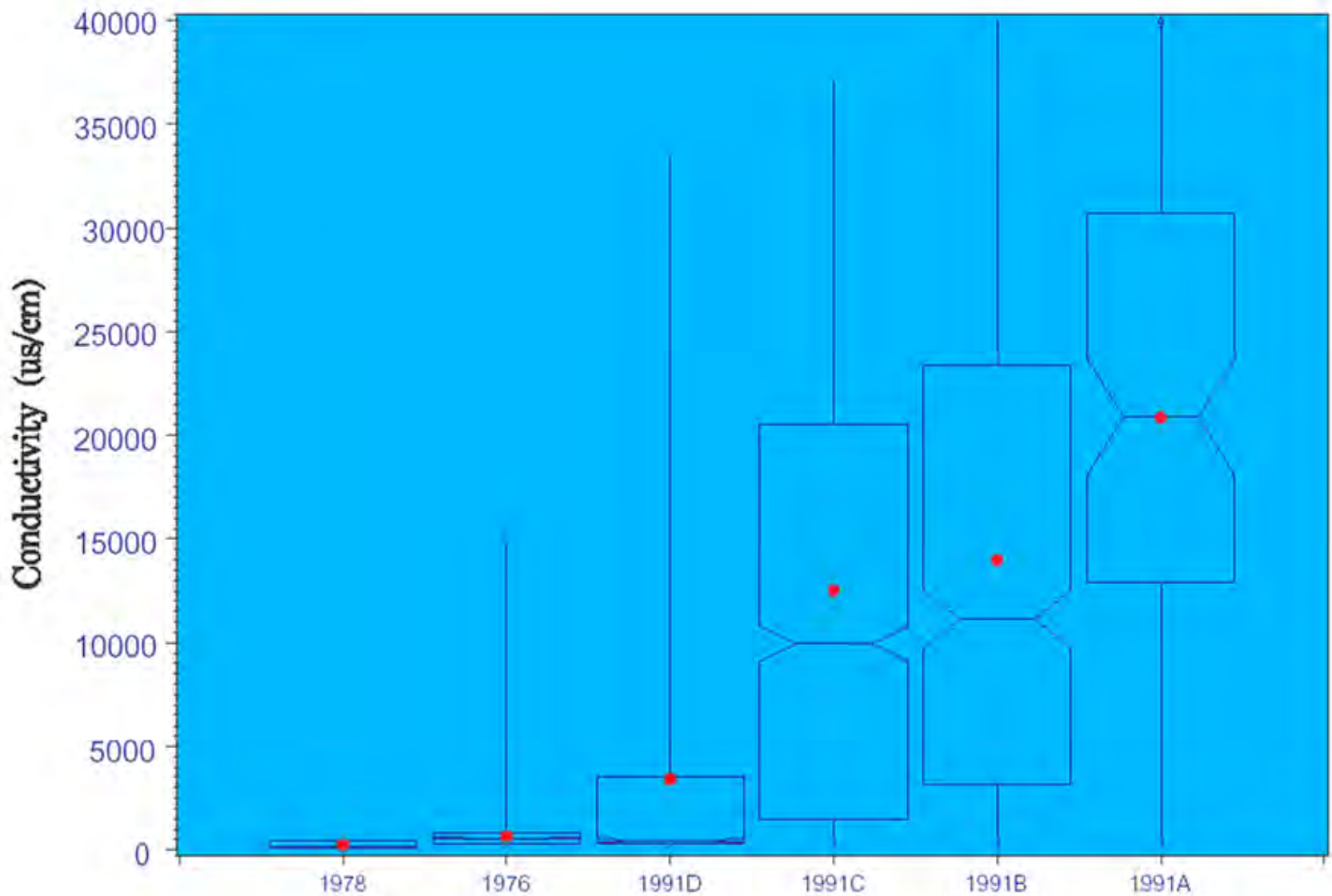
- **Conductivity**
- **Nitrate + Nitrite – Nitrogen**
- **Total Kjeldahl Nitrogen**
- **Orthophosphorus**
- **Dissolved Oxygen**
- **Chlorophyll a**

Box & Whisker SAS Plots

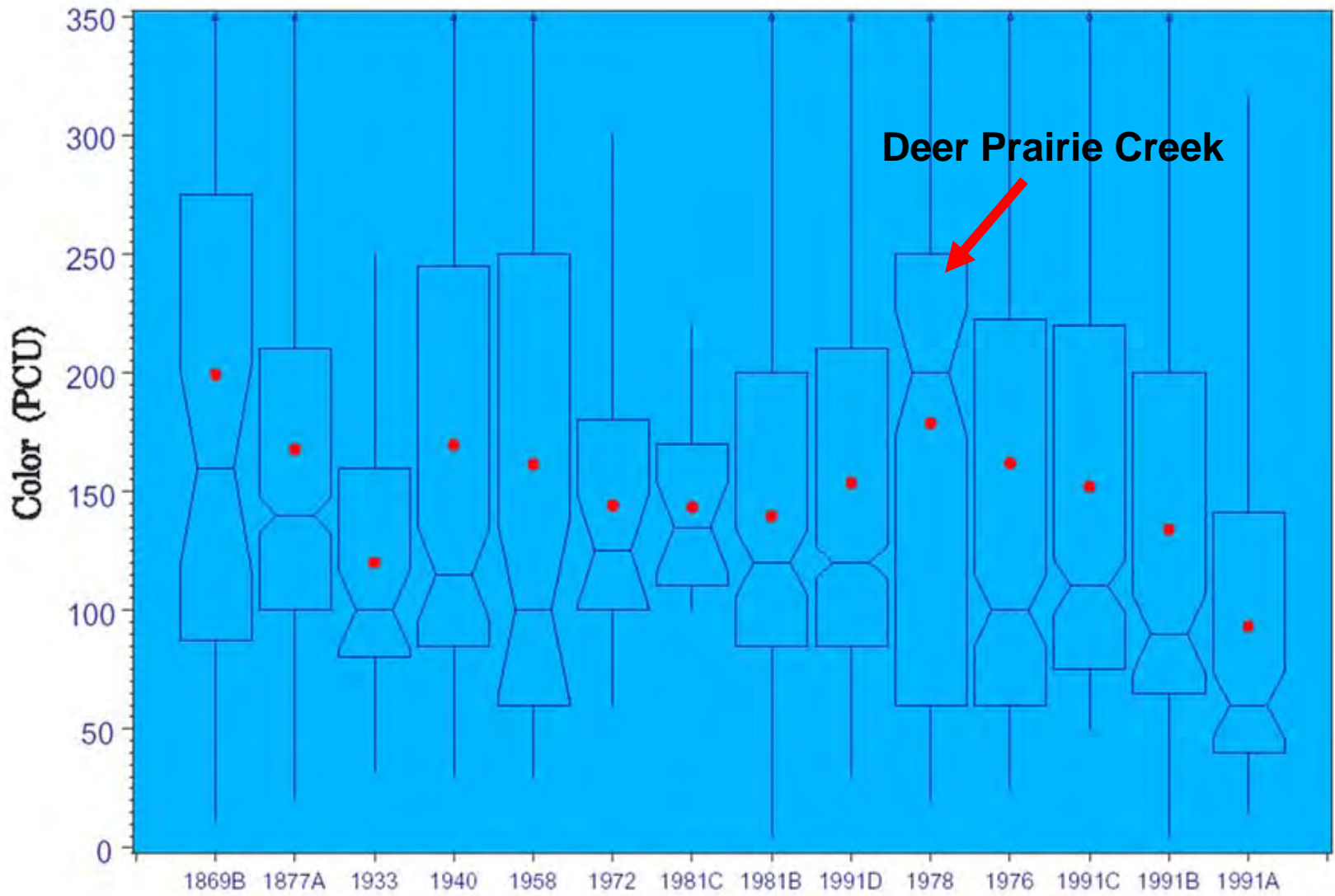




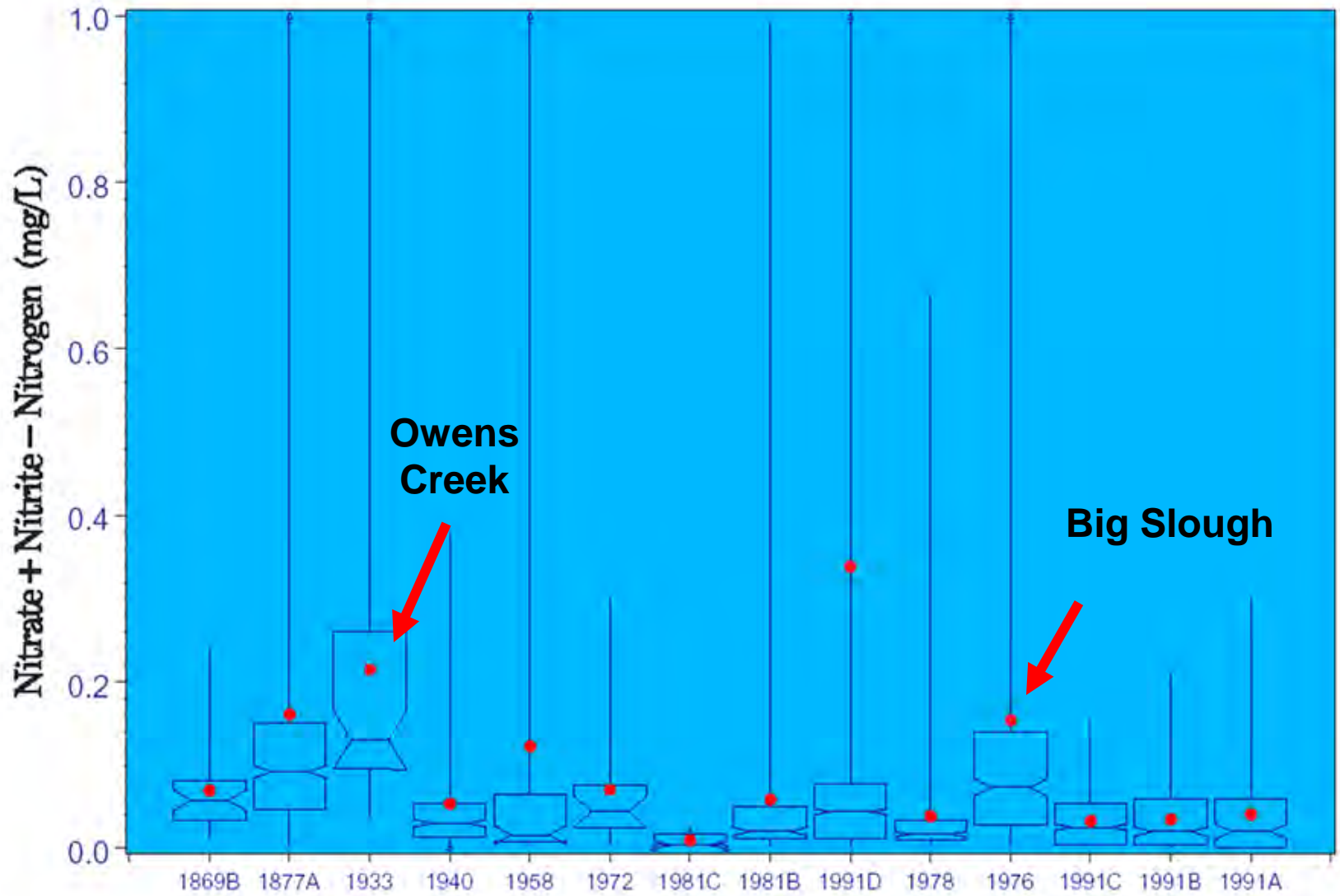
Boxplots of COND levels among upper river WBIDs



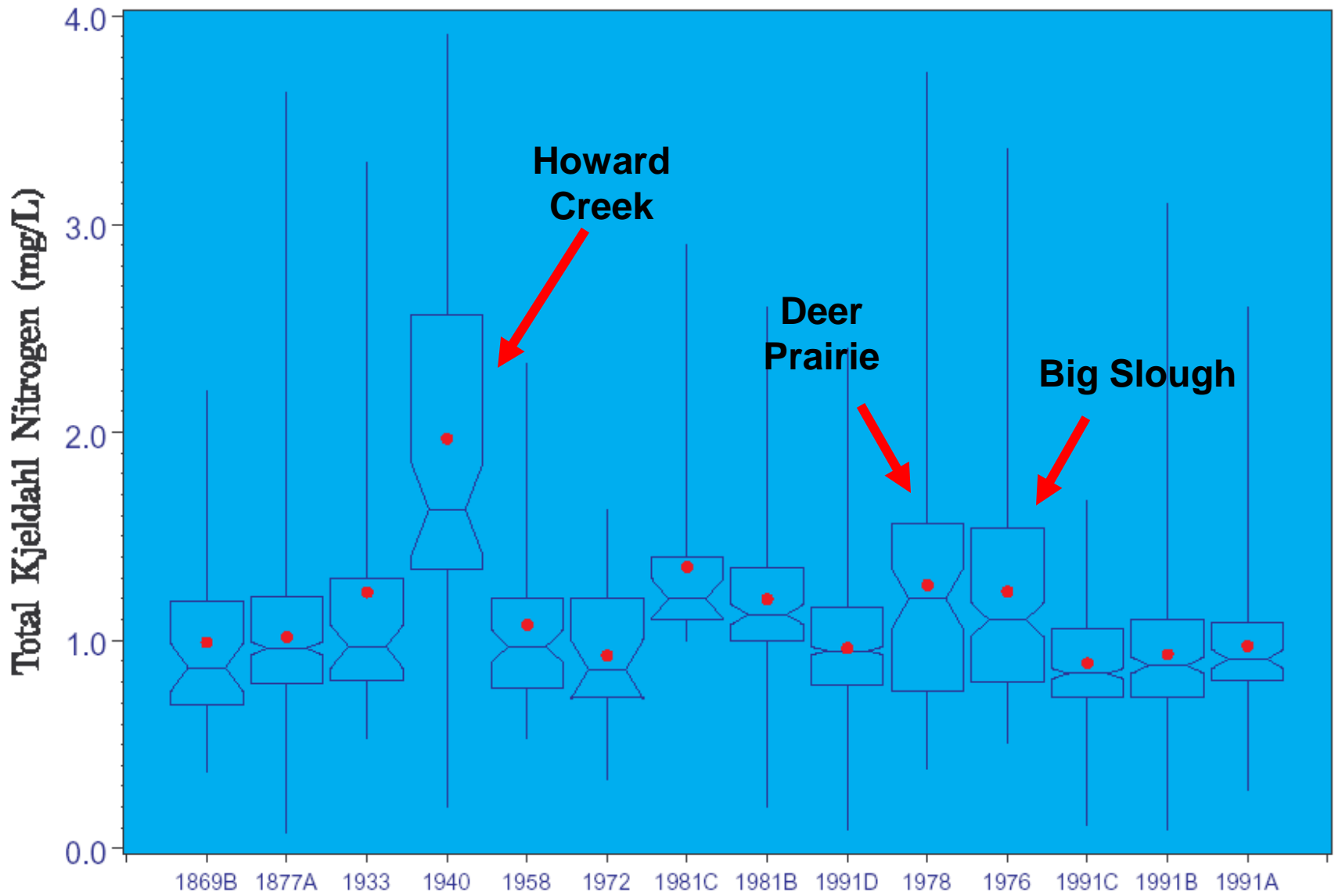
Boxplots of COND levels among lower river WBIDs



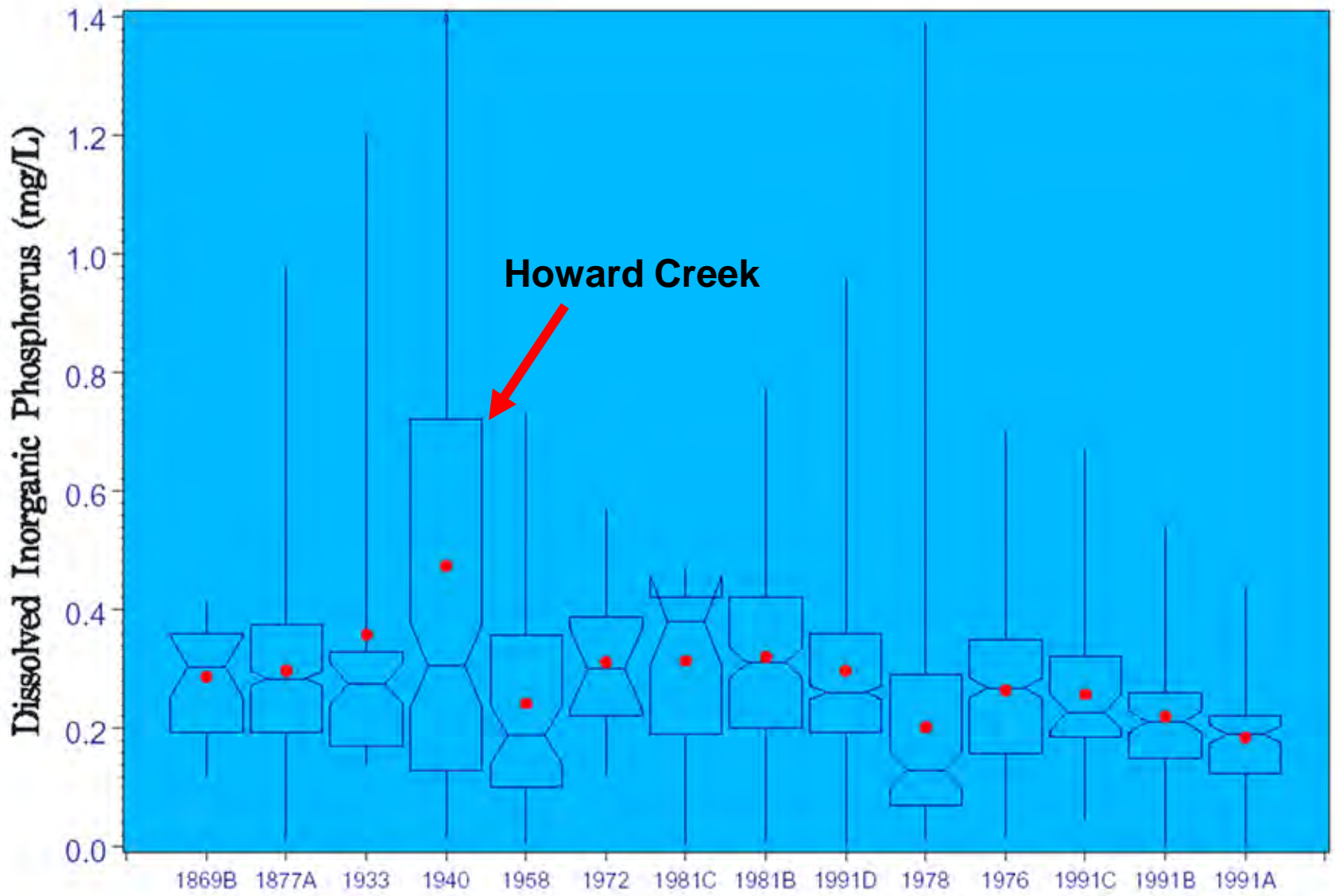
Boxplots of COLOR concentrations among WBIDs



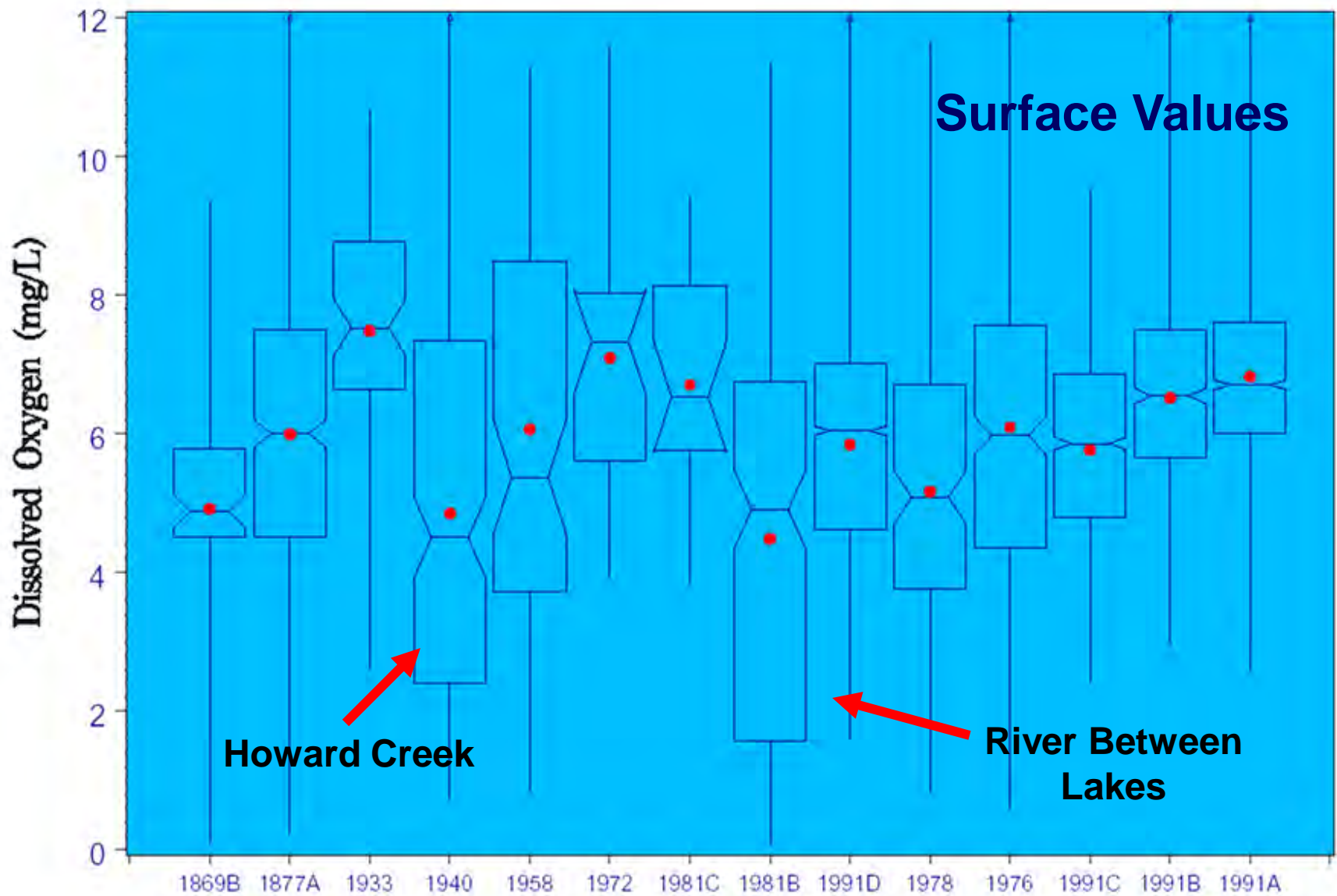
Boxplots of NO₂/NO₃ concentrations among WBIDs



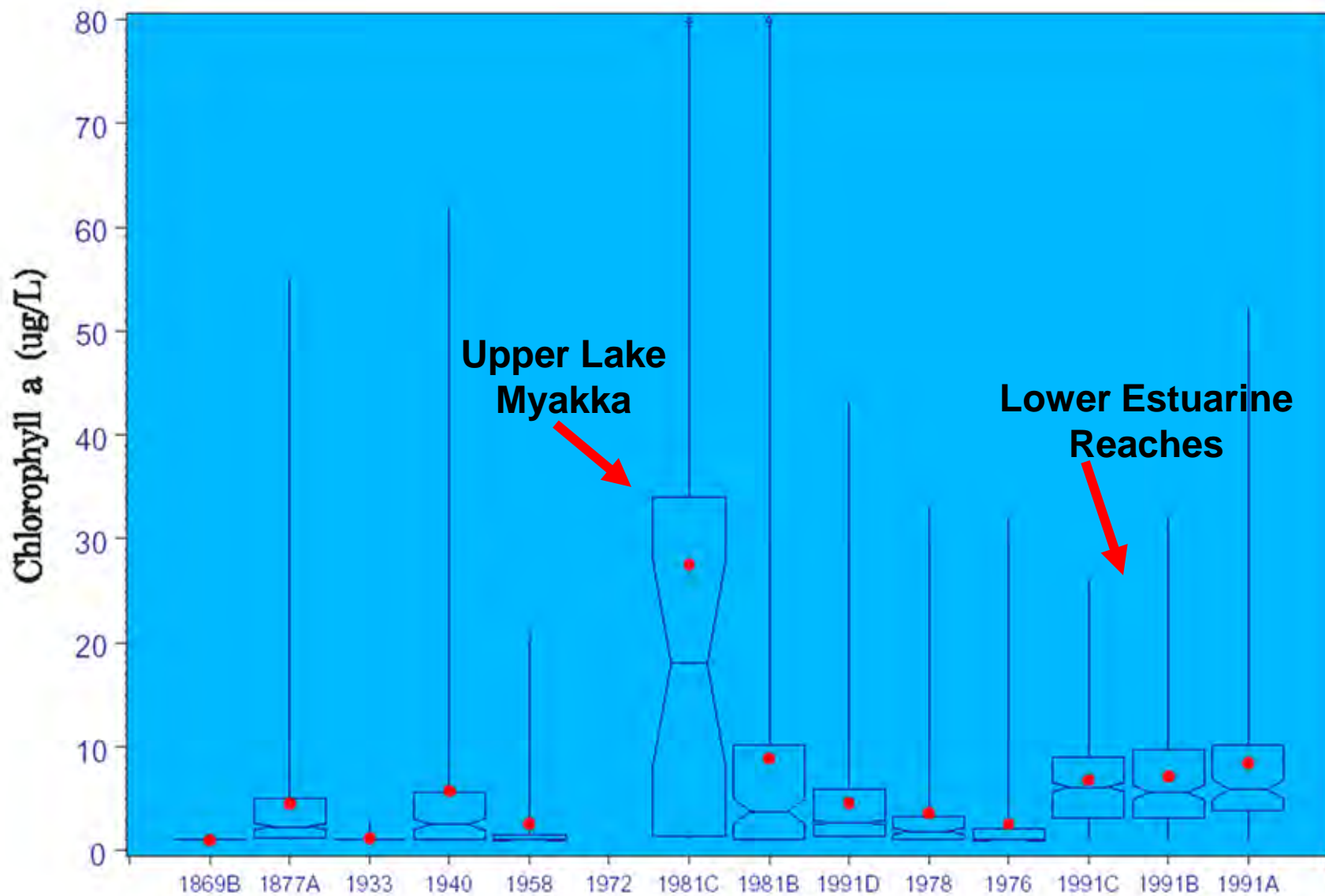
Boxplots of TKN concentrations among WBIDs



Boxplots of OP concentrations among WBIDs



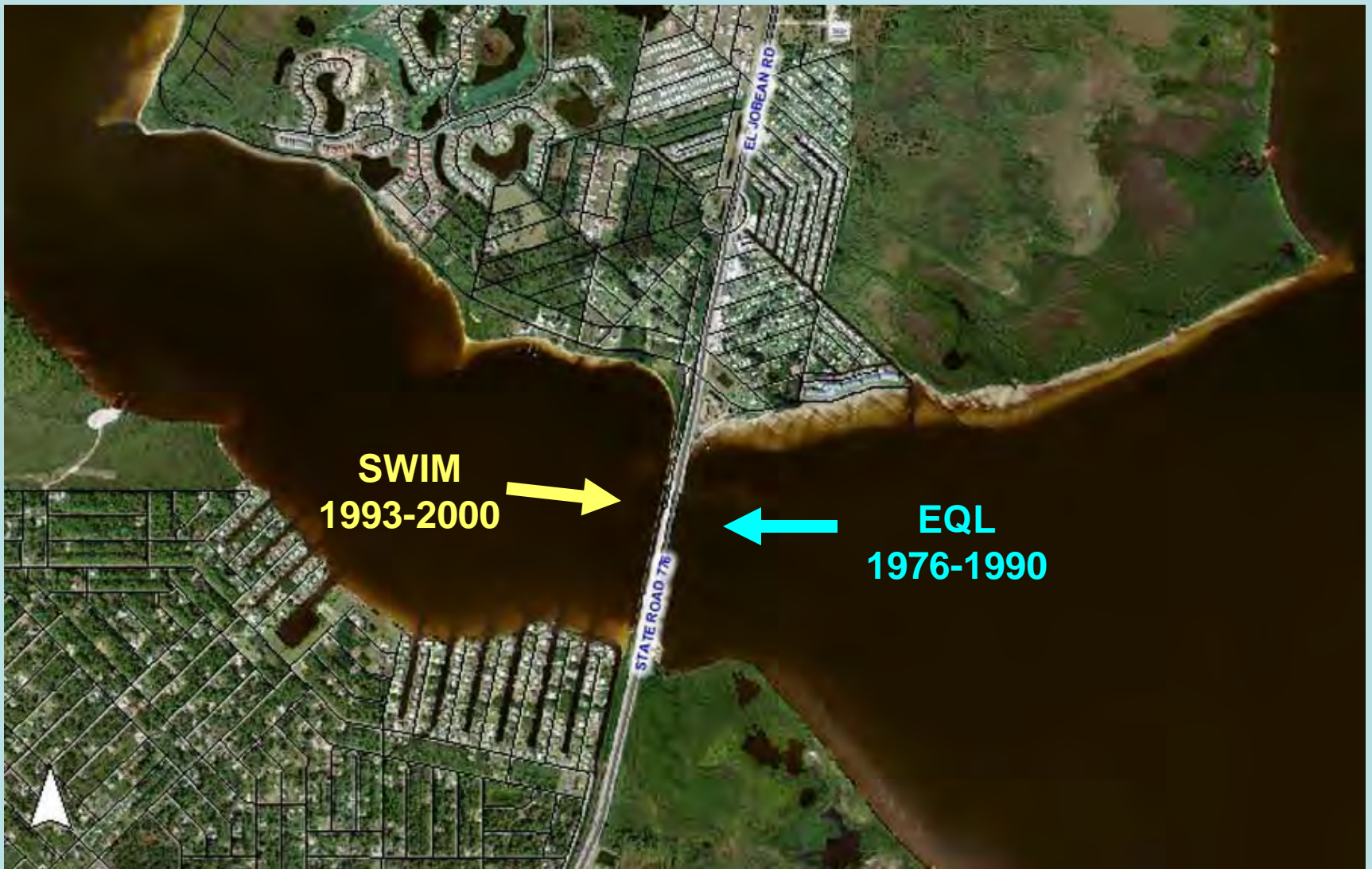
Boxplots of DO concentrations among WBIDs

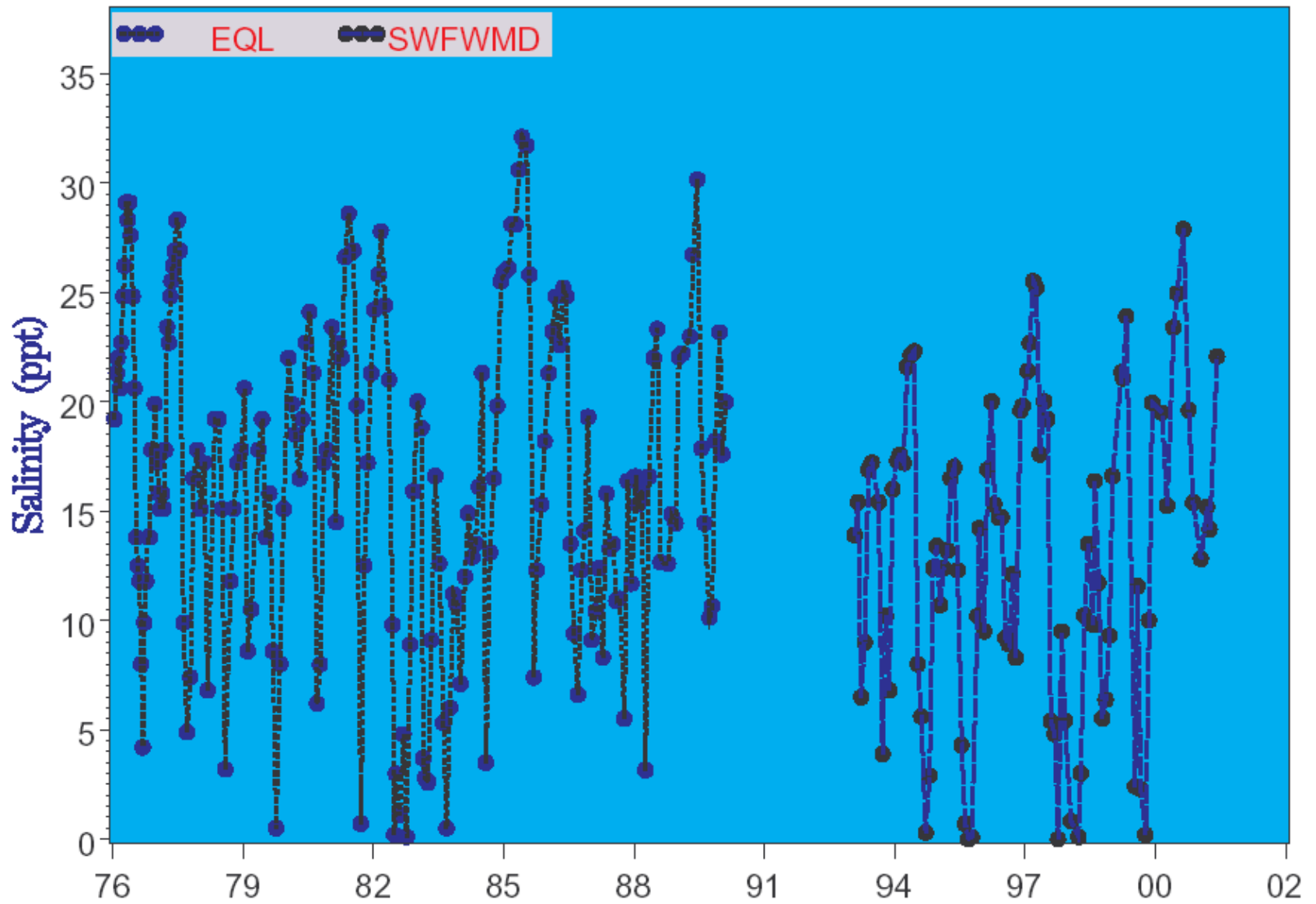


Boxplots of CHLA concentrations among WBIDs

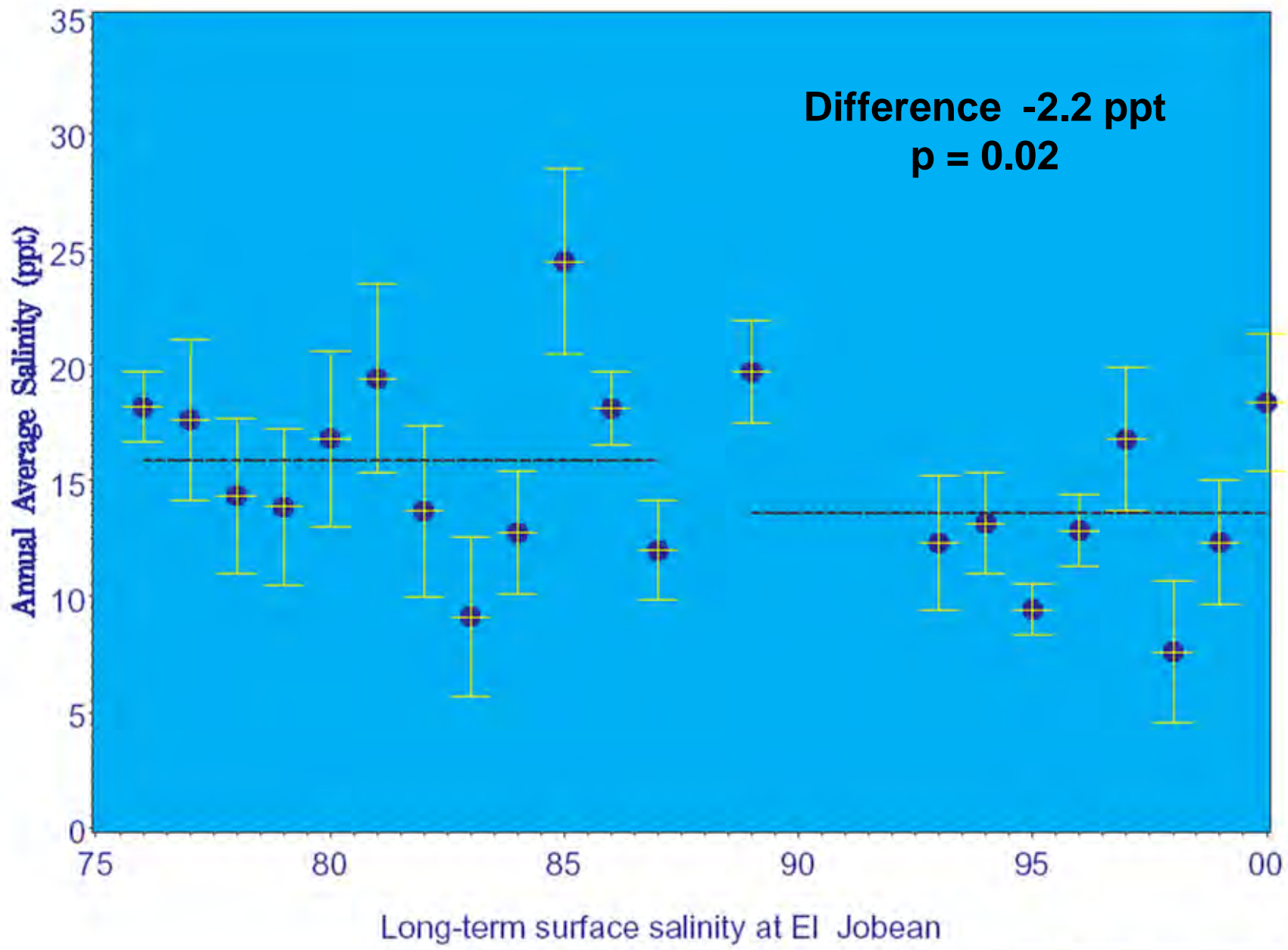
Lower Myakka River Estuary

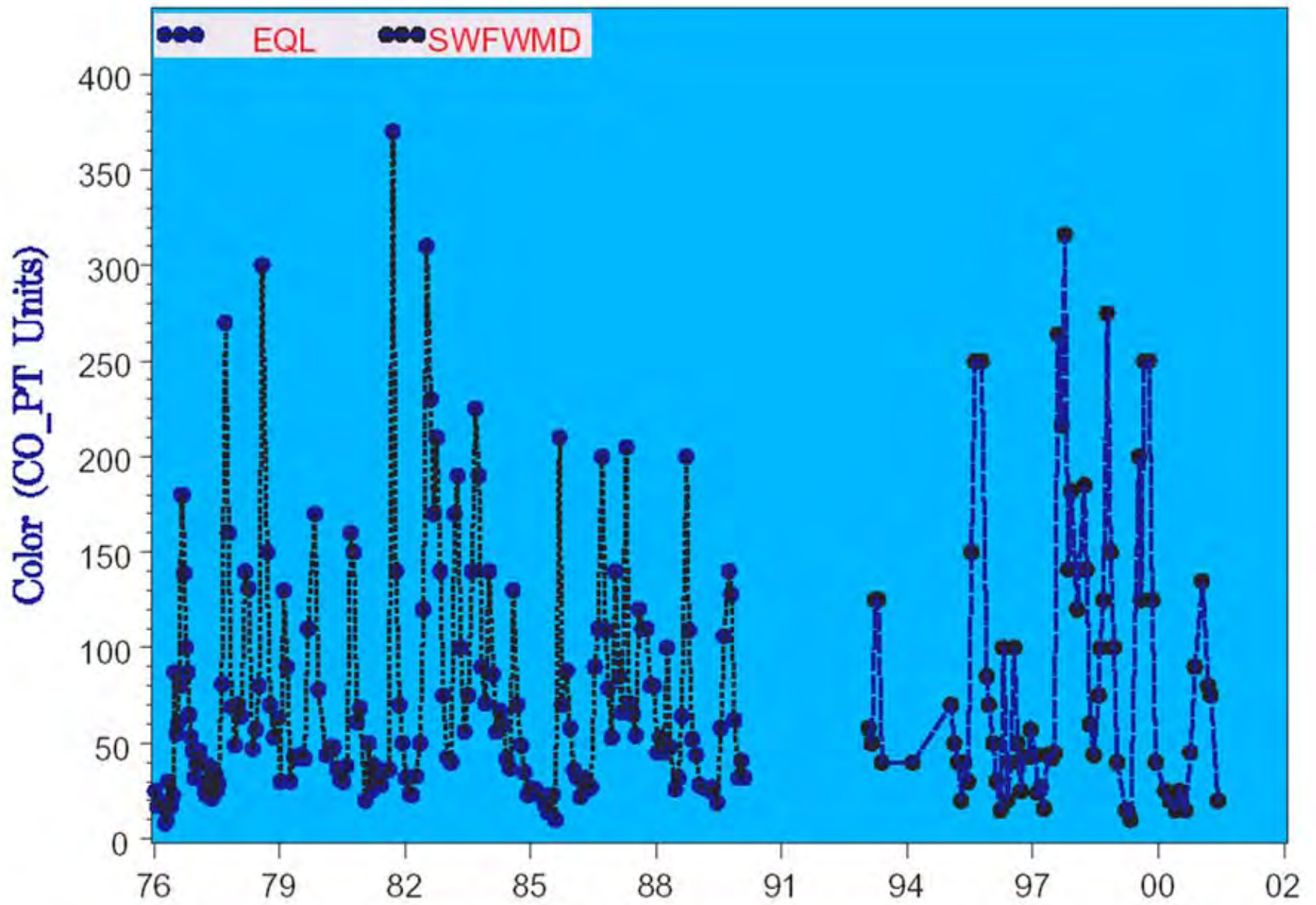




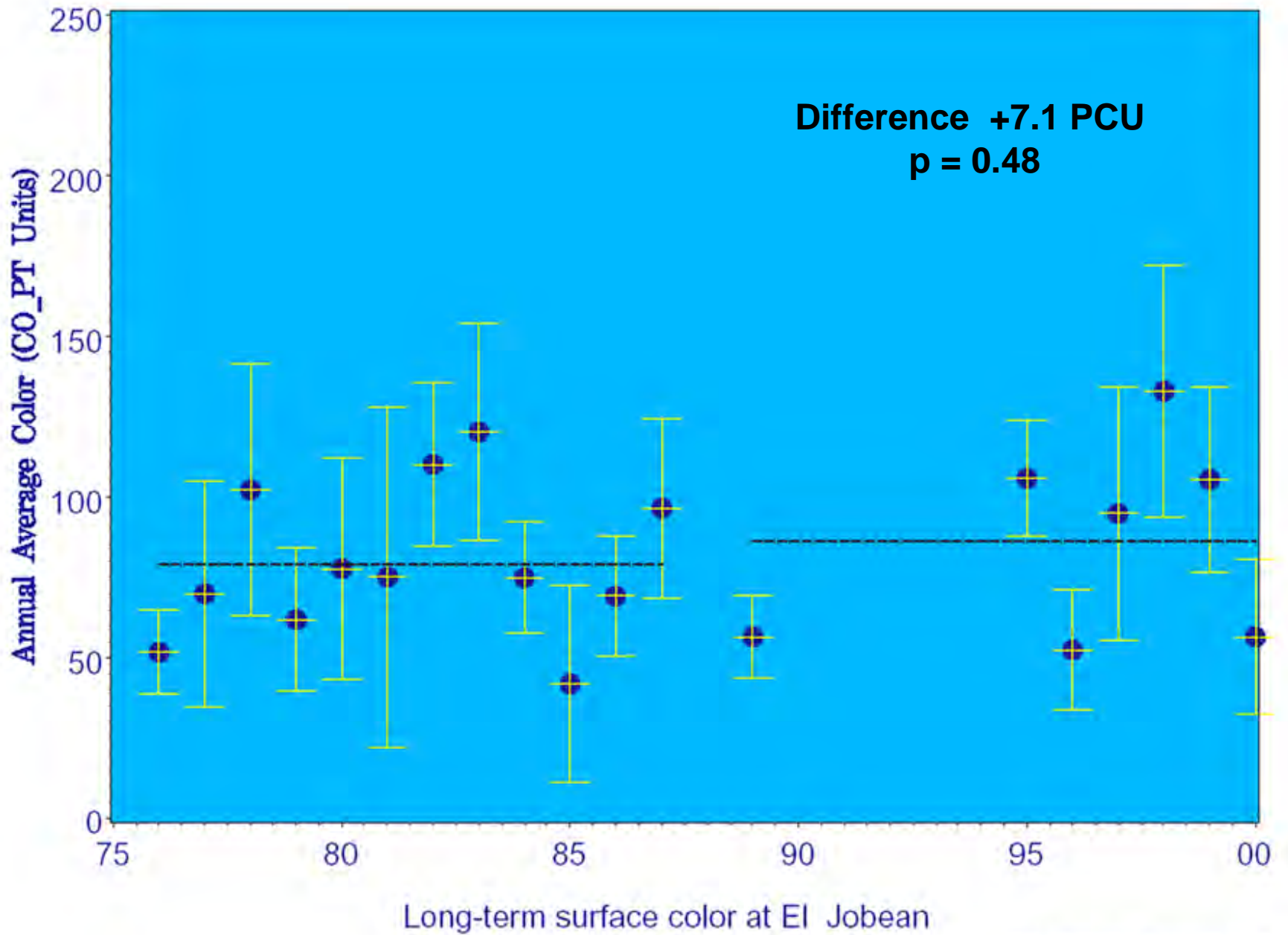


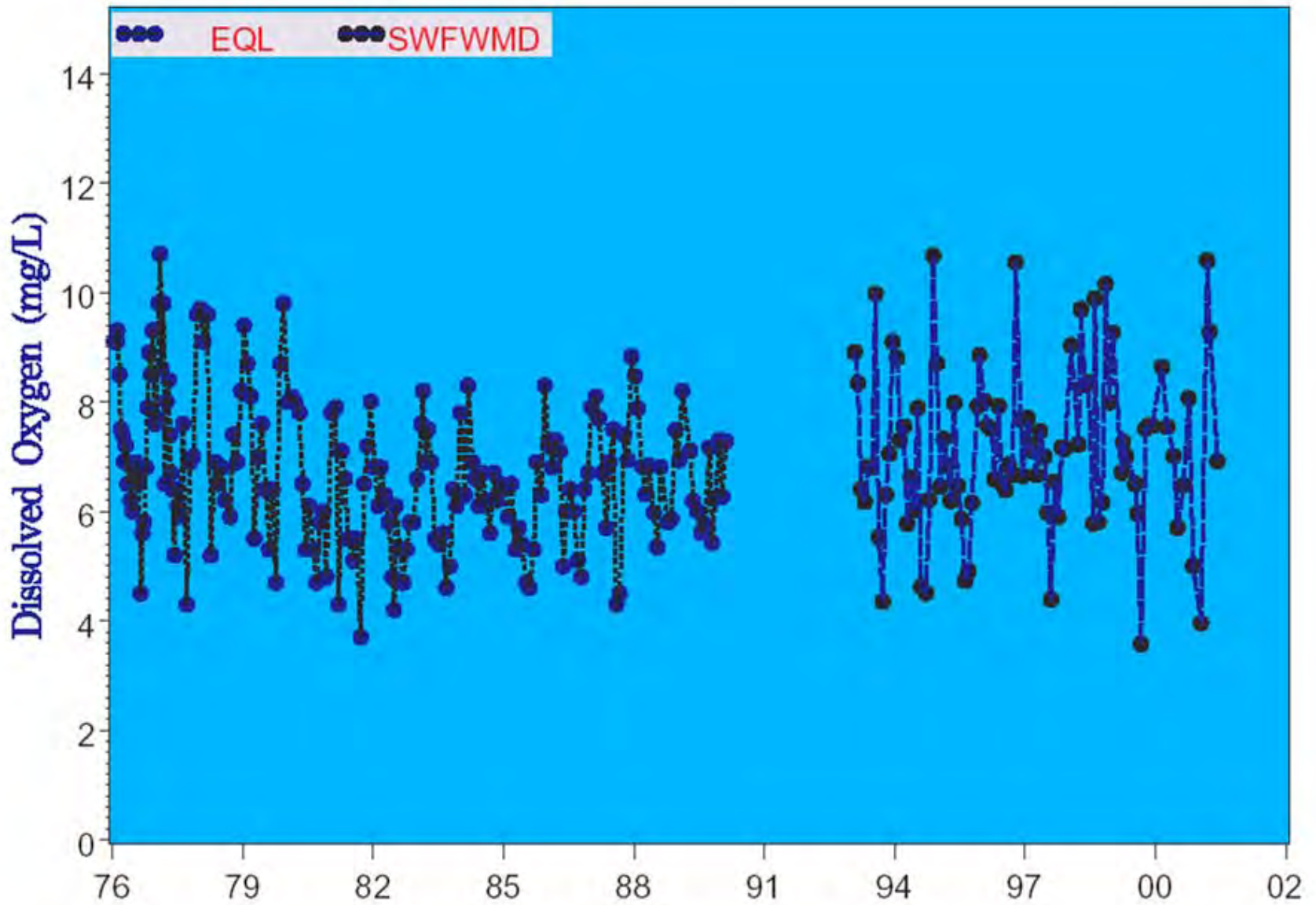
Long-term surface salinity at El Jobean



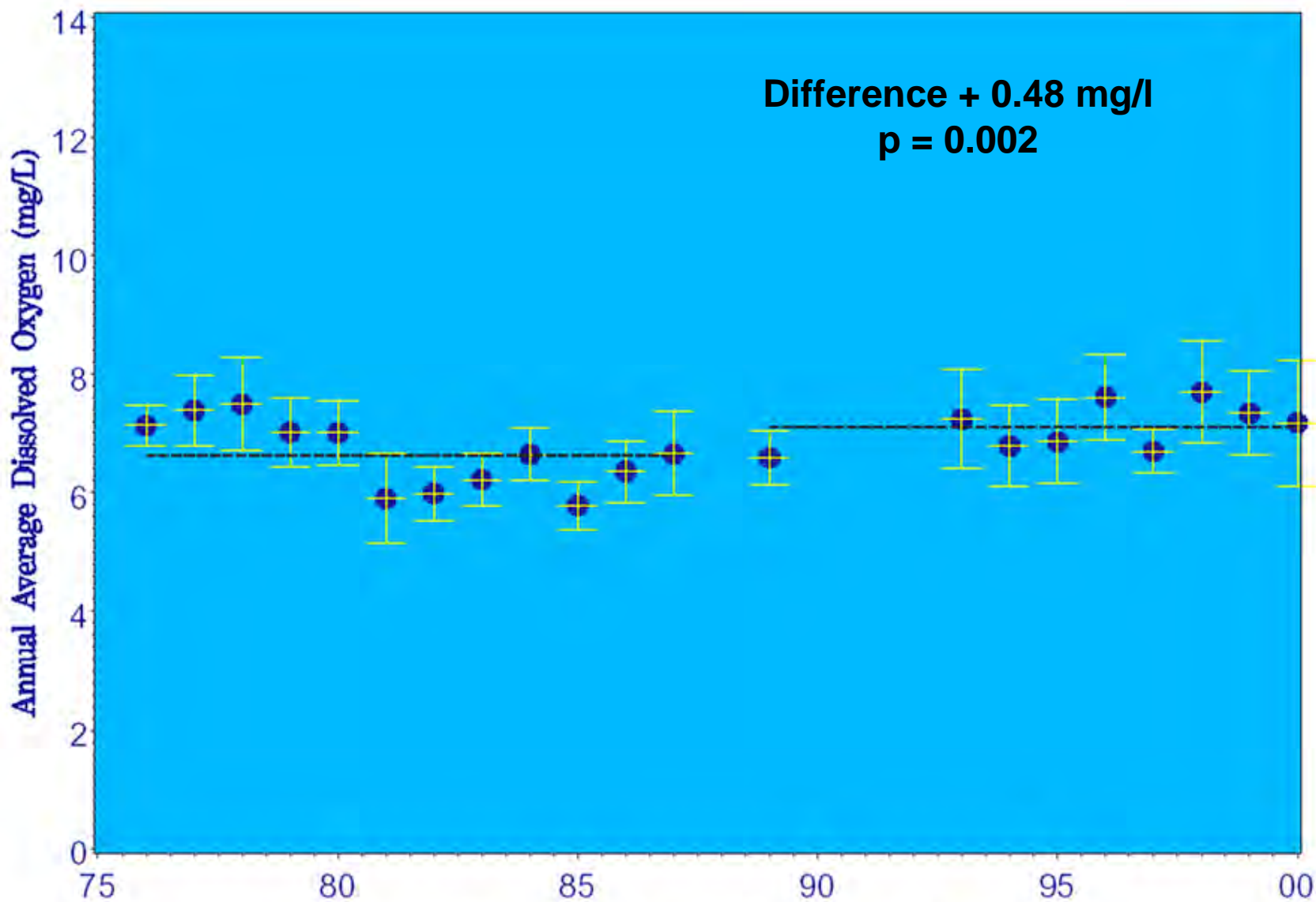


Long-term surface color at El Jobean

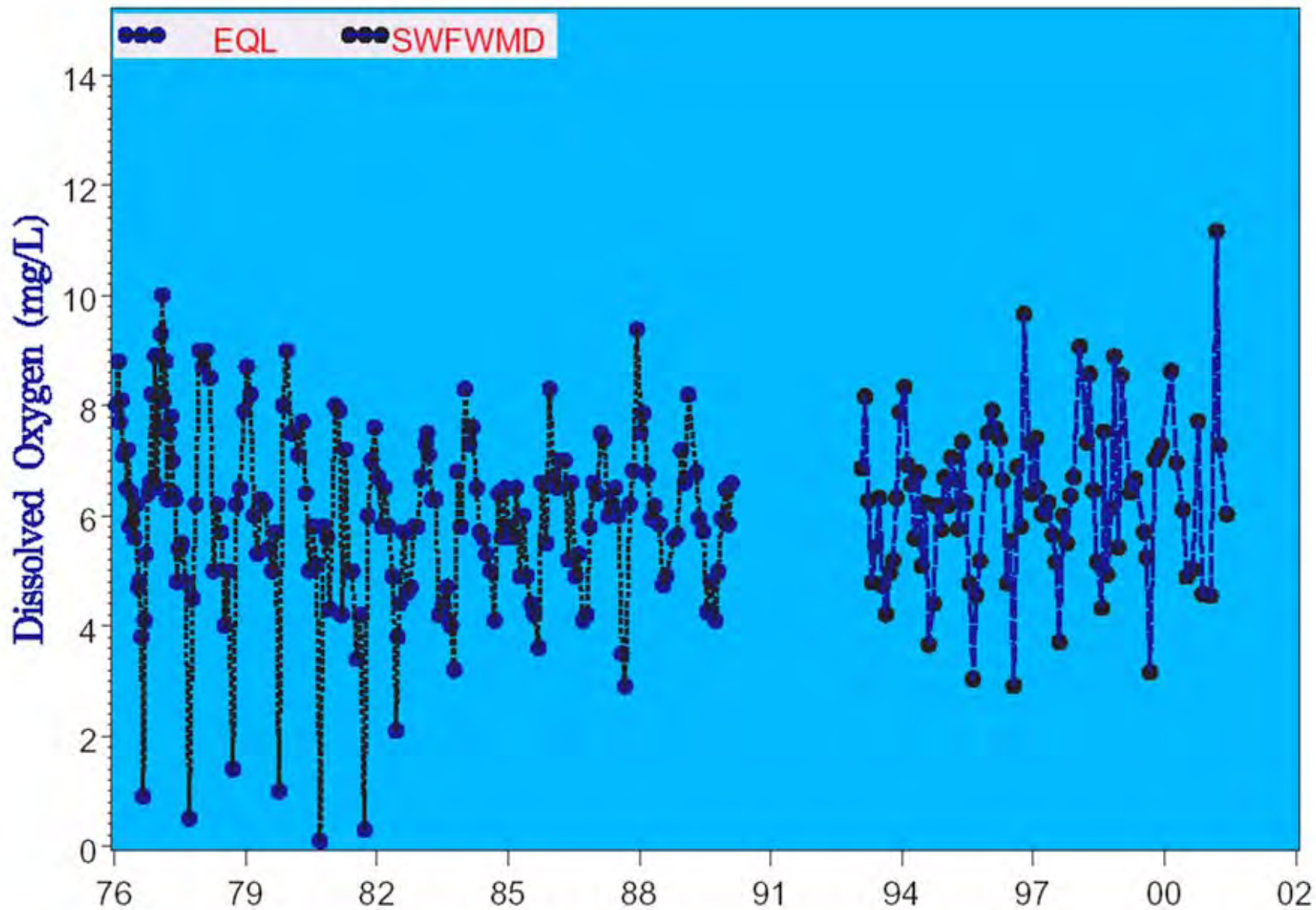




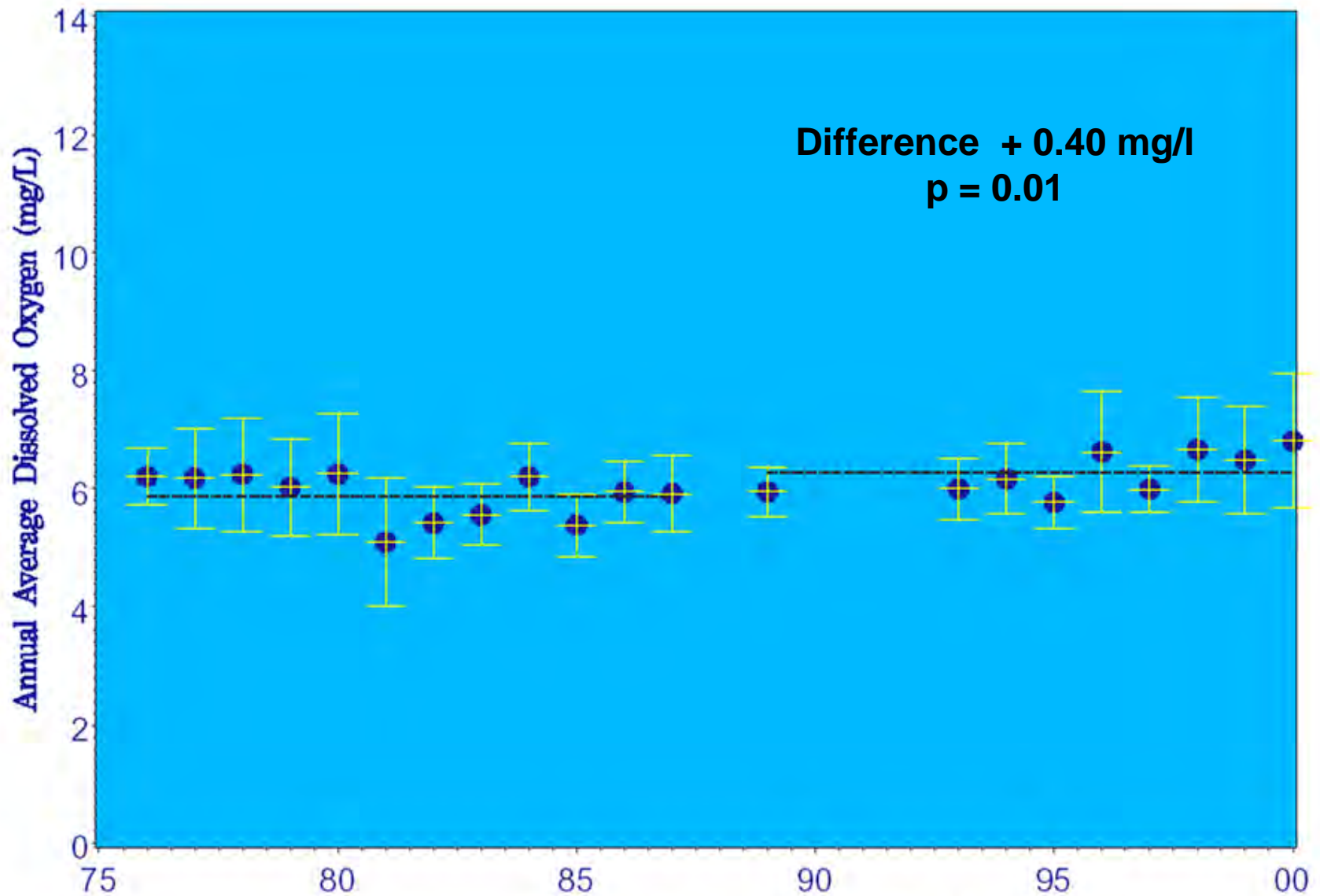
Long-term surface dissolved oxygen at El Jobean



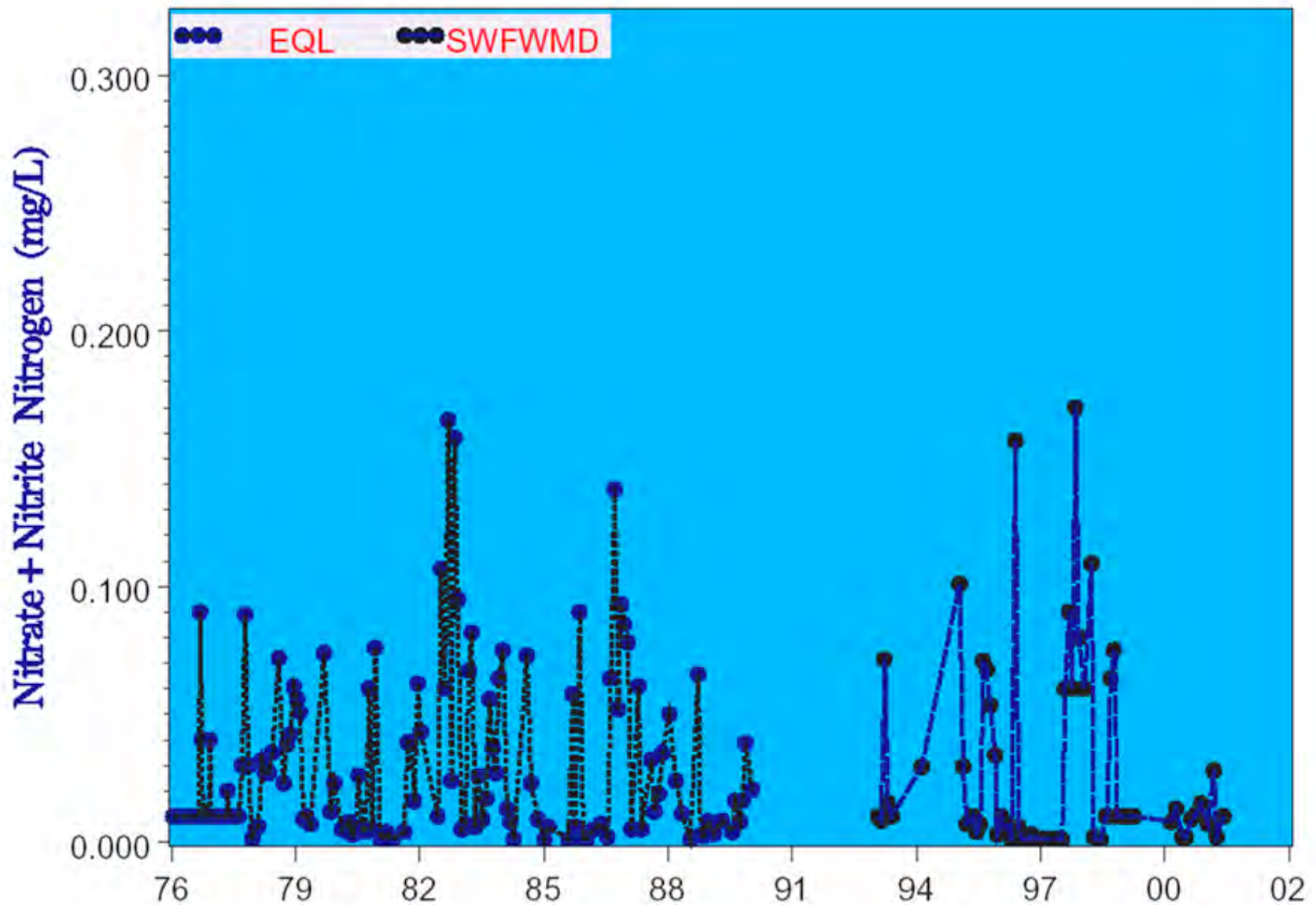
Long-term surface dissolved oxygen at El Jobean



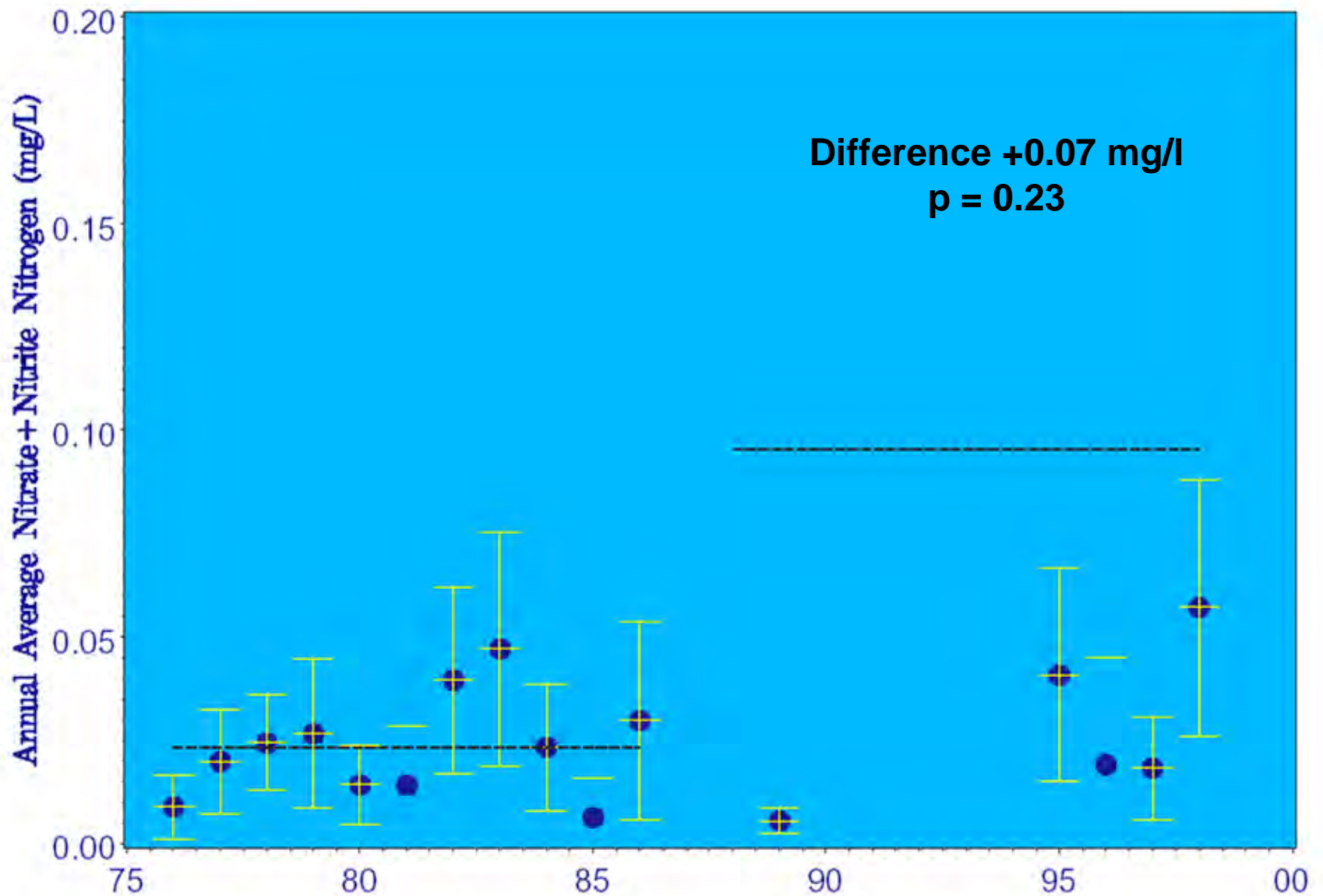
Long-term bottom dissolved oxygen at El Jobean



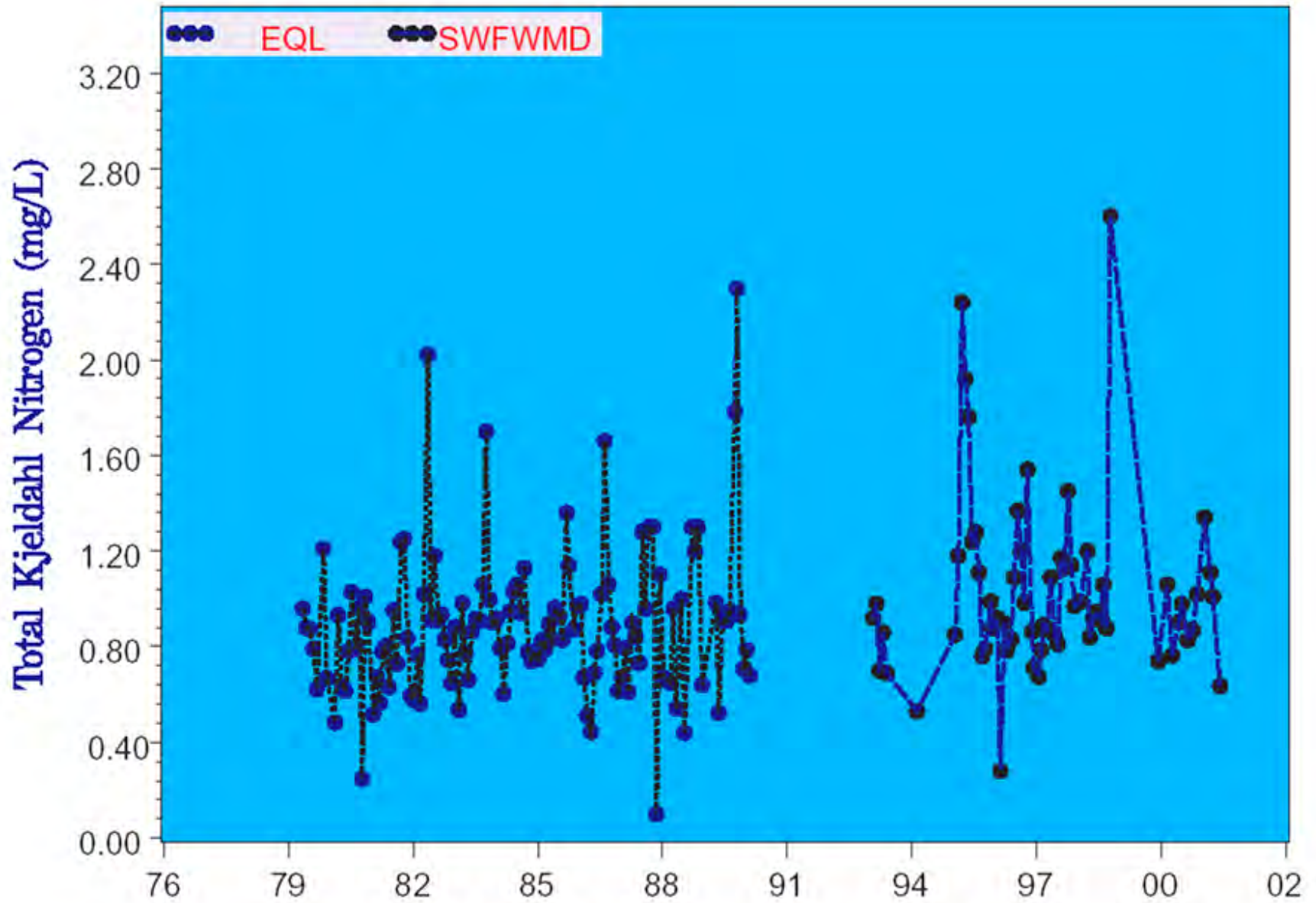
Long-term bottom dissolved oxygen at El Jobean



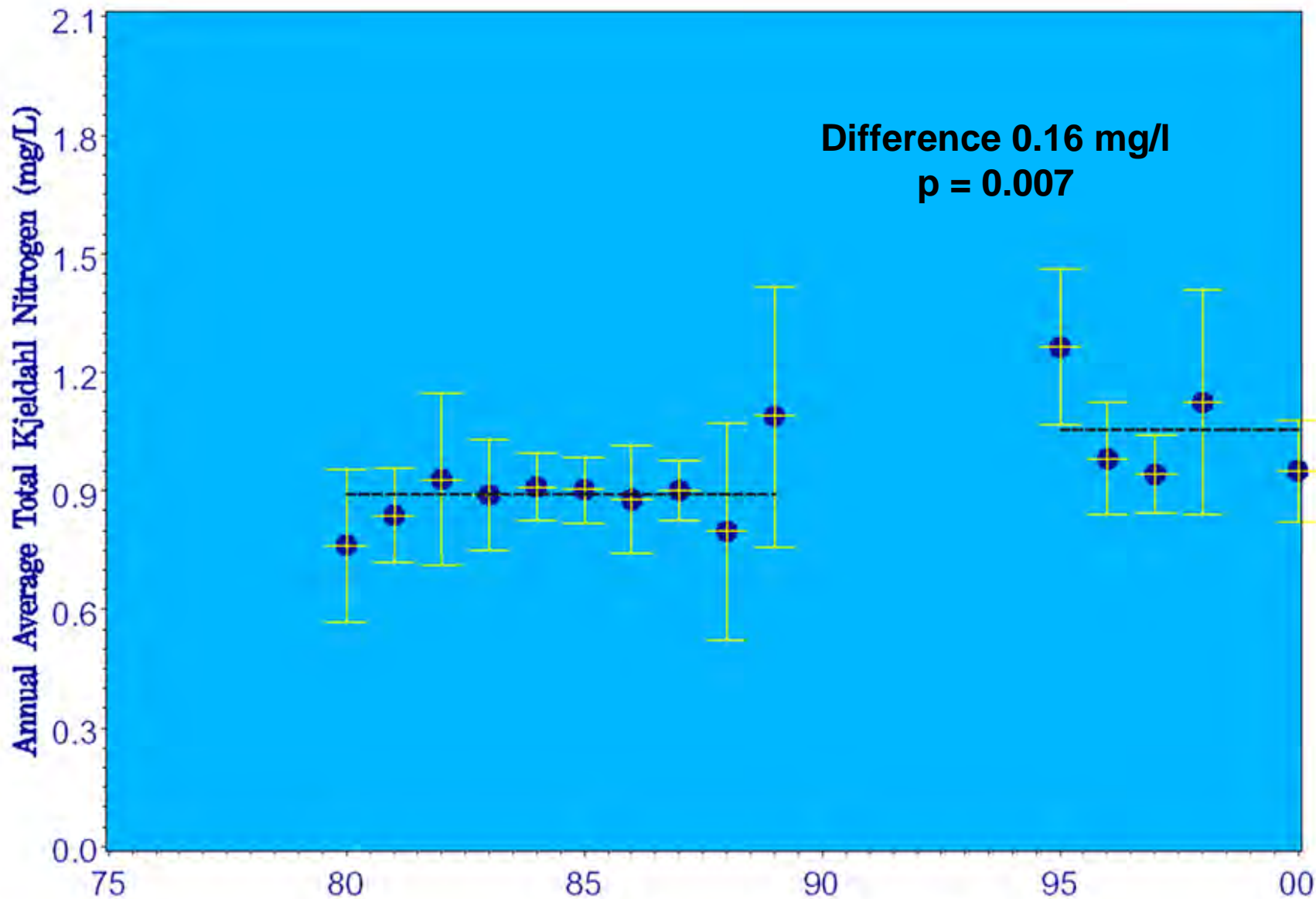
Long-term surface nitrate/nitrite nitrogen at El Jobean



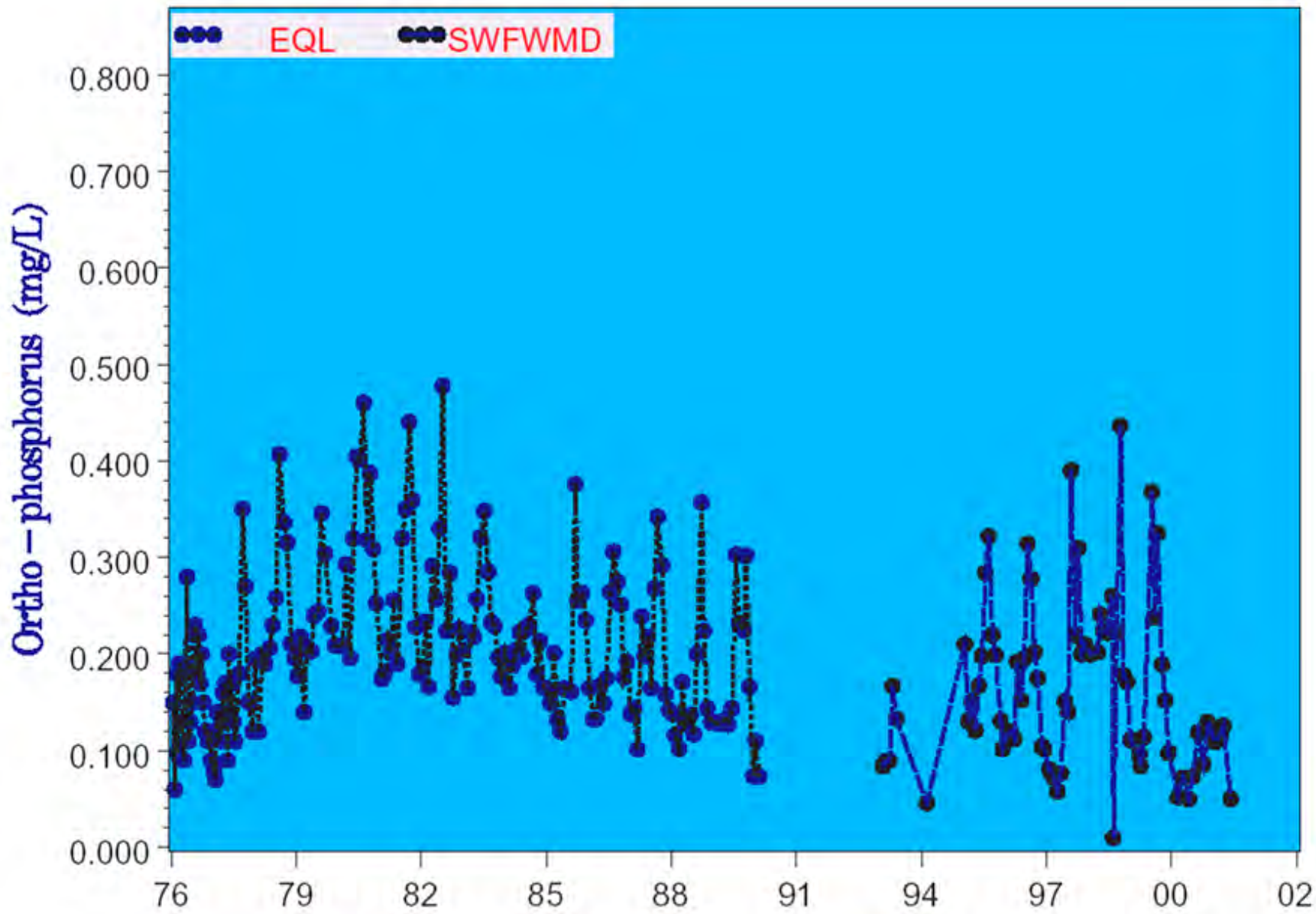
Long-term surface nitrate/nitrite nitrogen at El Jobean



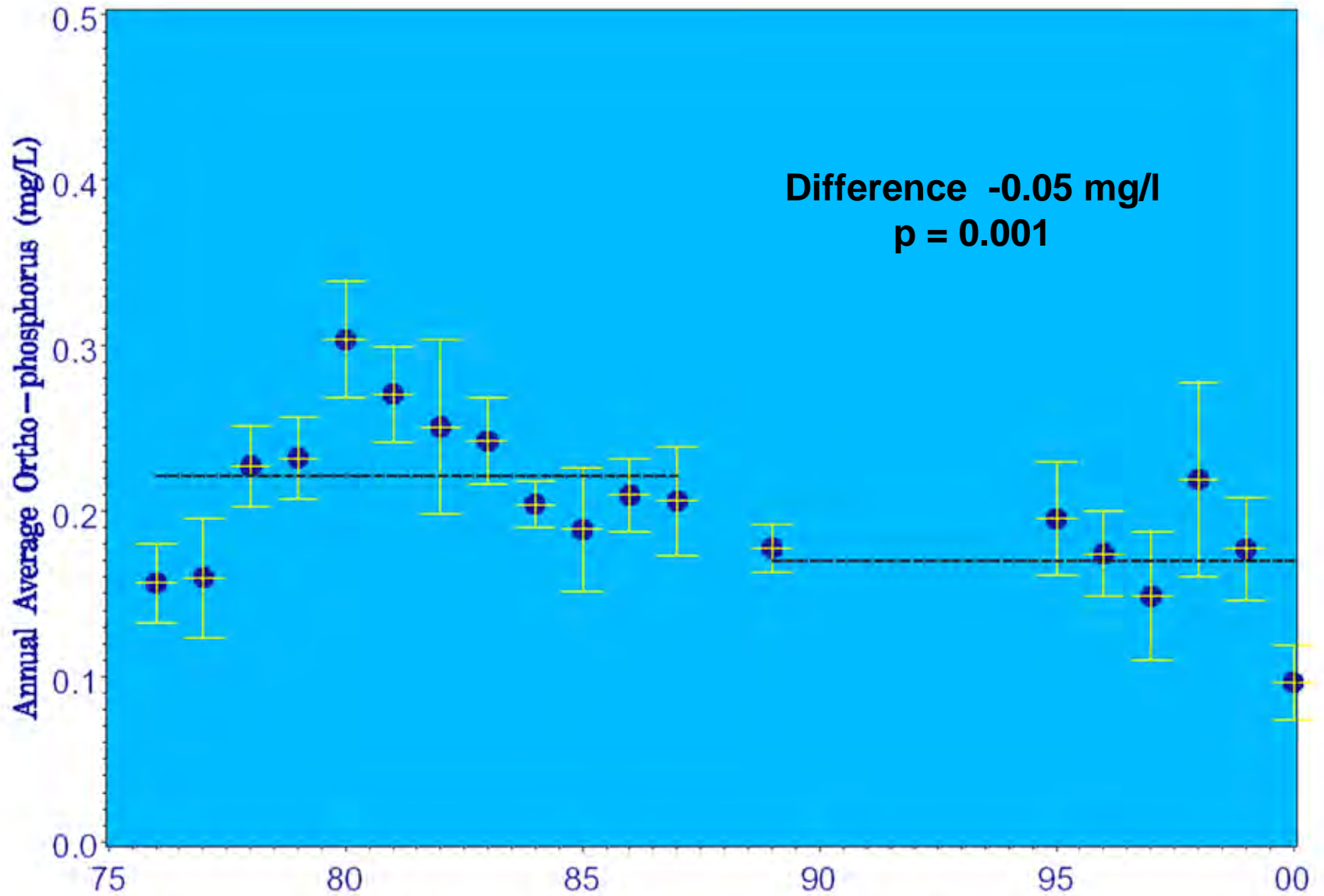
Long-term surface total Kjeldahl nitrogen at El Jobean



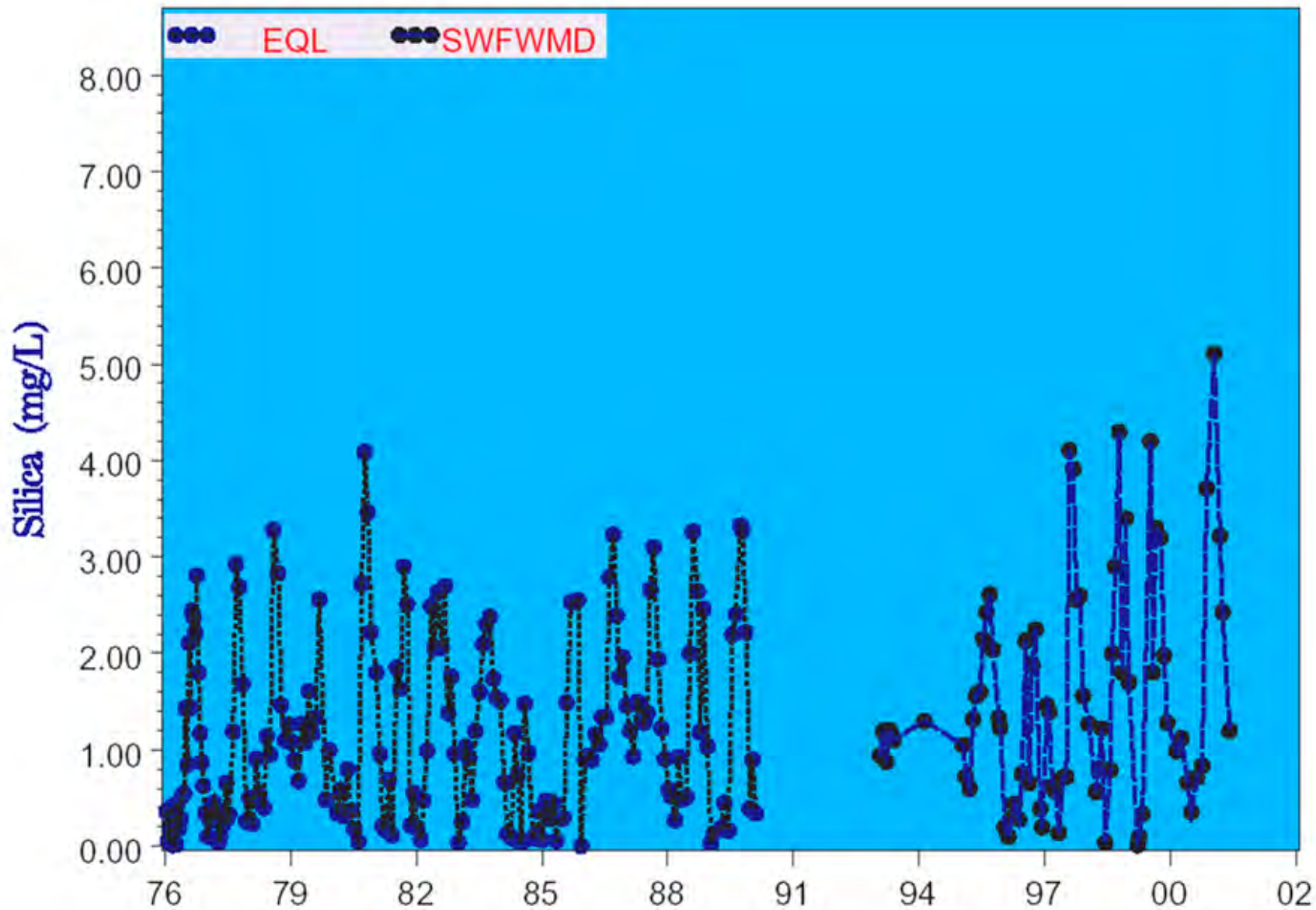
Long-term surface total Kjeldahl nitrogen at El Jobean



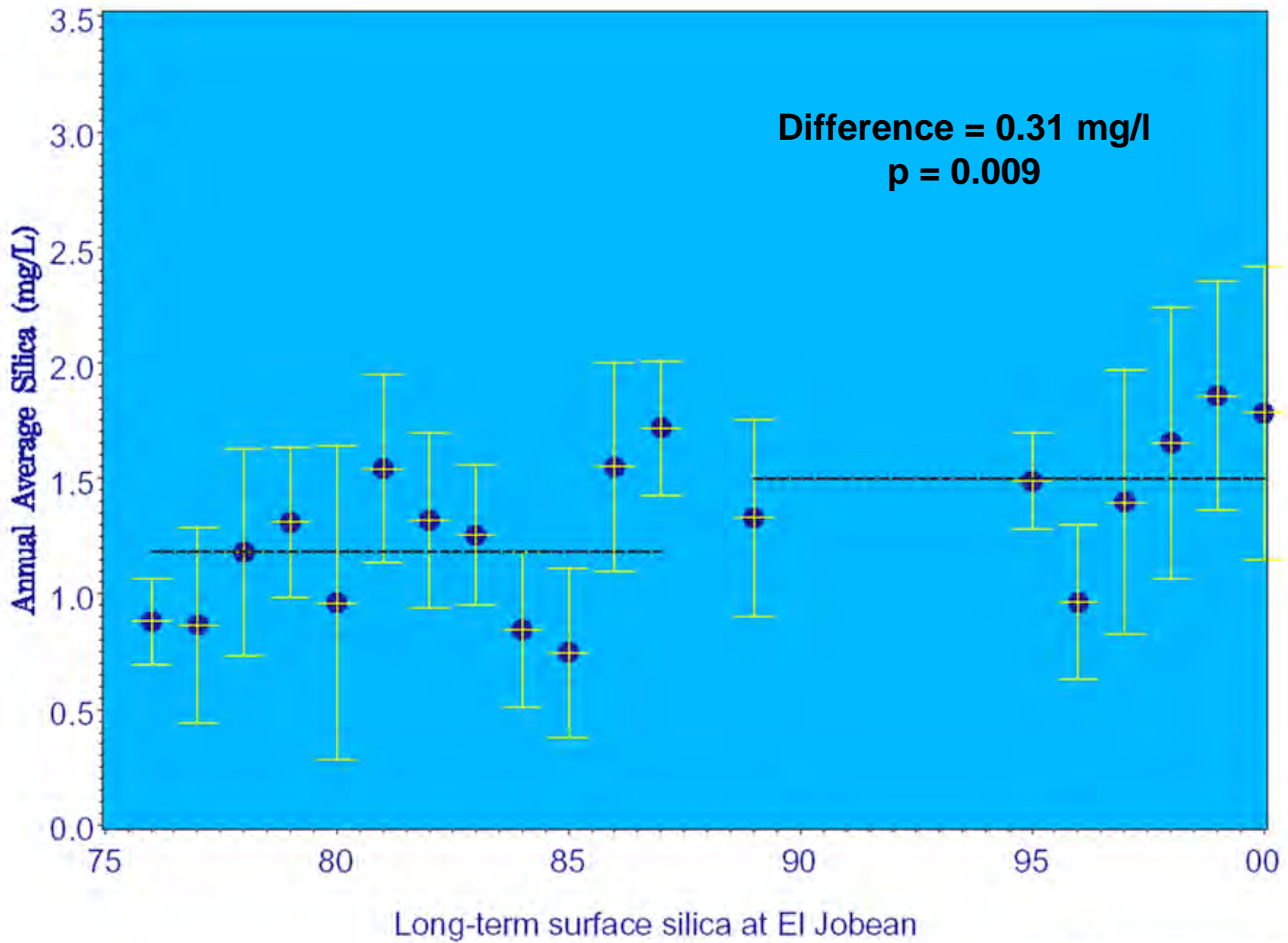
Long-term surface Ortho-phosphorus at El Jobean

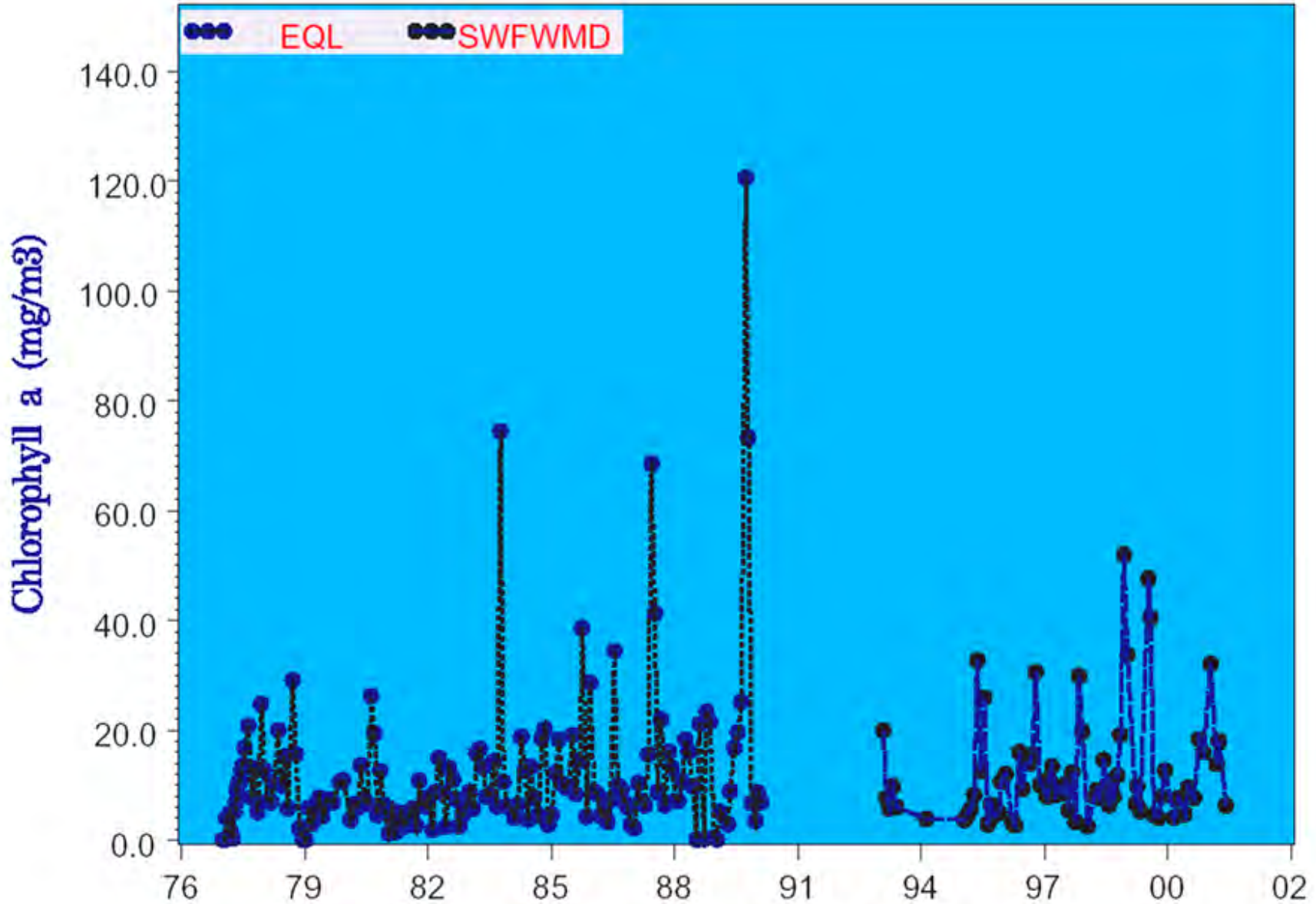


Long-term surface Ortho-phosphorus at El Jobean

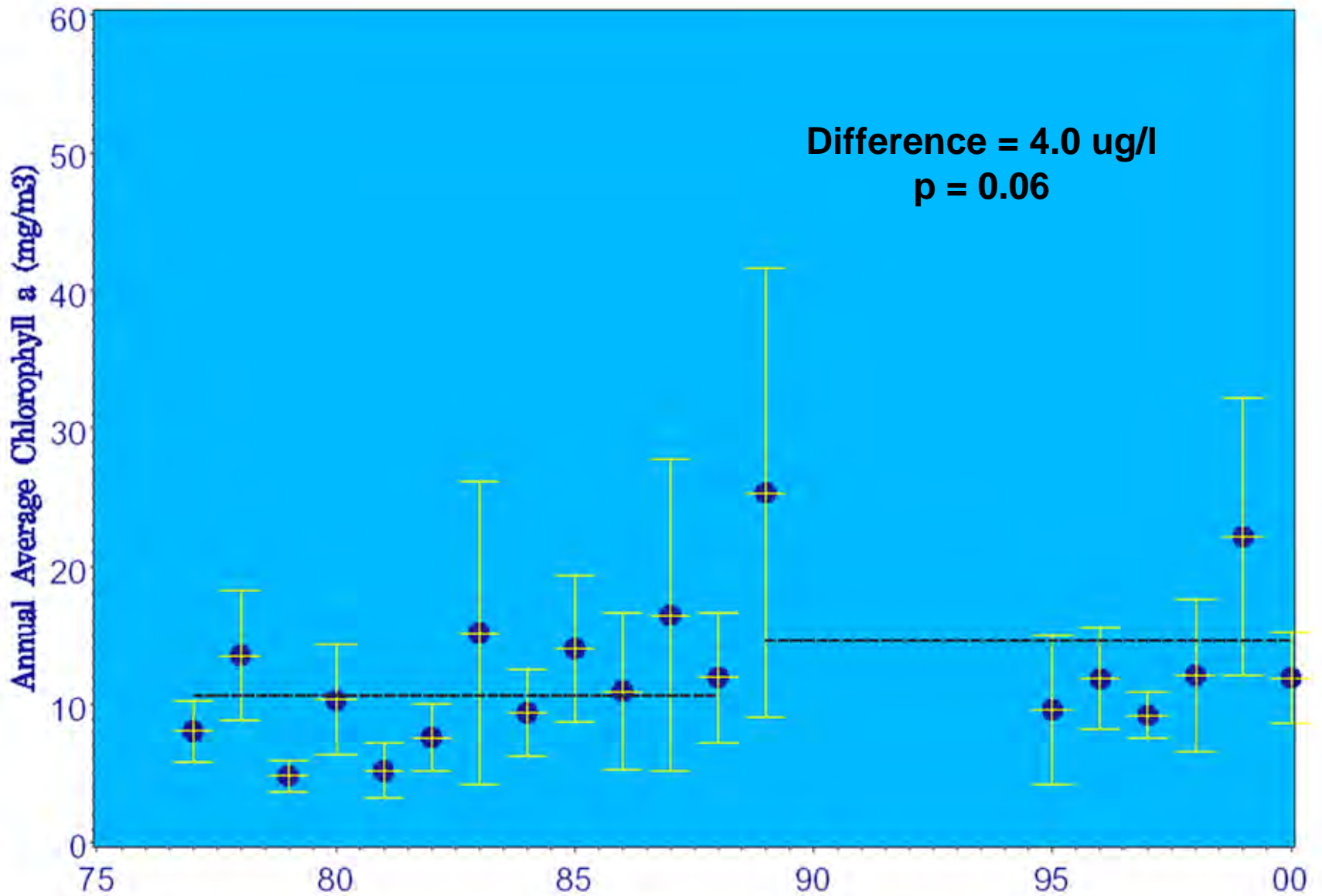


Long-term surface silica at El Jobean





Long-term surface chlorophyll a at El Jobean



Long-term surface chlorophyll a at El Jobean

Major Conclusions

- Significant Differences in Water Quality Characteristics within the Watershed
- Some Small Long-term Changes within the Lower Estuarine Area of the River