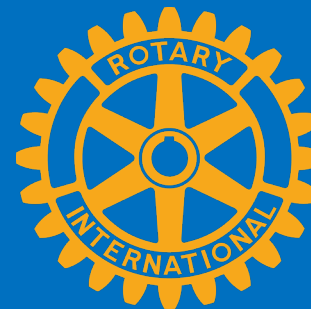




Dedicated to the restoration, preservation, and support
of the Charlotte Harbor watershed (501c3)

Sources and Transport Fecal Indicator Bacteria East Wall Canals

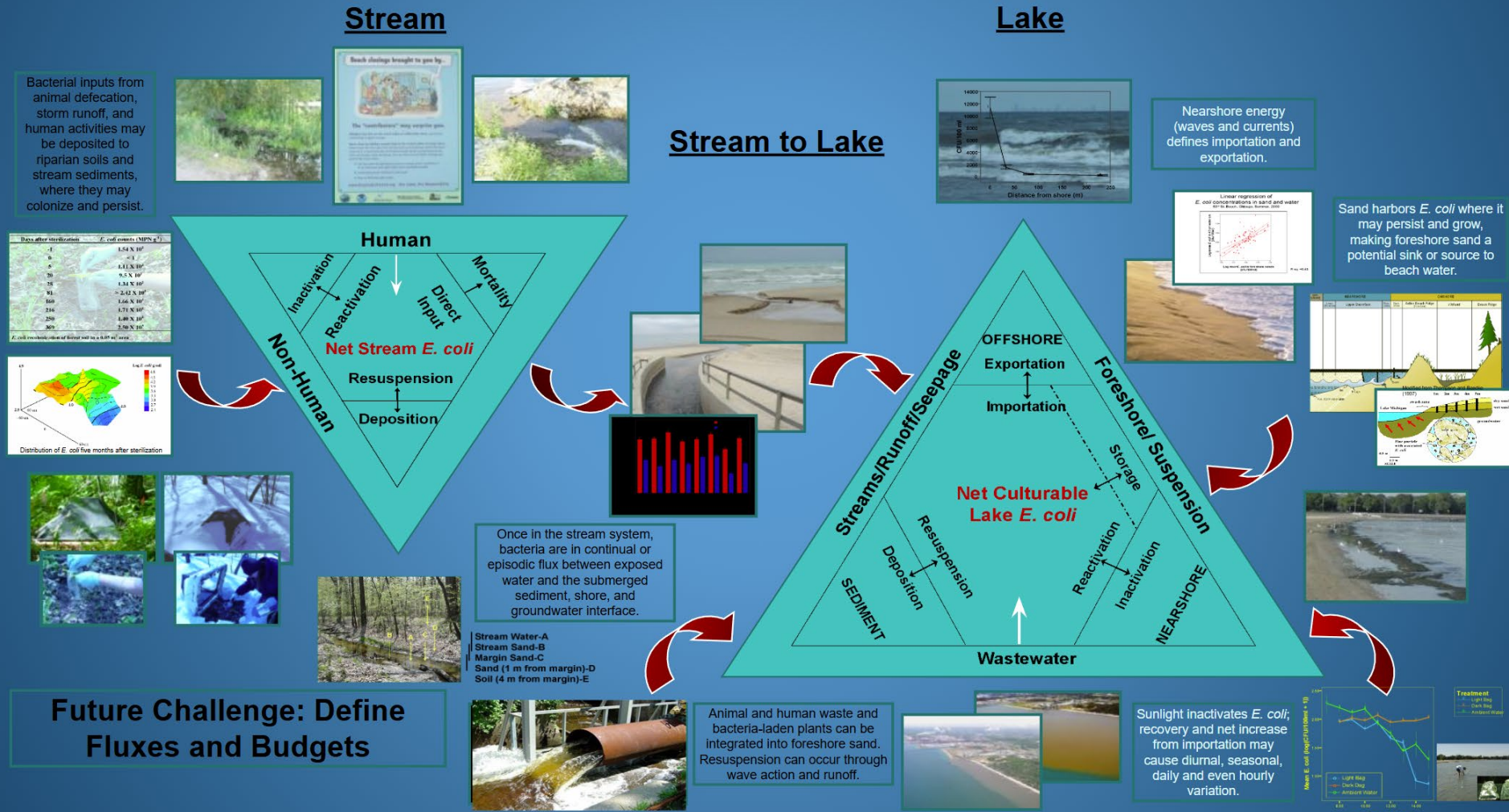
Dr. Richard Whitman, HOH

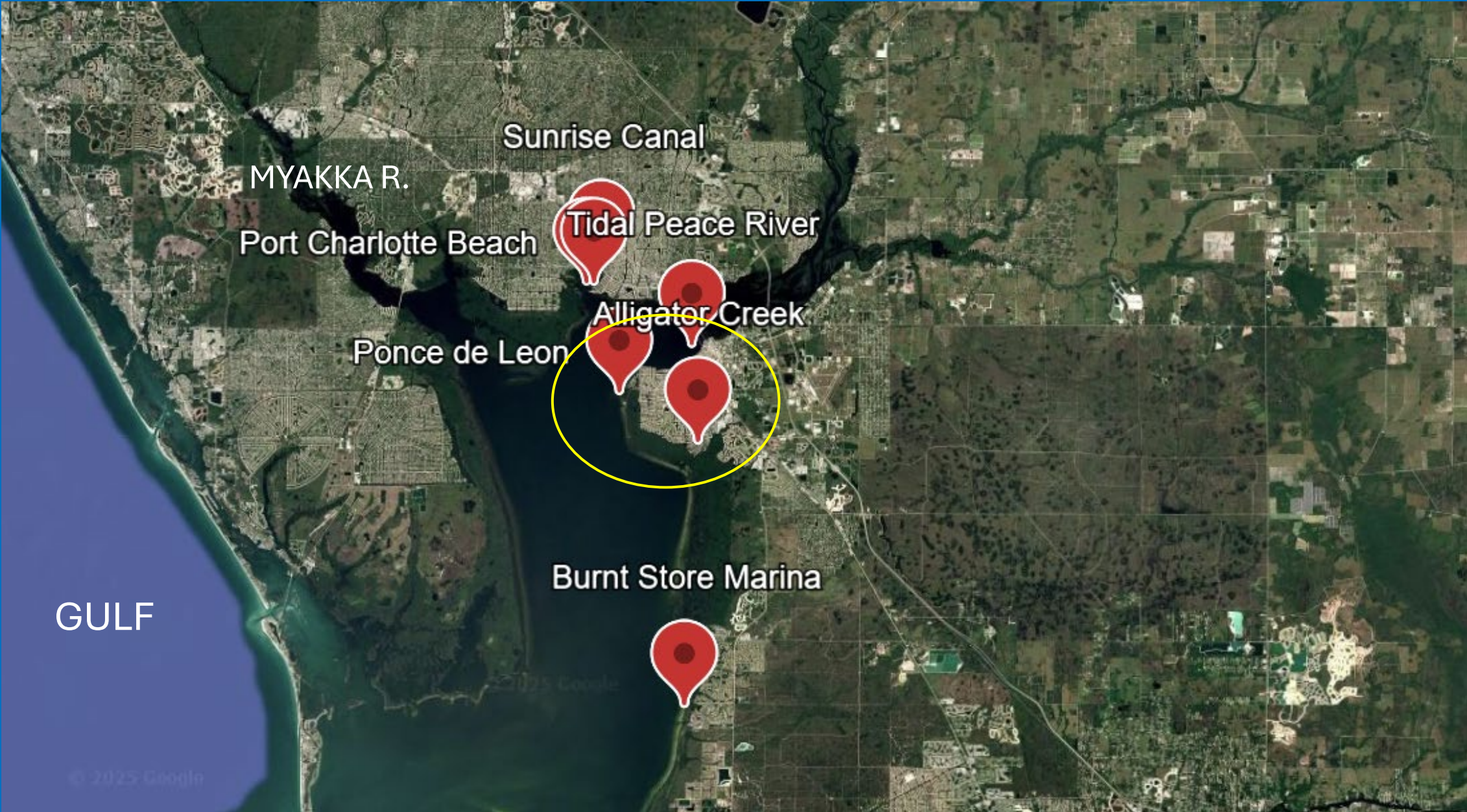


WITH DATA SUPPLIED BY HOH, FDEP, CHNEP, NOAA, USGS, CPCC, DOH, GSU, UM, CC DOH, CC LAB, BENCHMARK INC

Examining Nonpoint Sources of FIB in Coastal Areas: A Beachshed Approach

A Conceptual Diagram of *E. coli* Within and Between Stream and Beach Watersheds





MYAKKA R.

Sunrise Canal

Port Charlotte Beach

Tidal Peace River

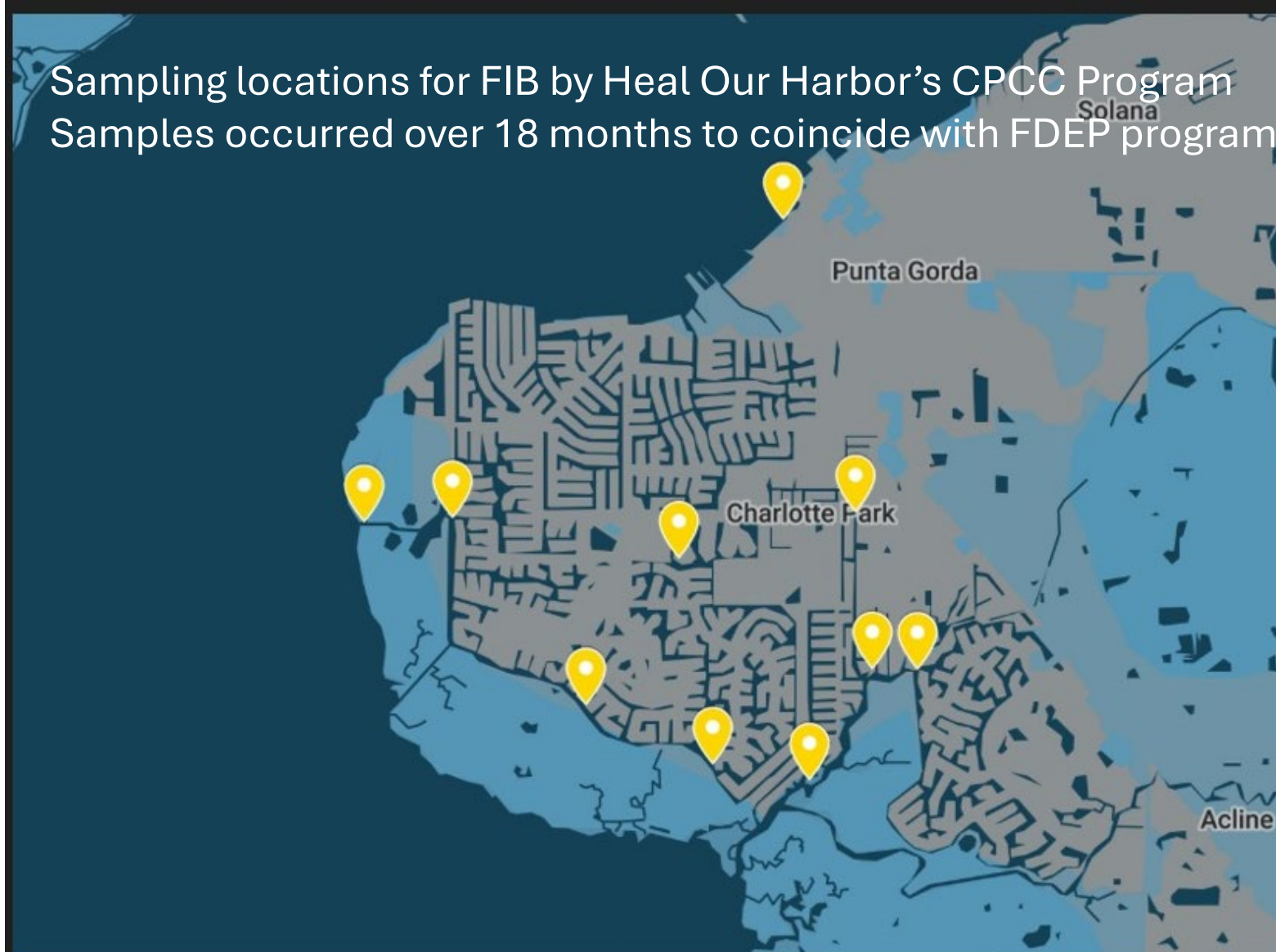
Alligator Creek

Ponce de Leon

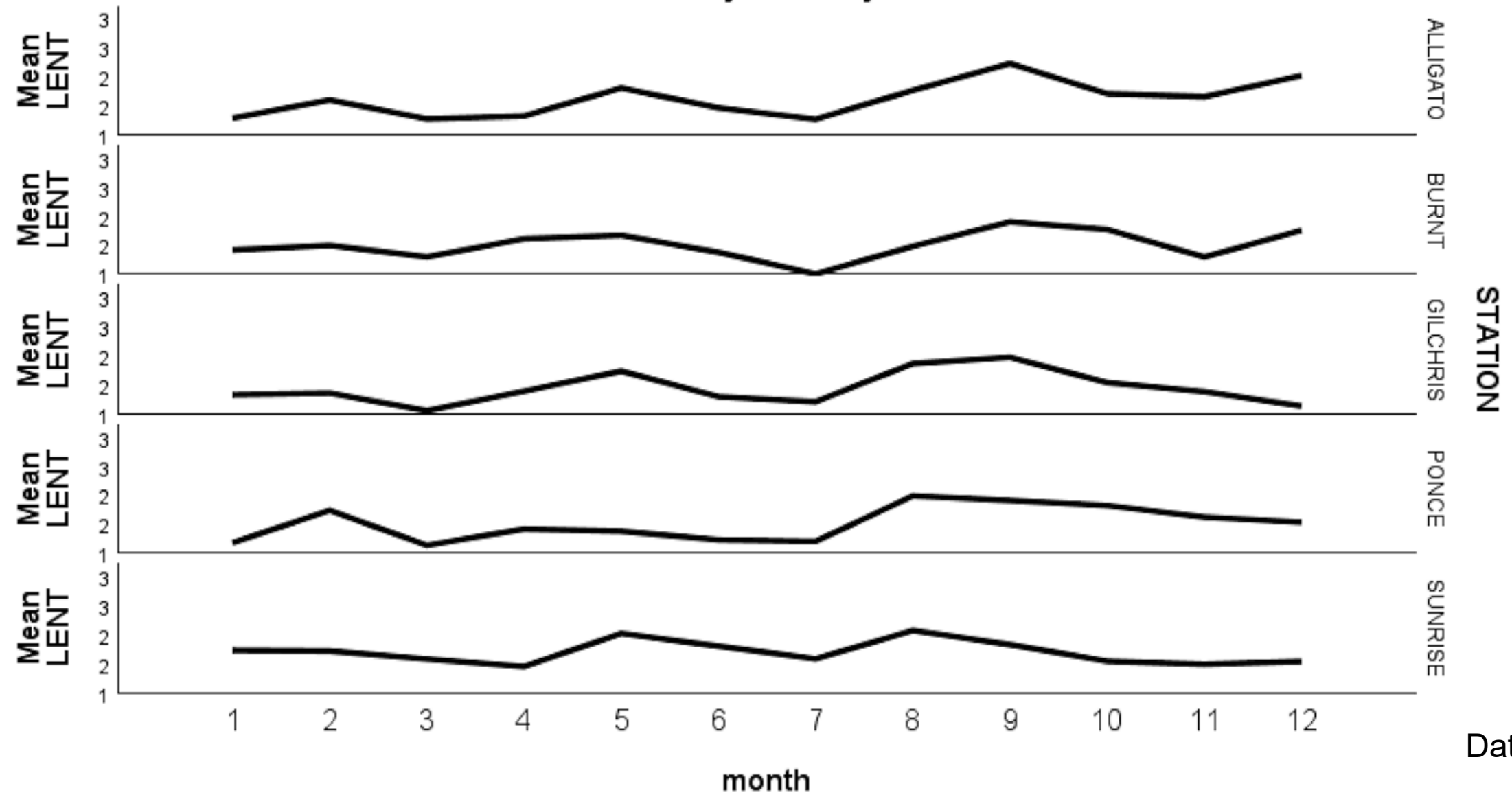
Burnt Store Marina

GULF

Sampling locations for FIB by Heal Our Harbor's CPMC Program
Samples occurred over 18 months to coincide with FDEP program.

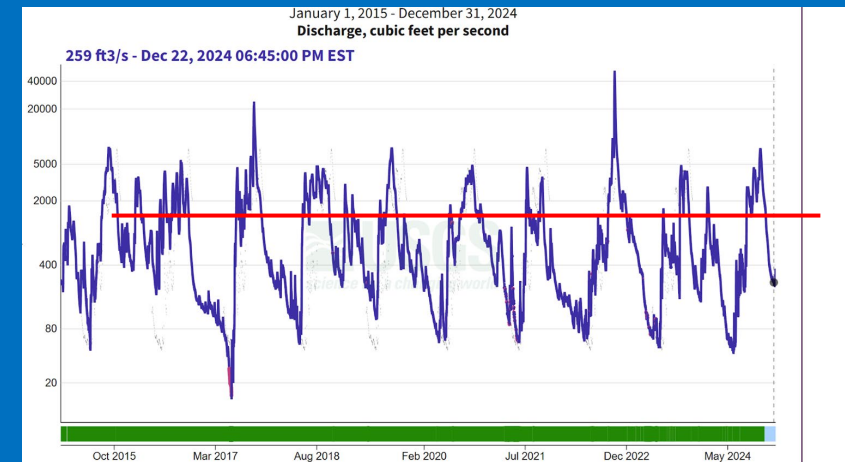
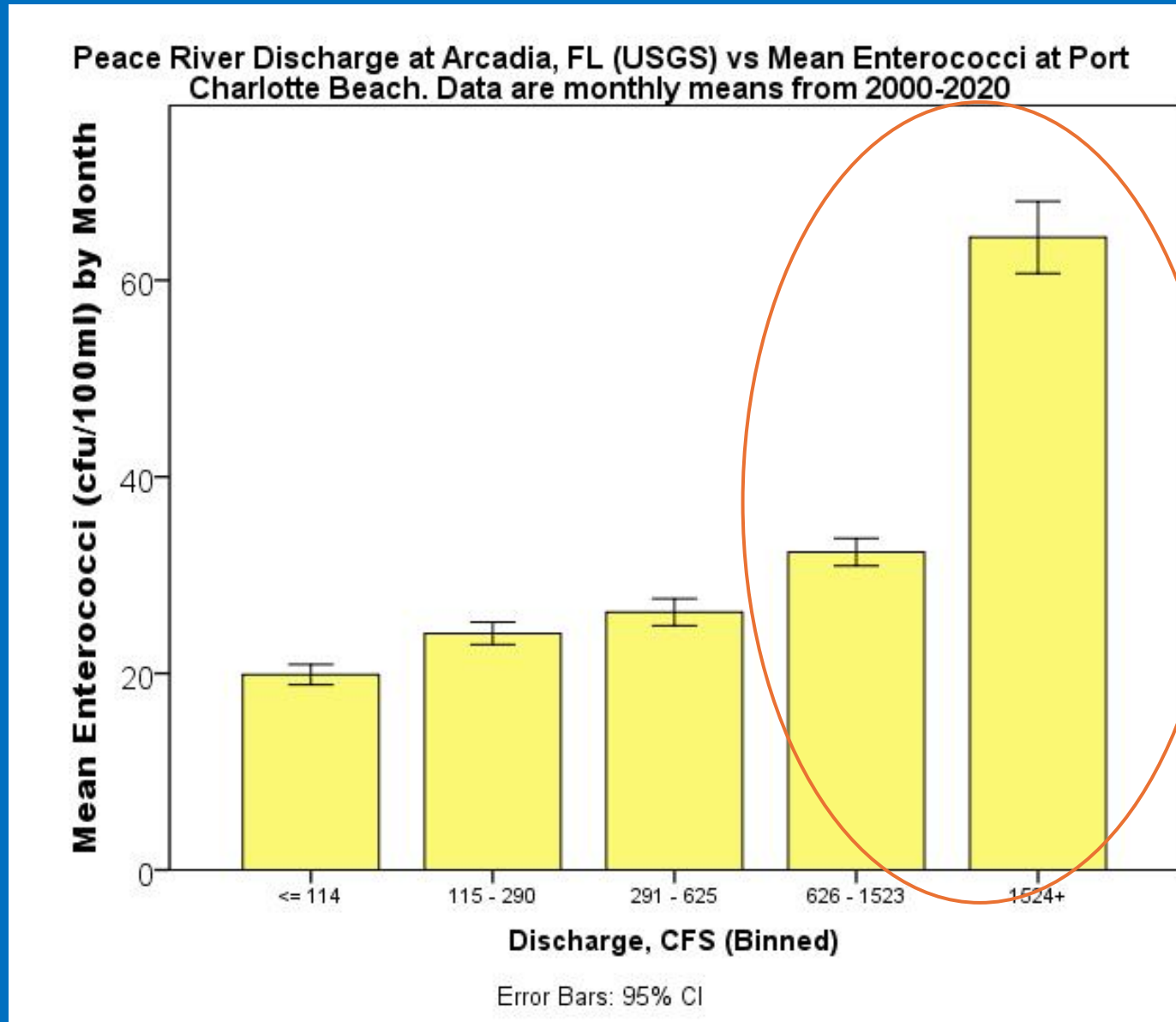


Mean of LENT by month by STATION



Data: FDEP

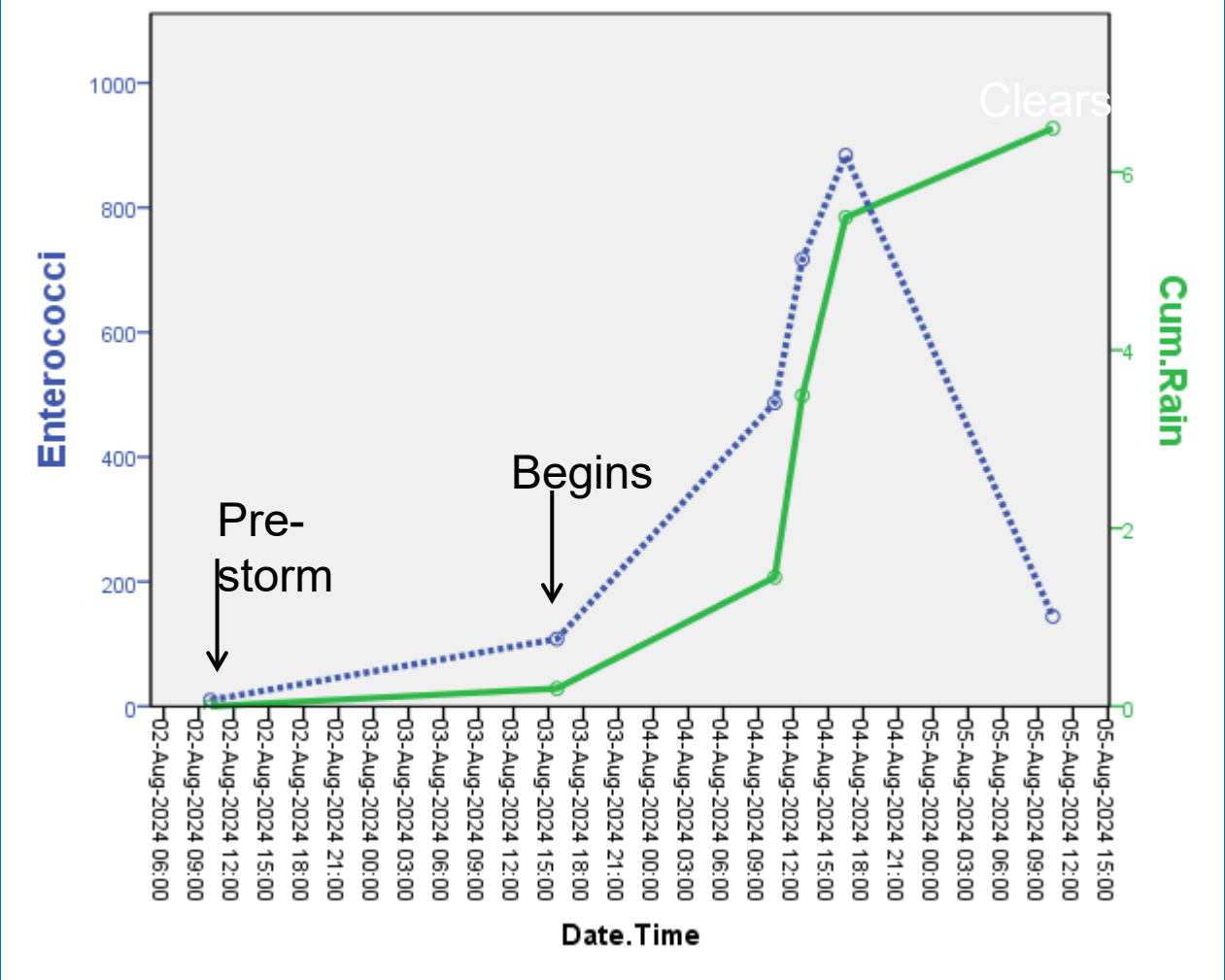
Port Charlotte Beach Fecal Indicator Bacteria vs Peace R. Discharge @ Arcadia, FL



Data:
FDOH, USGS

Whitman, et al. in prep.

TS Debby Cum. Rain vs Enterococci, Rim Canal, PG



'Hang-over' Hurricane Milton?
Tidal Creek, Punta Gorda



Data: Heal Our Harbor
Whitman, et al. in prep.

Suspended Matter TS Storm Debby



Day
Before

Day
Later

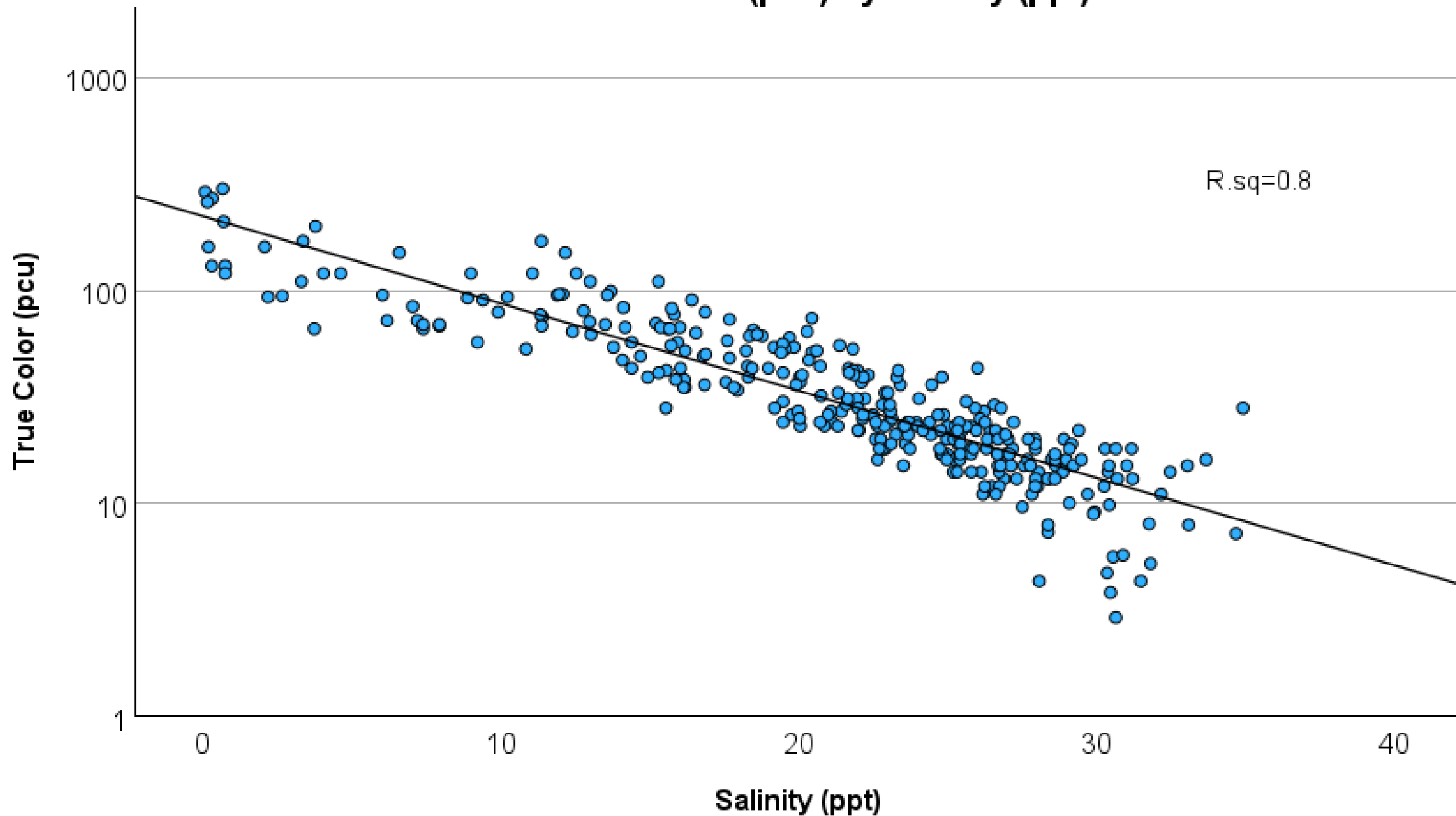


Rim Canal

**Ponce de
Leon**

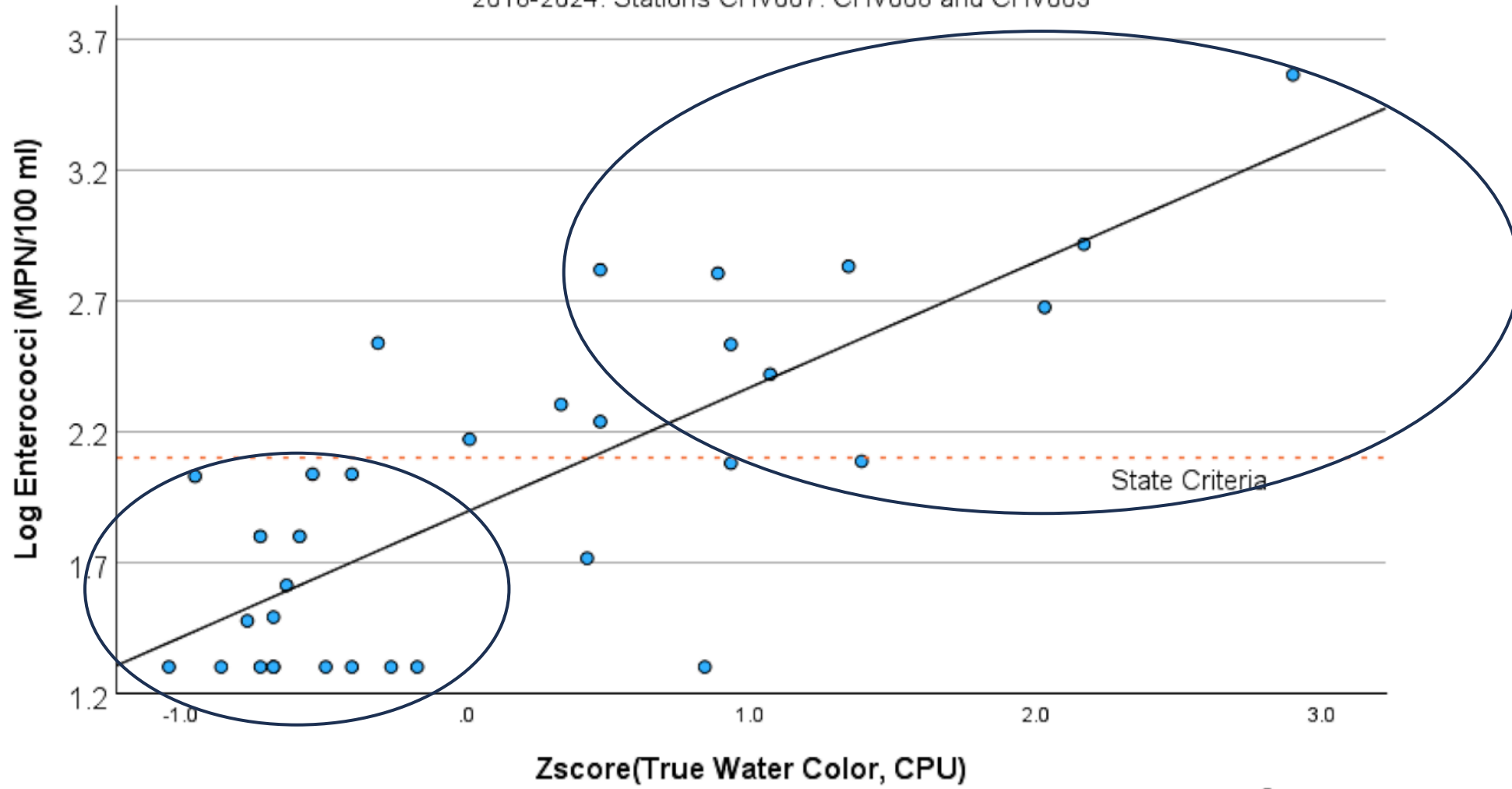
Data: Heal Our Harbor
Whitman, et al. in prep.

Scatter Plot True Color (pcu) by Salinity (ppt)



Log Enterococci by zscoreTrue Water Color

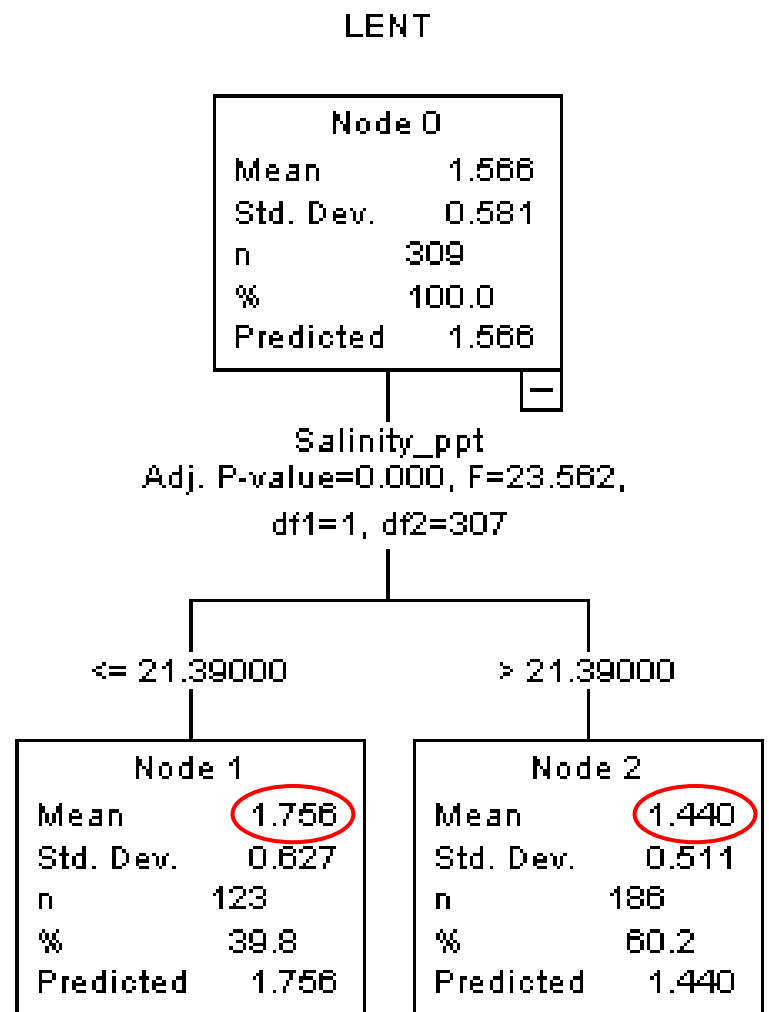
2018-2024. Stations CHV007, CHV008 and CHV009



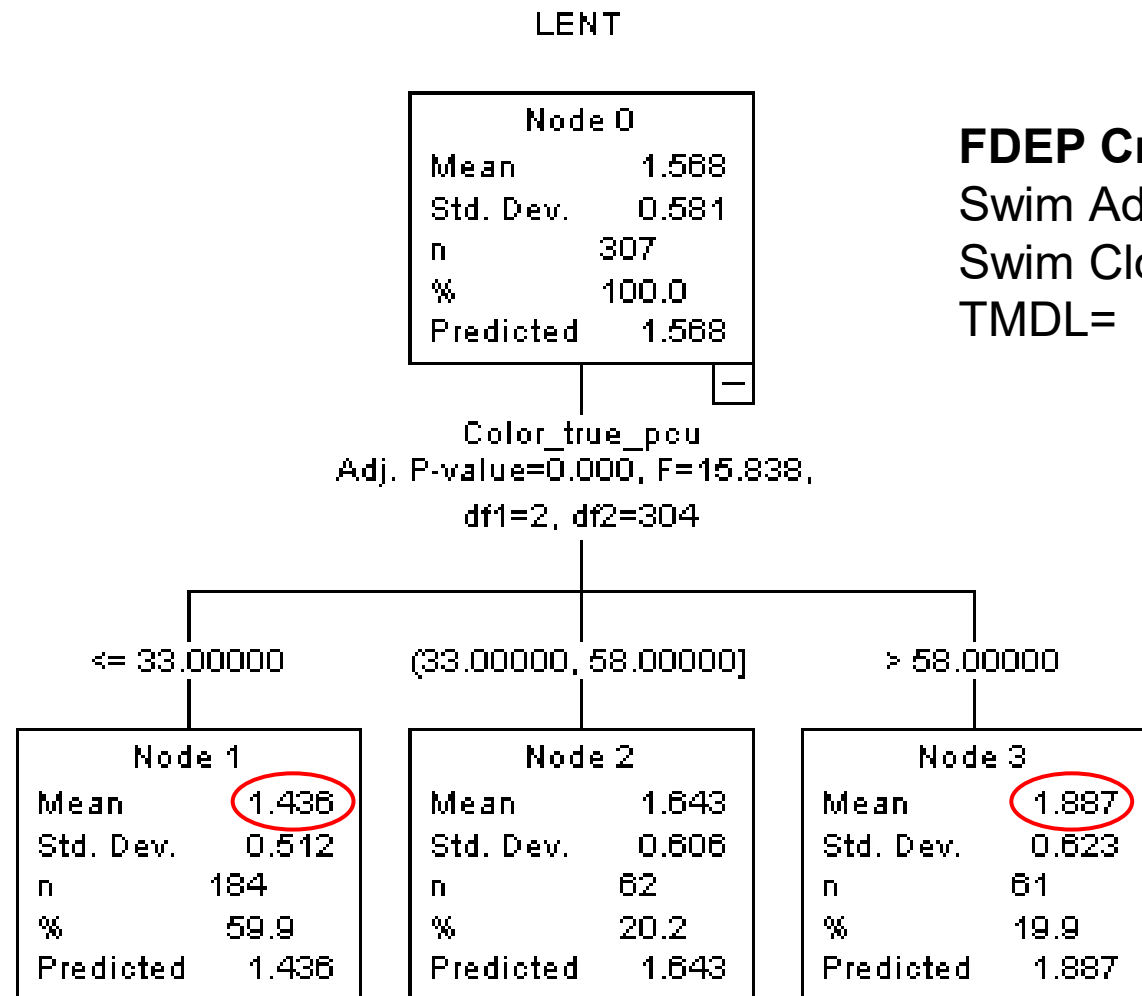
R² Linear = 0.604

Filtered by LENT>1.1 (FILTER) variable

CHAID Decision Tree for Log Enterococci predicted by Salinity (left) or True Color (right)



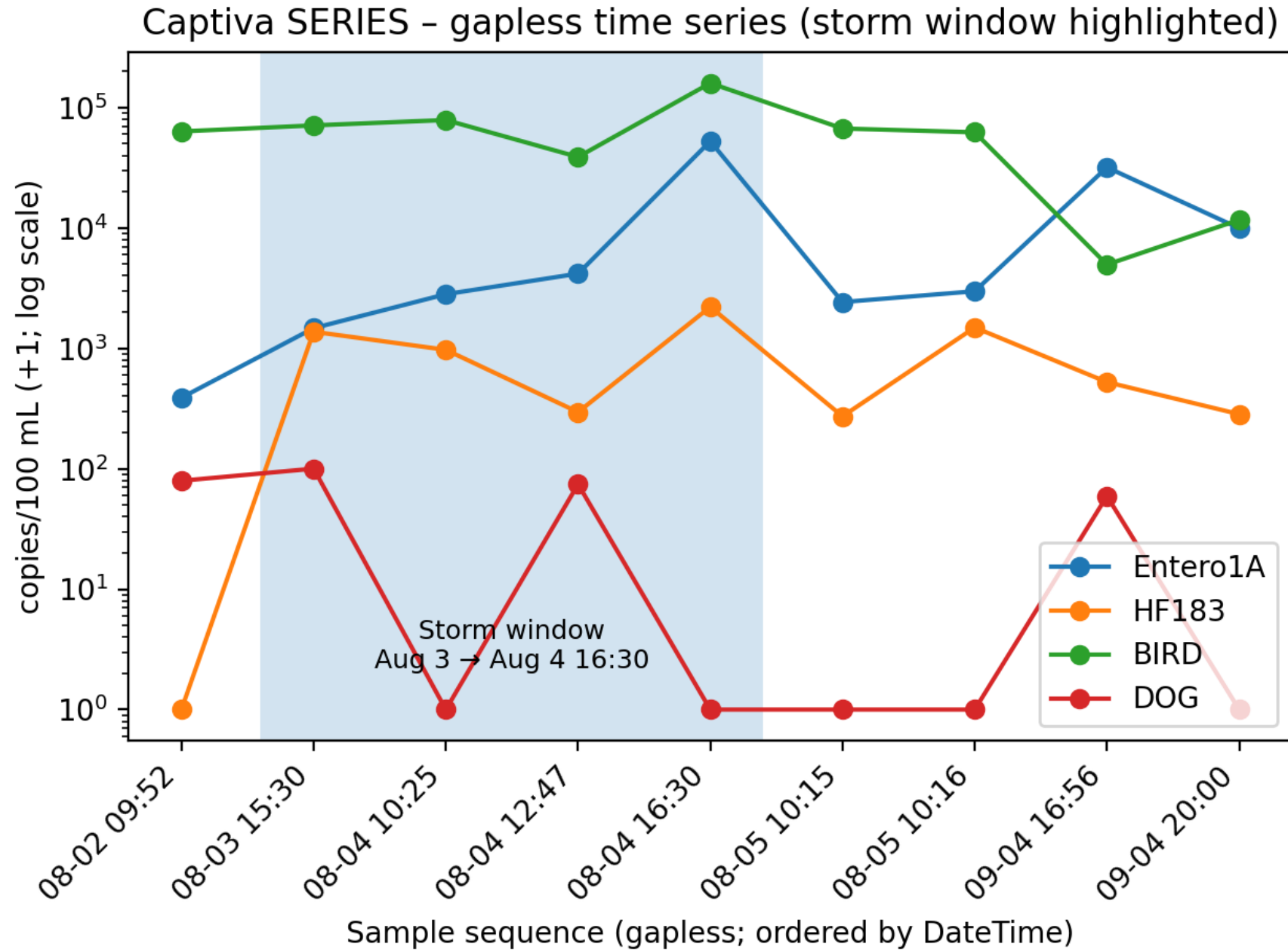
Estimated Risk=0.312, Std. Err.= 0.028



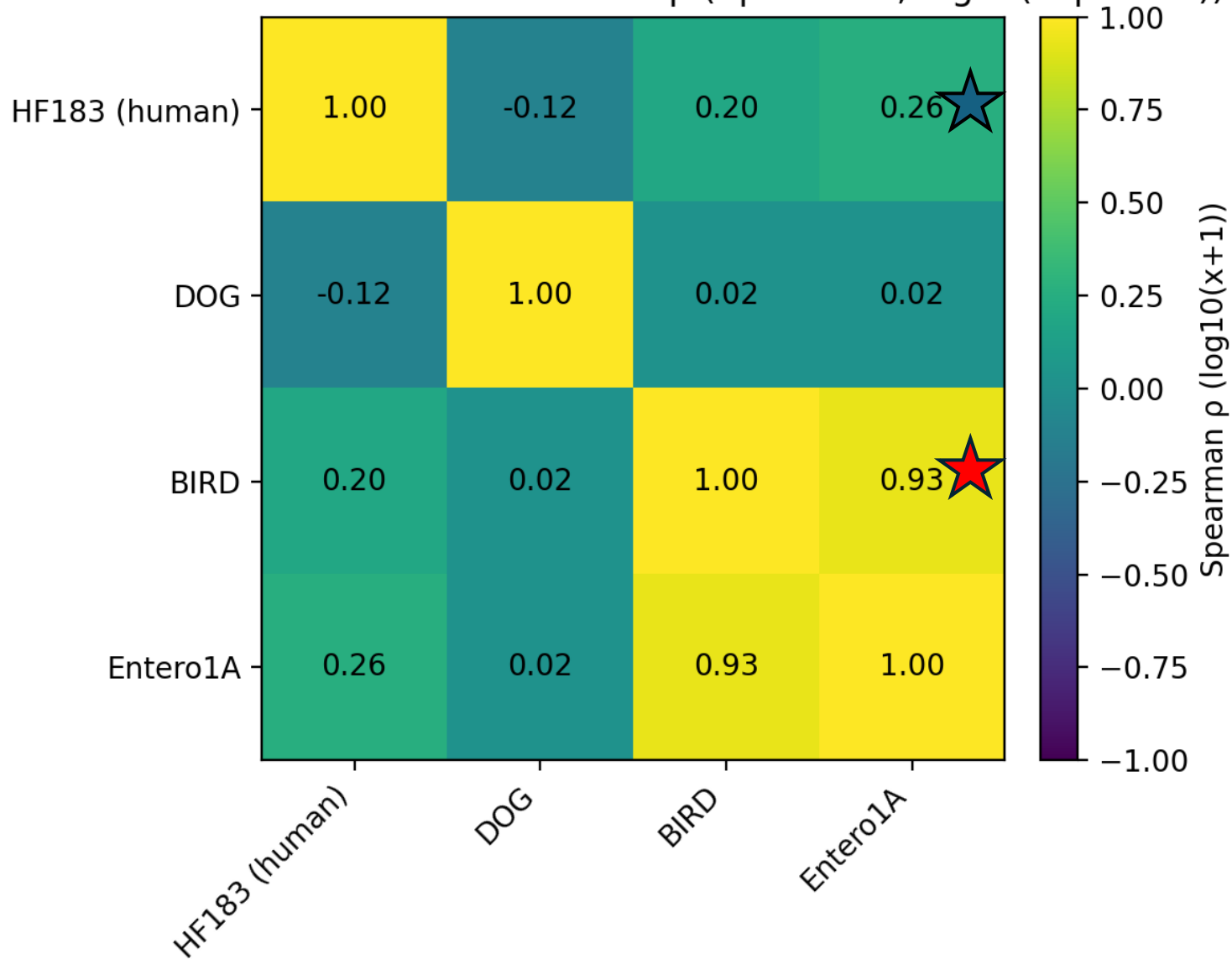
Estimated Risk=0.305, Std. Err.=0.028

FDEP Criteria
Swim Adv.= 1.54
Swim Close=1.84
TMDL= 2.11

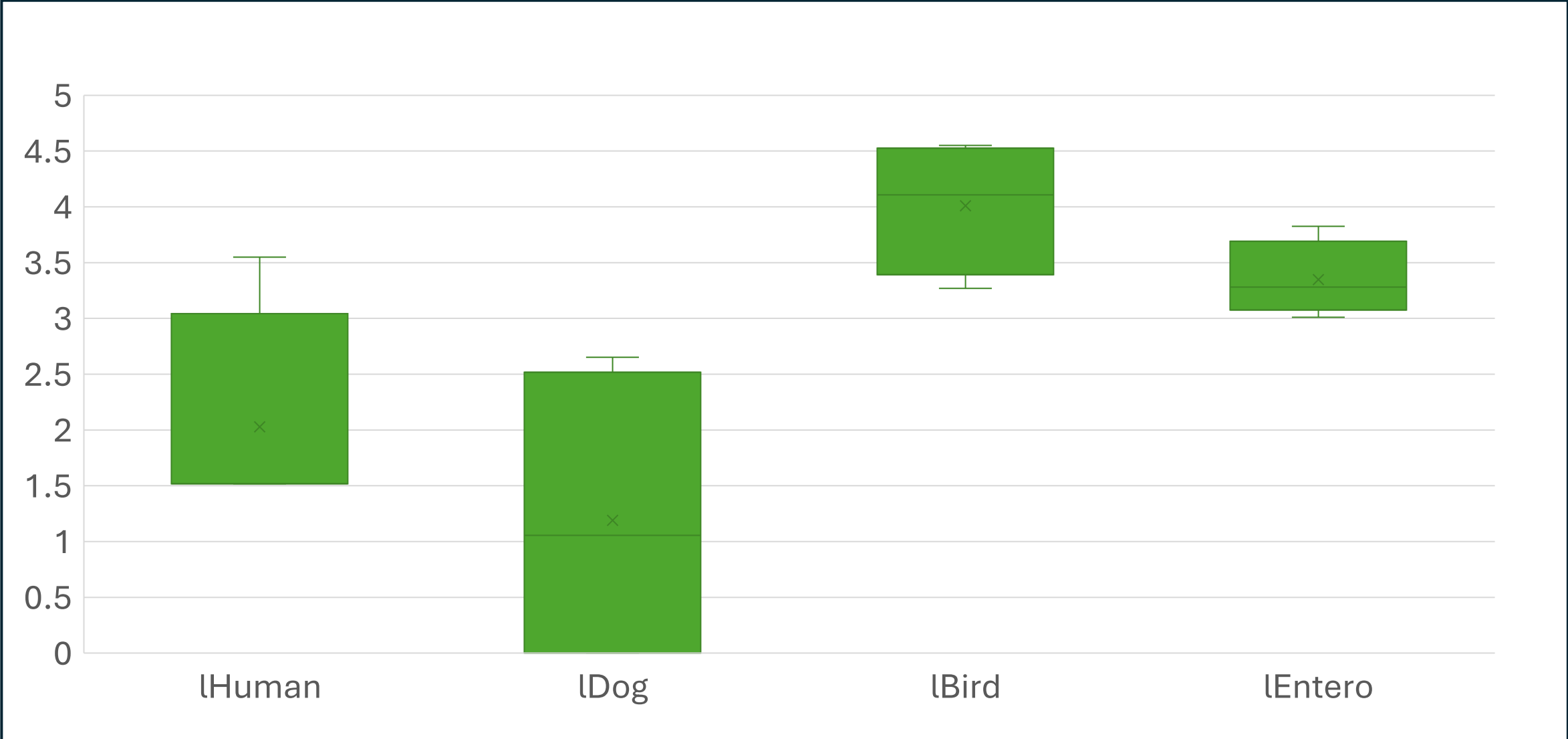
Rim Canal Time Series of eDNA Markers pre to post TS Debby

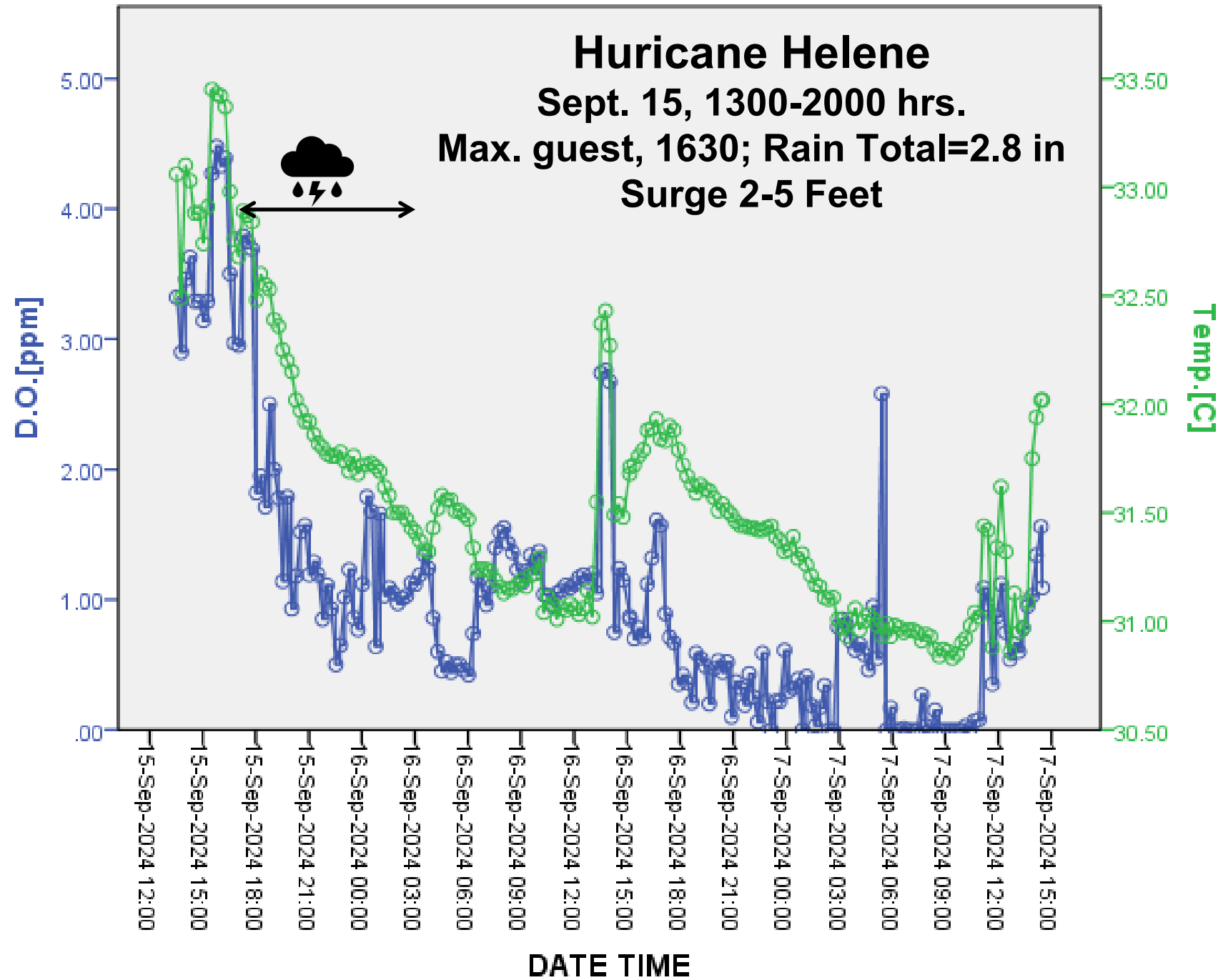


Sediment eDNA correlation heatmap (Spearman; $\log_{10}(\text{copies}+1)$)

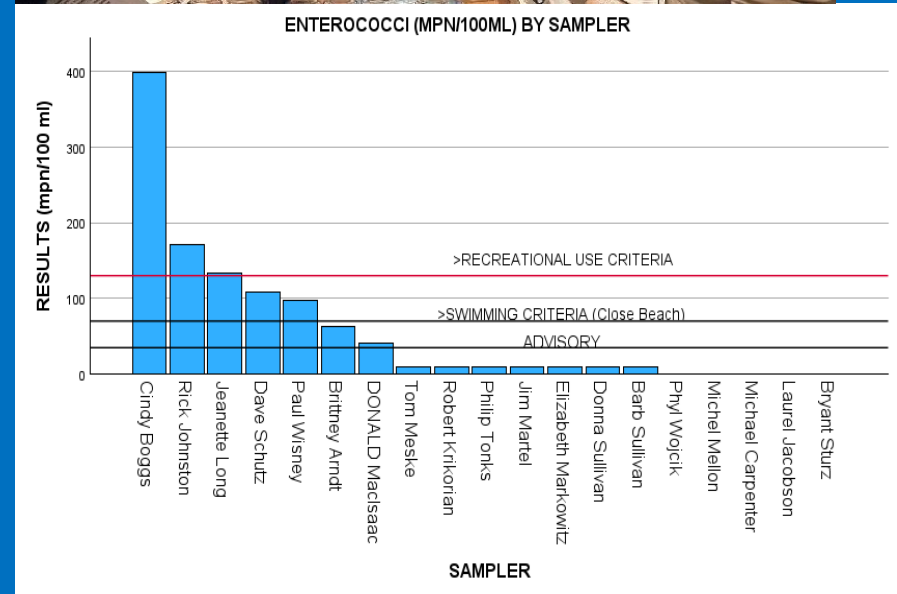


Microbial eDNA Source Marker concentration (copies/100ml) during a Dry Winter Period (Feb. 3, 2025)





What's Next: Wide Area Synoptic Snapshots of FIB Impaired Waters.





QUESTIONS?

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Richard.Whitman@healourharbor.org

