Deschutes River, Capitol Lake, and Budd Inlet TMDL Technical Advisory Group March 3, 2005 Progress Meeting

Department of Ecology

Environmental Assessment Program

What we've learned

- Data collection activities
  - Temperature and hydrogeology
  - Fecal coliform bacteria
  - DO, pH, and nutrients
- Data analysis

Deschutes River TMDL - Technical Information - Microsoft Internet Explorer provided by Dept of Ecology

File Edit View Favorites Tools Help

Back Search Favorites Media

Address http://www.ecy.wa.gov/programs/wq/tmdl/watershed/deschutes/technical.html Go Links

Deschutes River TMDL

Technical Information

If you have questions concerning these technical documents please see the Contact Page for contact information.

QAPP (Sampling Plan): Deschutes River, Capitol Lake, & Budd Inlet Temperature, Fecal Coliform Bacteria, Dissolved Oxygen, pH, and Fine Sediment TMDL Study
http://www.ecy.wa.gov/biblio/0403103.html

Final Reconnaissance Study Plan for Deschutes River/Capitol Lake/Budd Inlet Total Maximum Daily Loads*
http://www.ecy.wa.gov/programs/wq/tmdl/watershed/deschutes/technical_reports/reconplan_deschutes.pdf

Deschutes River Basin Aerial Surveys - Thermal Infrared and Color Video
http://www.ecy.wa.gov/apps/watersheds/temperature/tir/deschutes

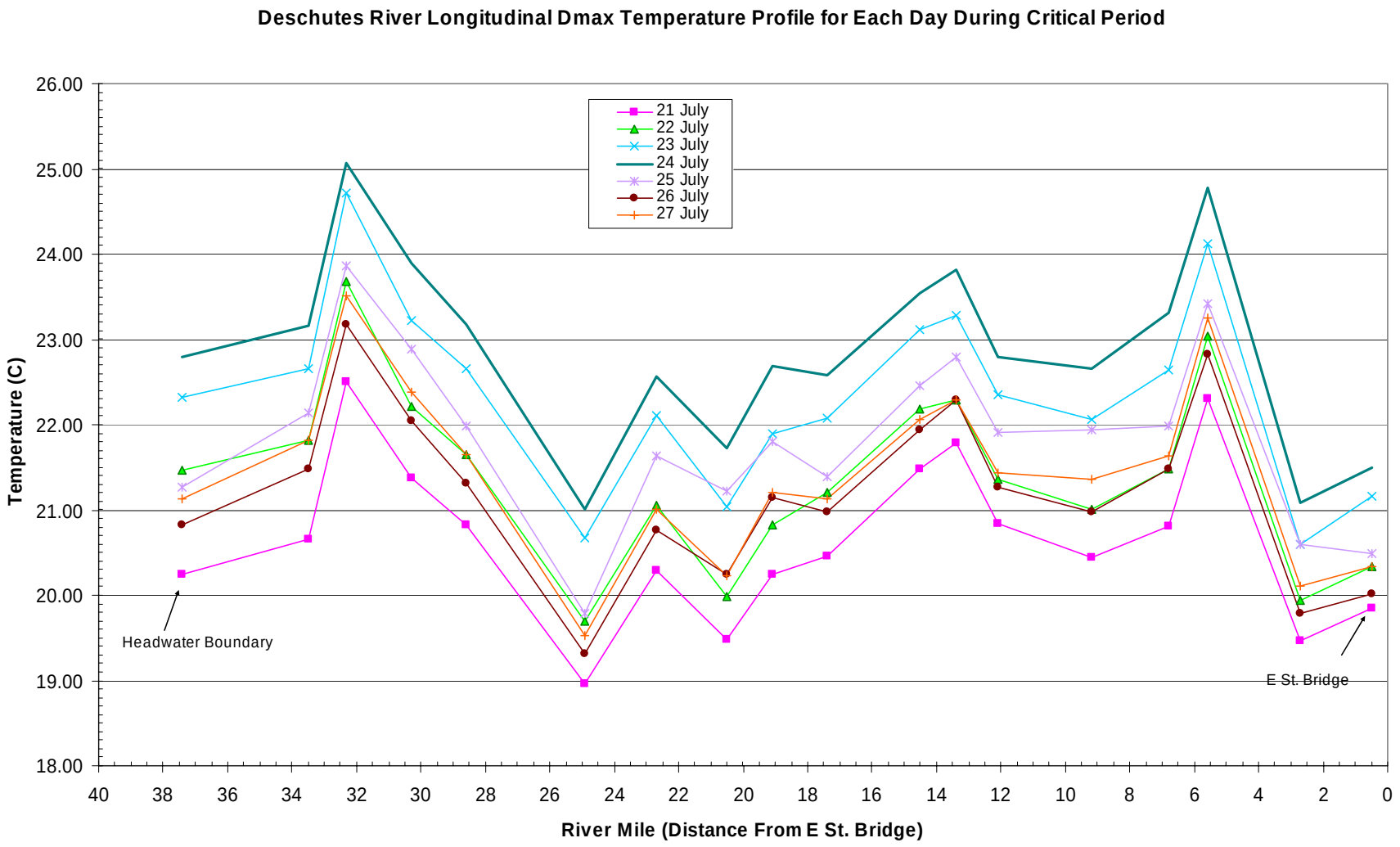
Lower Deschutes and Budd Inlet Tributaries Wet Weather Monitoring Plan
technical_reports/stormwaterplan_final_nofigs.pdf*

Deschutes River/Capitol Lake/Budd Inlet TMDL: Quarterly Progress Reports:*

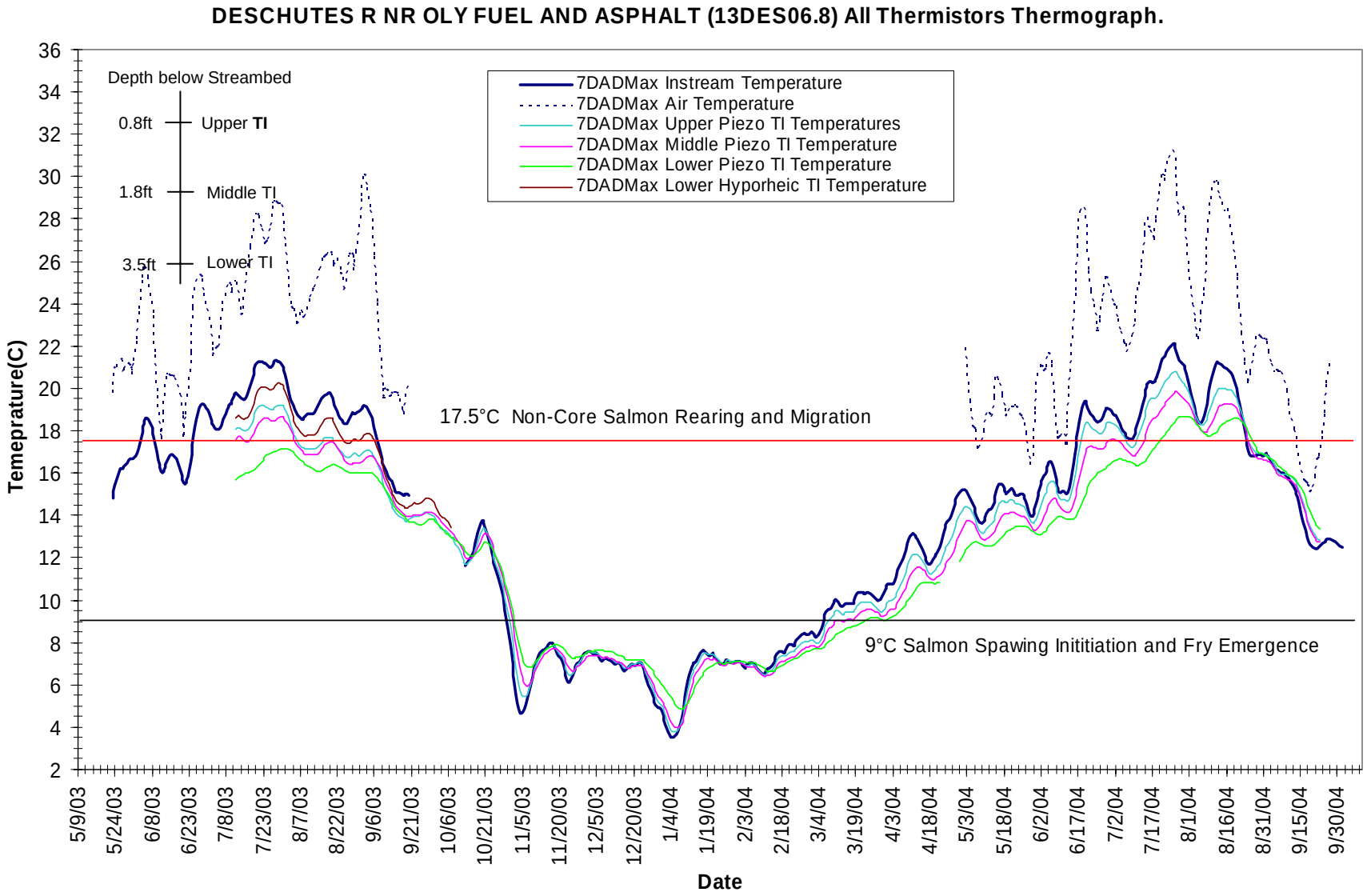
- #1 - March - June 2003
- #2 - July - September 2003
- #3 - October - December 2003
- #4 - January - March 2004
- #5 - April - June 2004
- #6 - NEW! July - September 2004

Internet

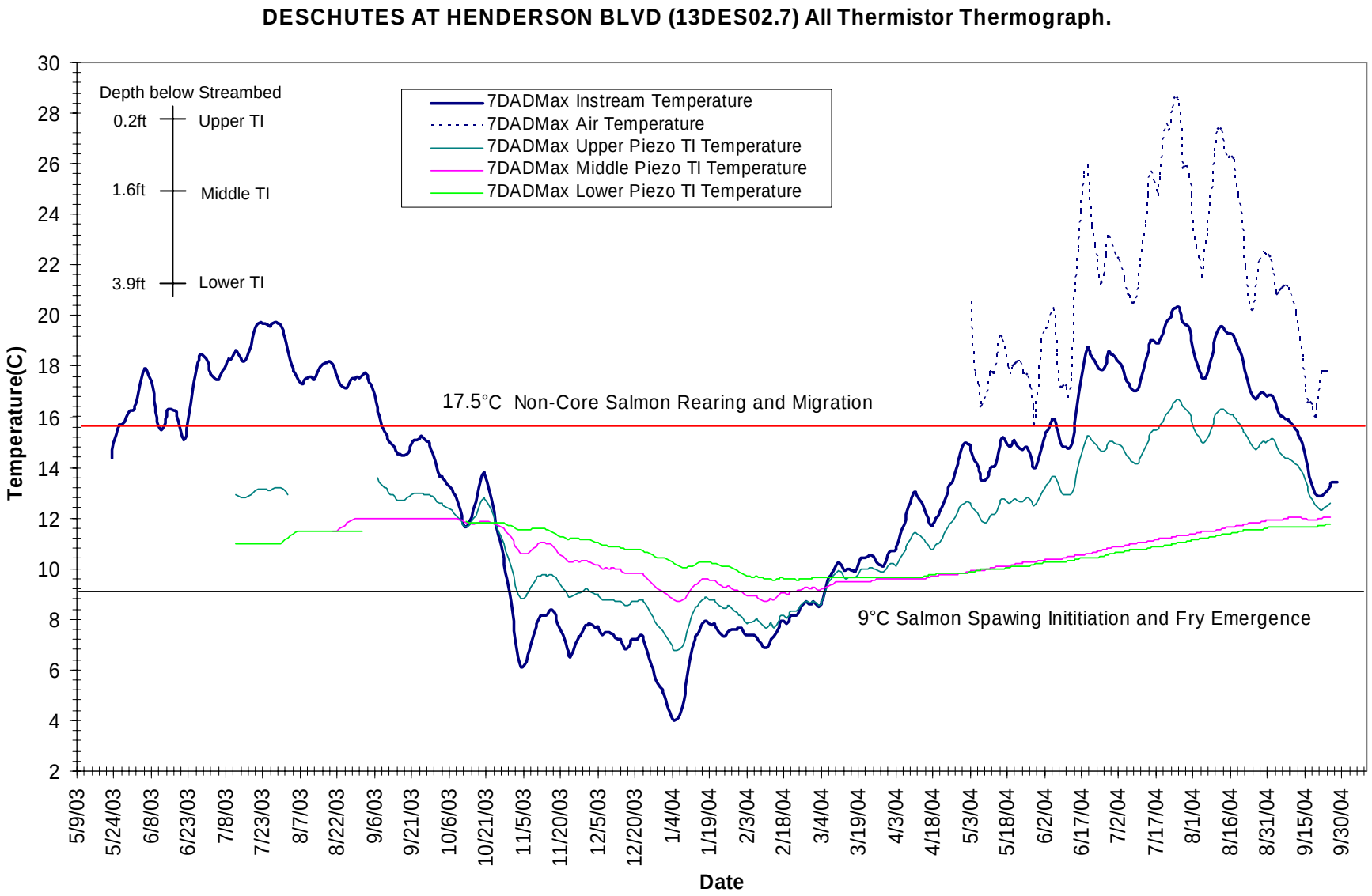
Deschutes River Critical Period Longitudinal Profile



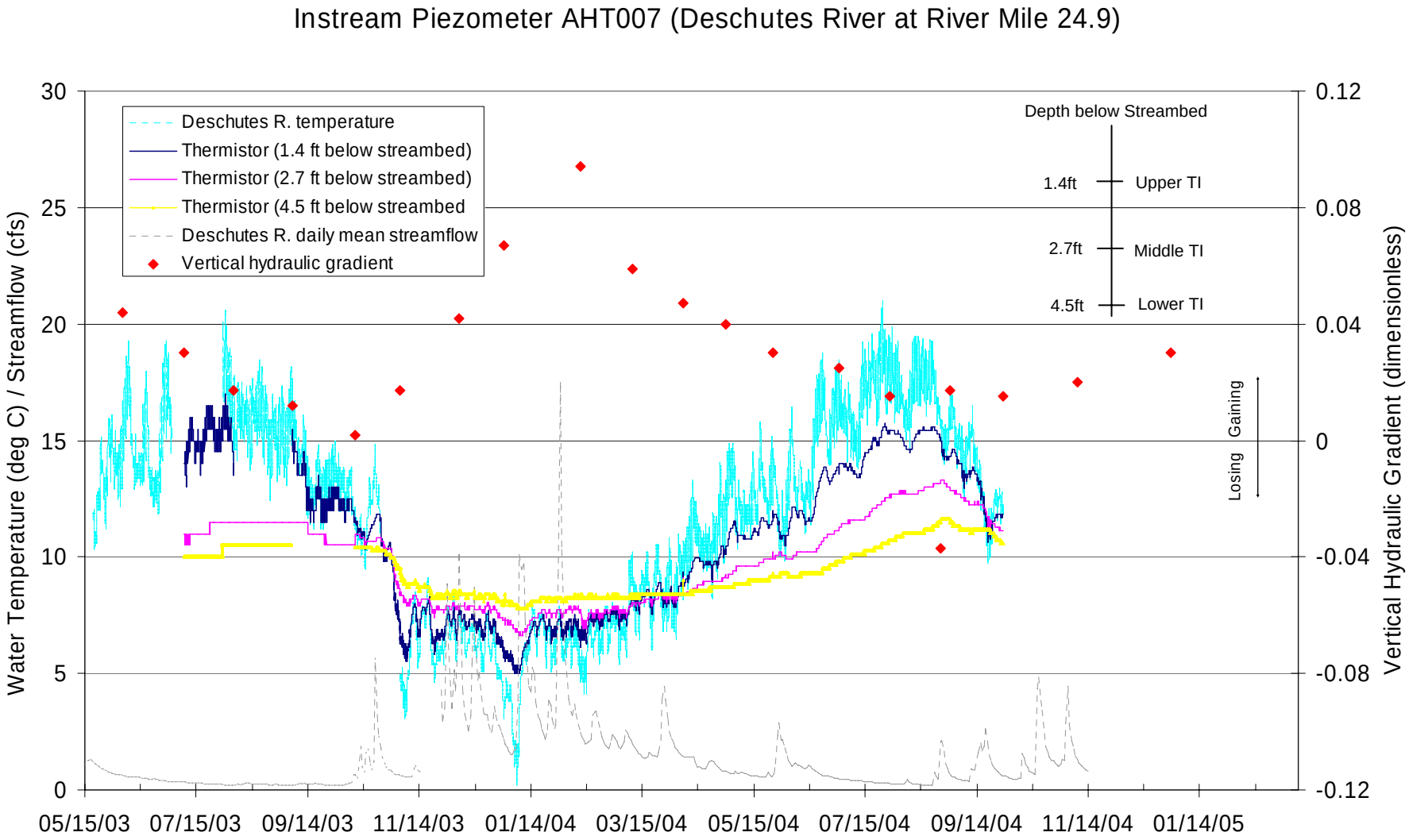
Deschutes Temperature Results



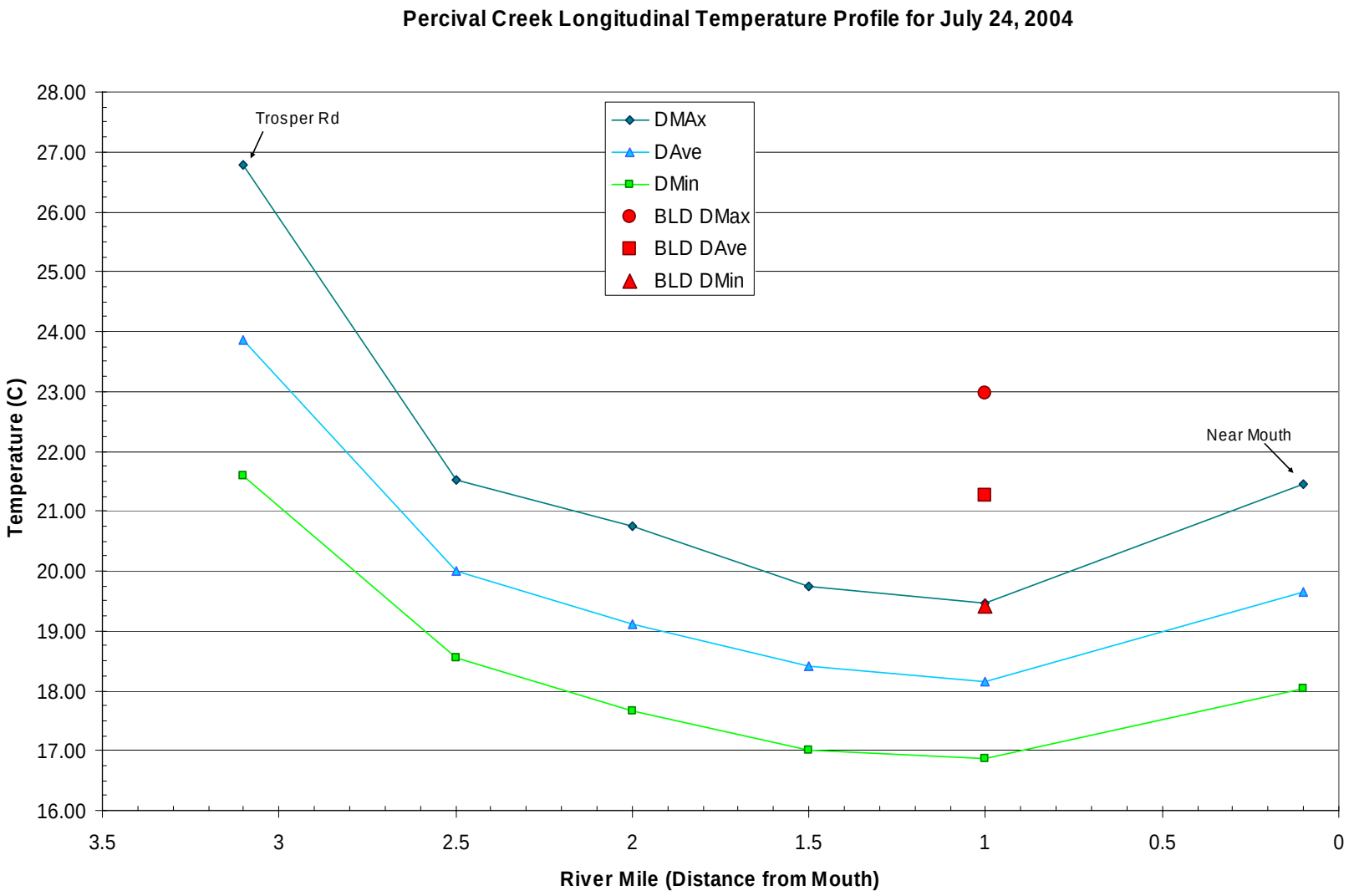
Deschutes Temperature Results



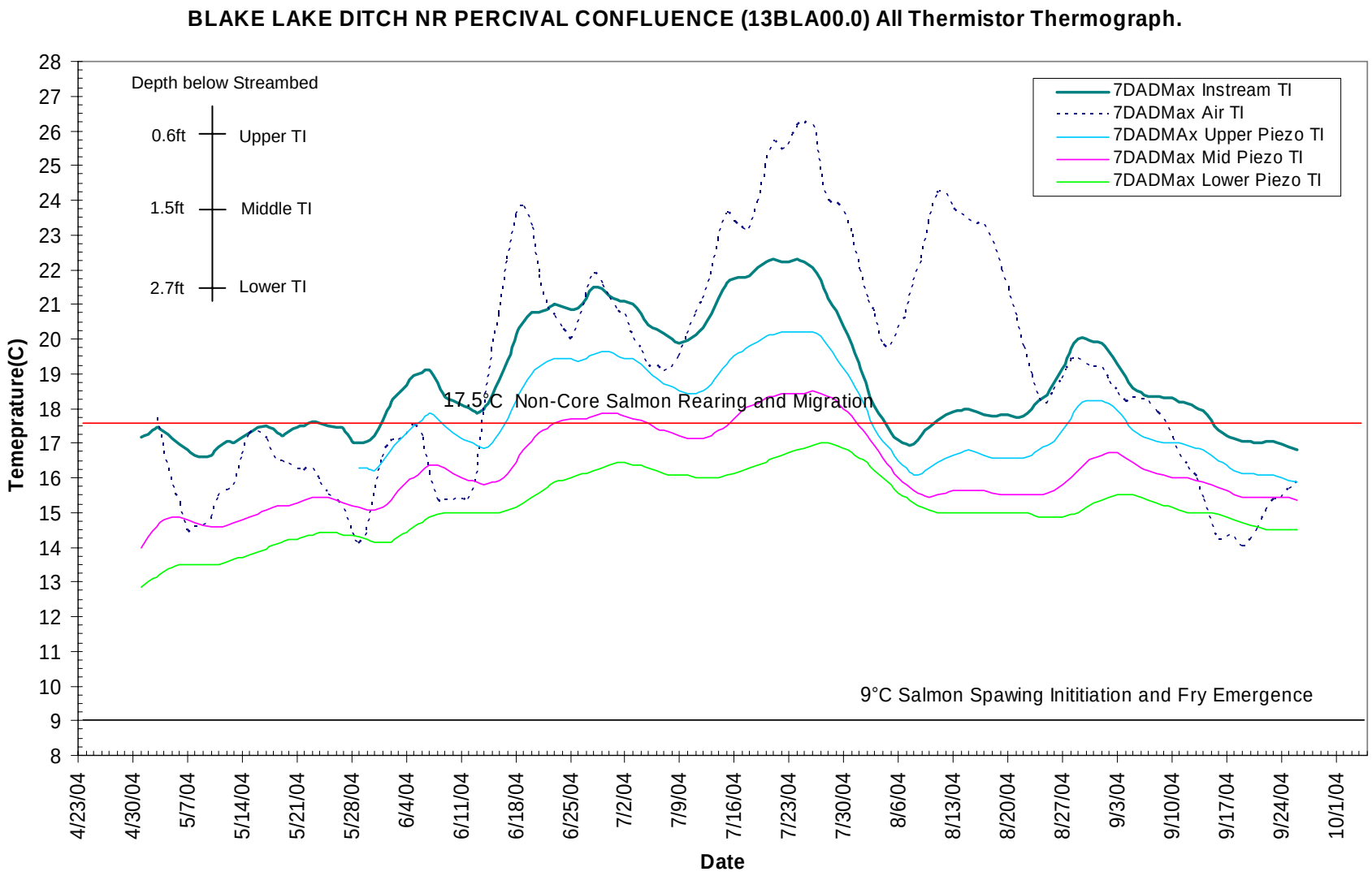
Deschutes Temperature Results



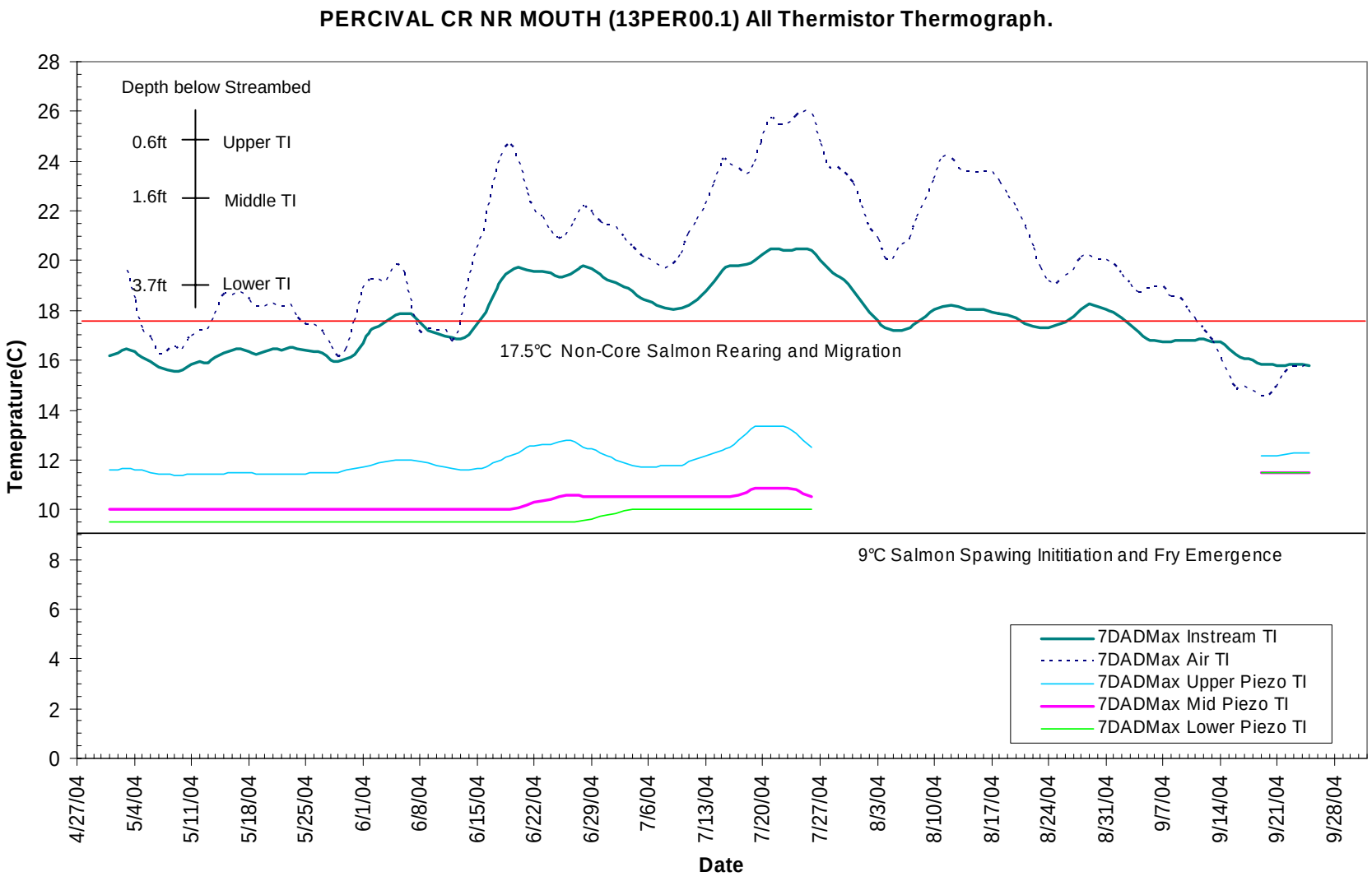
Percival Cr Critical Period Longitudinal Profile



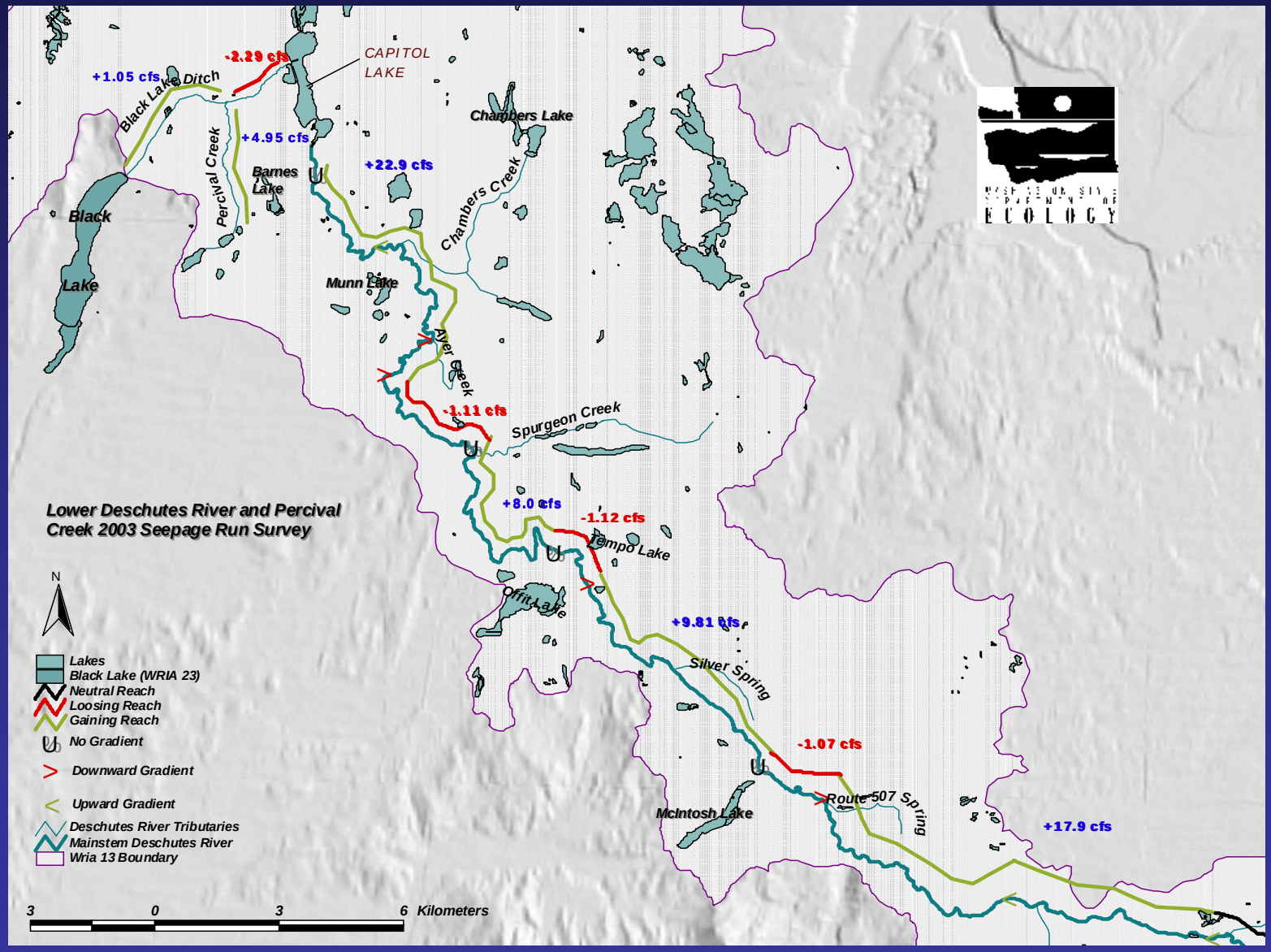
Black Lake Ditch Temperature Results



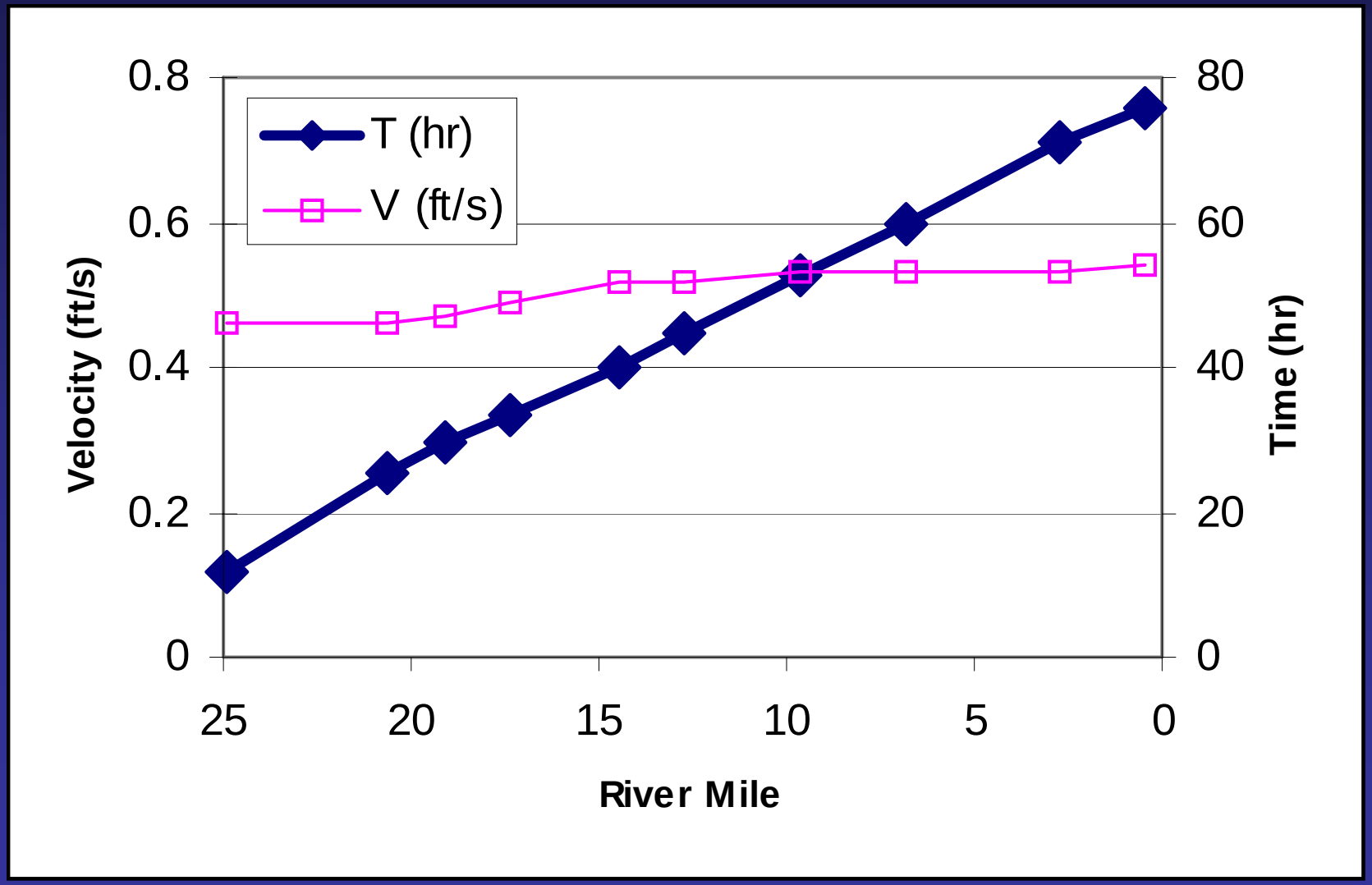
Percival Creek Temperature Results



Gaining and Losing Reaches



Deschutes River Travel Time



Fecal Coliform Bacteria

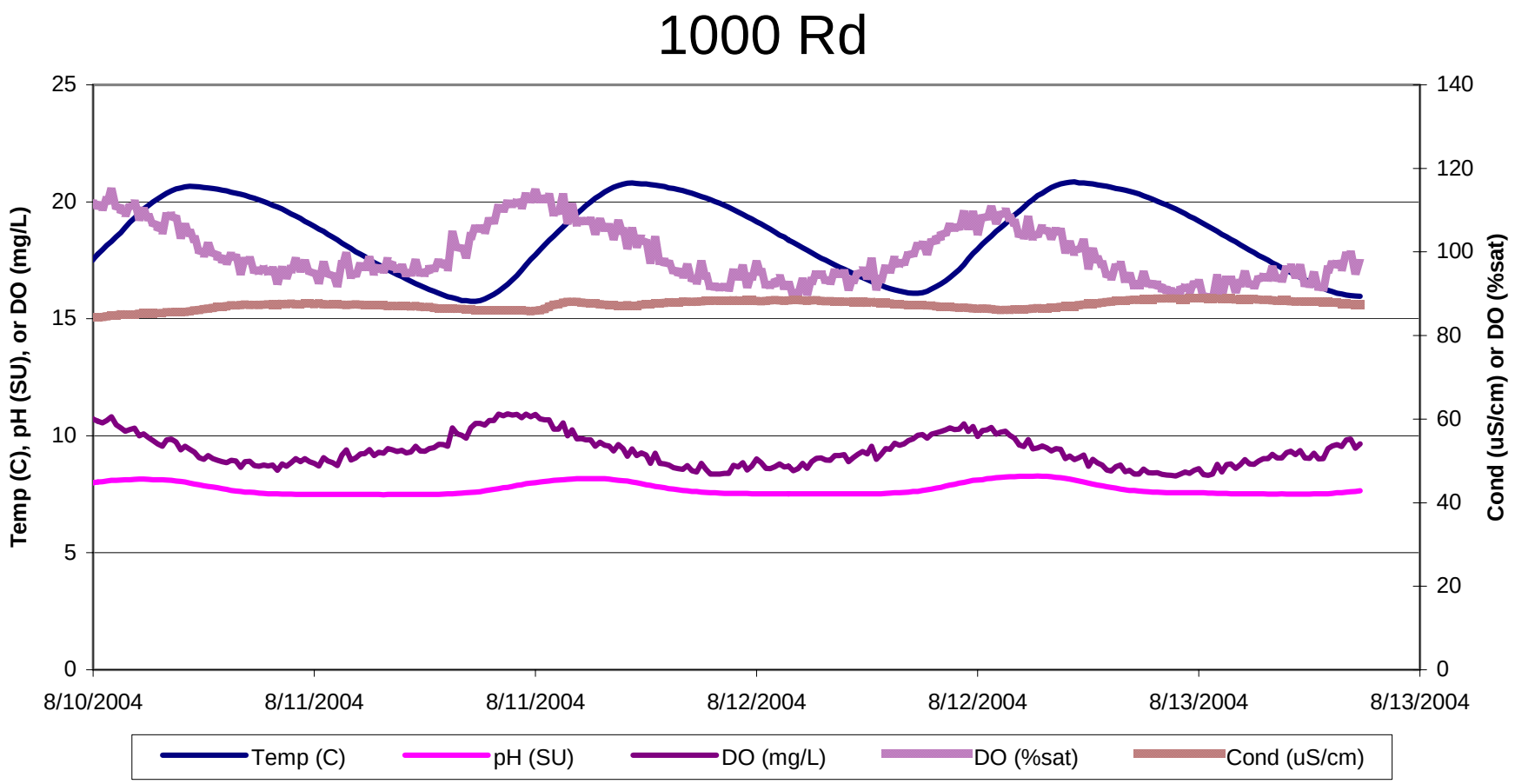
- Geomean >100/100 mL:
  - Adams, Indian, Moxlie
- >10% exceeding 200/100 mL:
  - Adams, Chambers, Ellis, Indian, Mission, Moxlie, Reichel, Schneider
- Deschutes River meets bacteria standards
- Percival Creek meets bacteria standards

Initial Stormwater FC Results

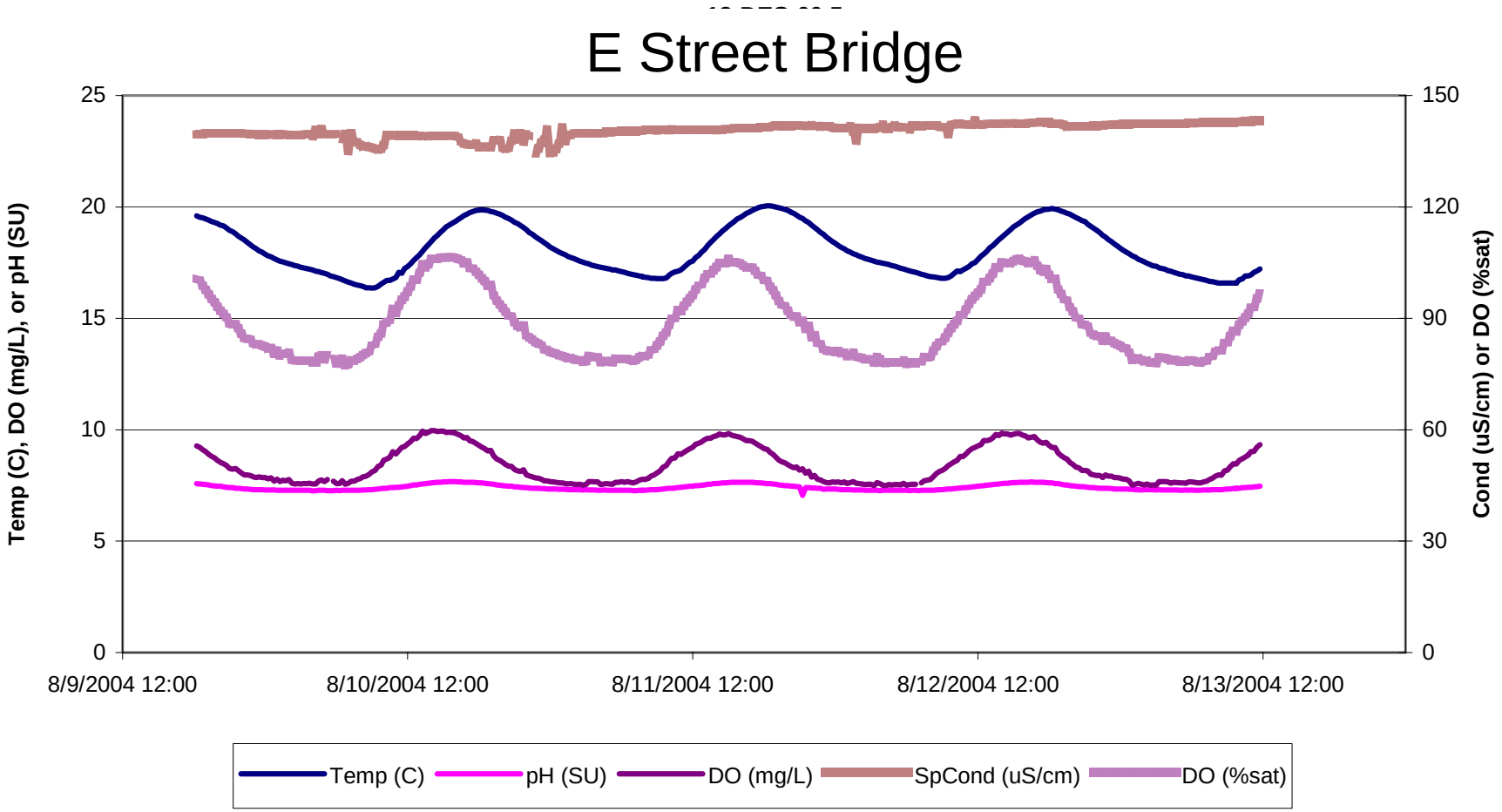
- Elevated levels throughout Adams, Indian, Mission, Moxlie
- Single high values in Butler, Ellis

- *More from Thurston County*…

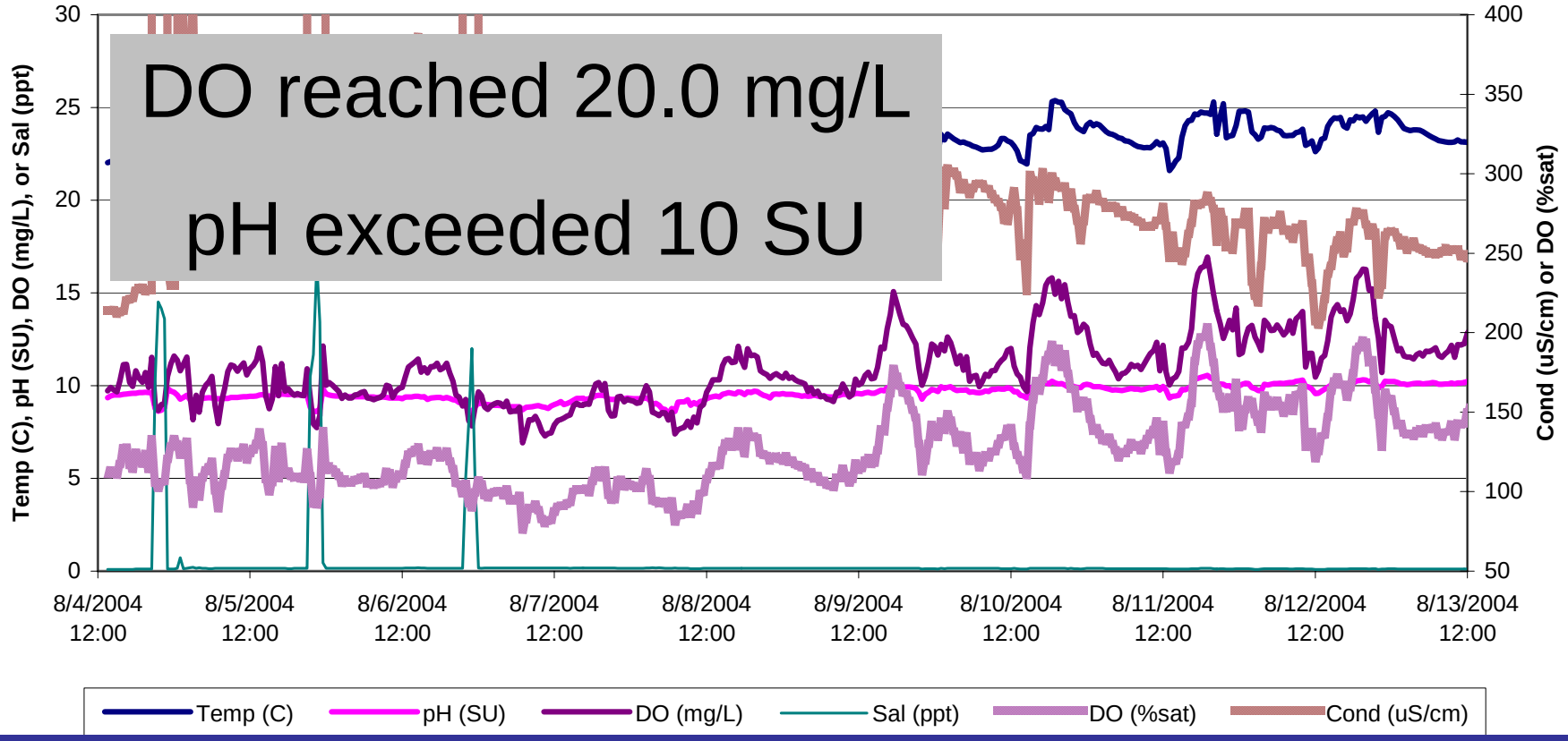
Deschutes River DO and pH



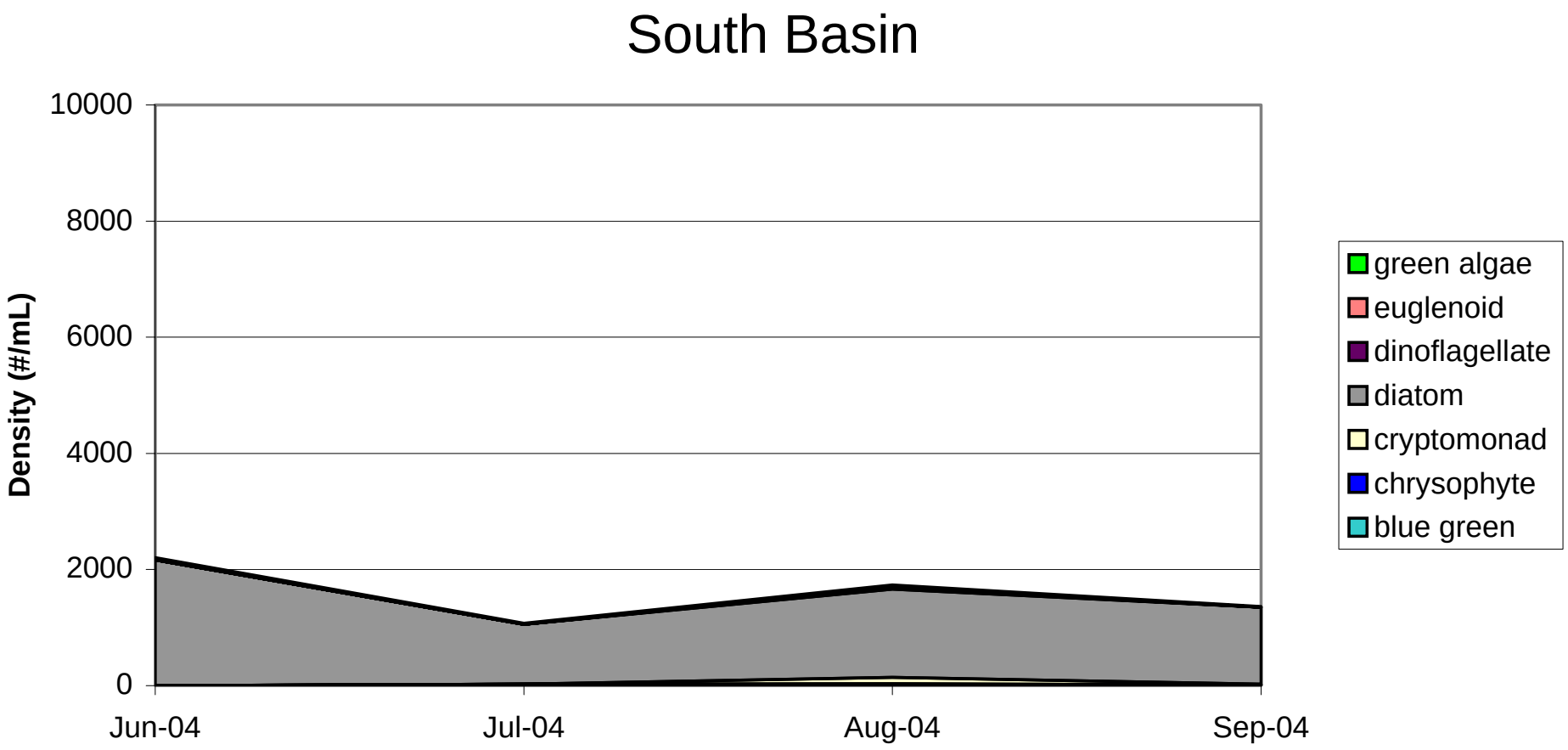
Deschutes River DO and pH



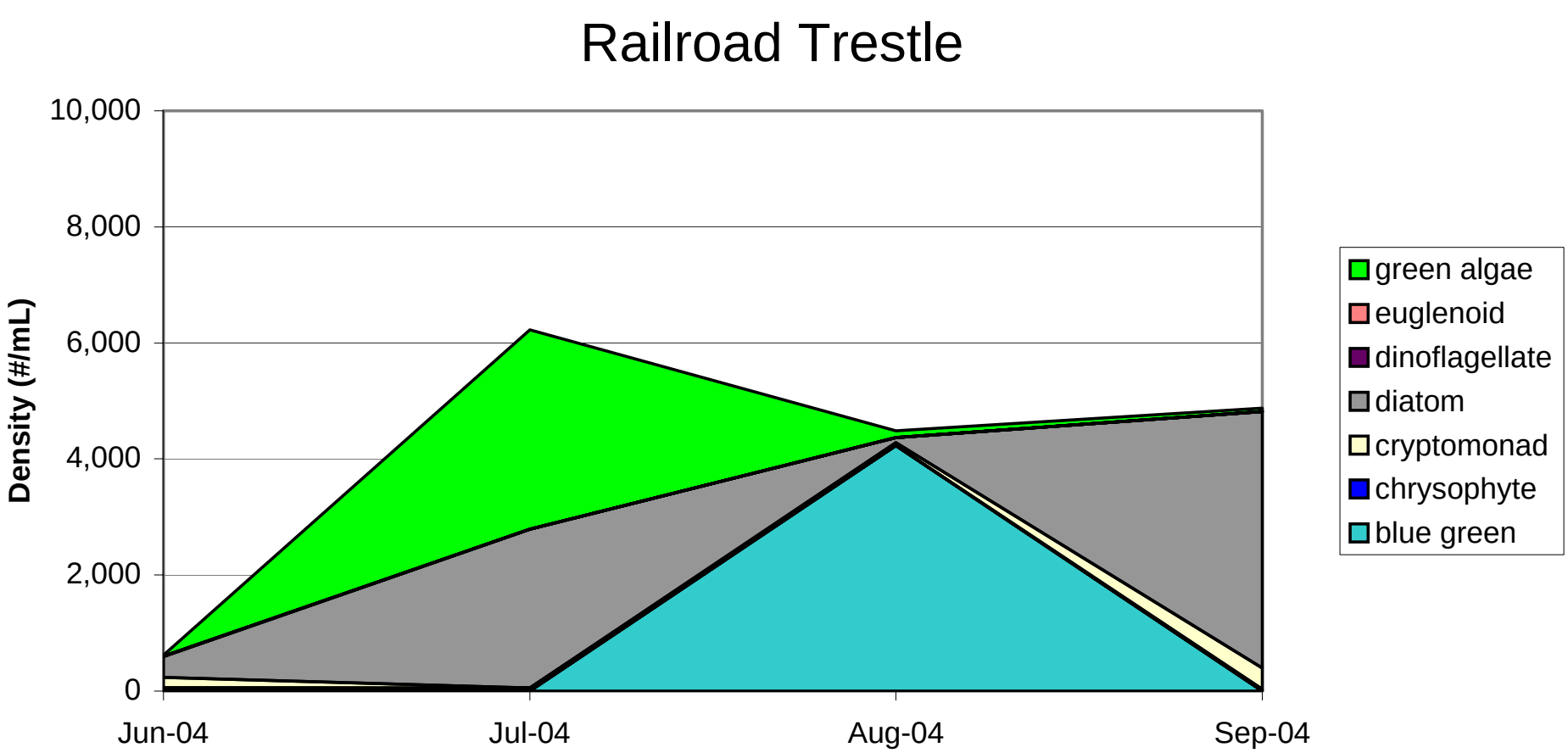
Capitol Lake DO and pH



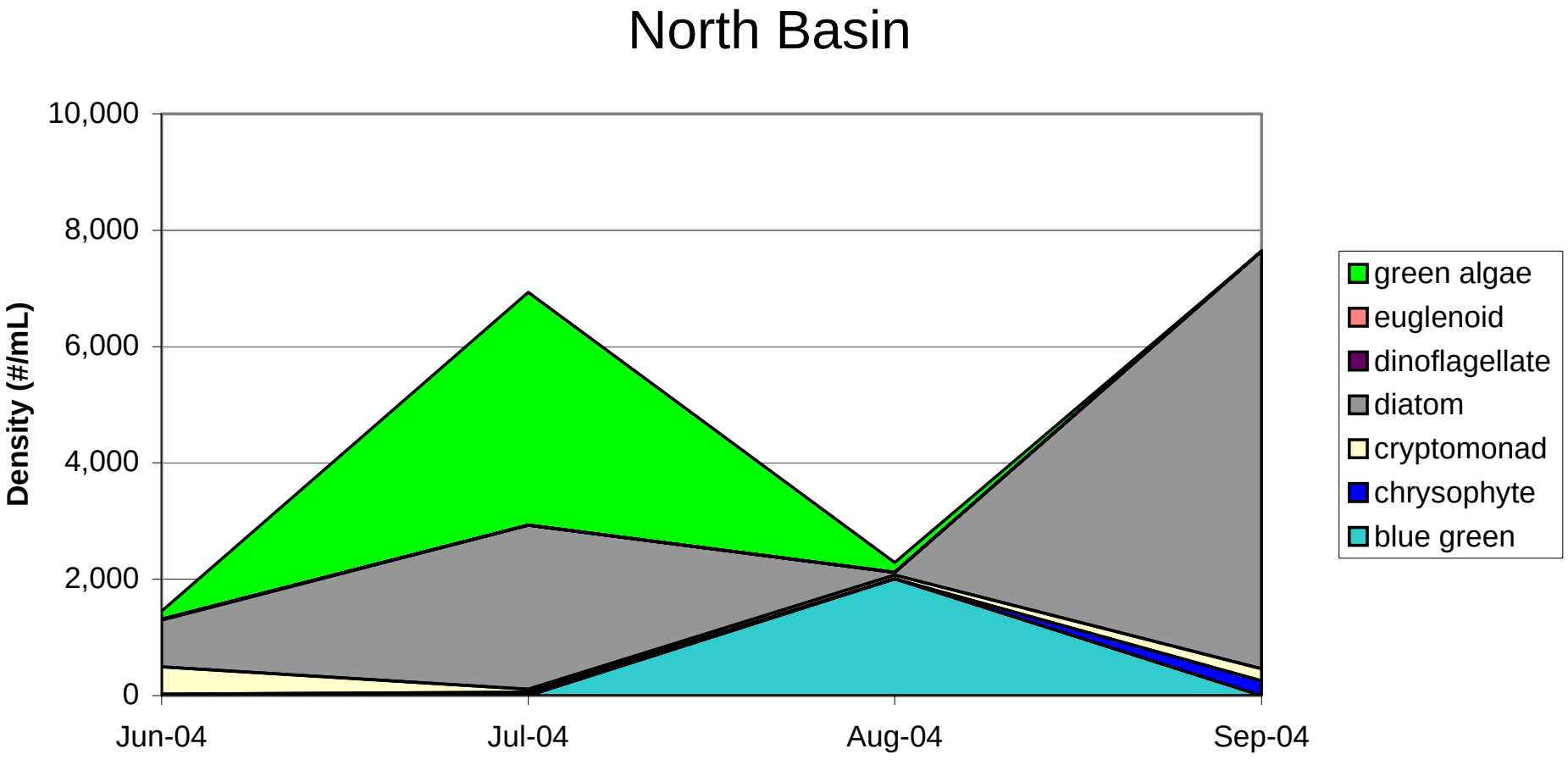
Capitol Lake Algae



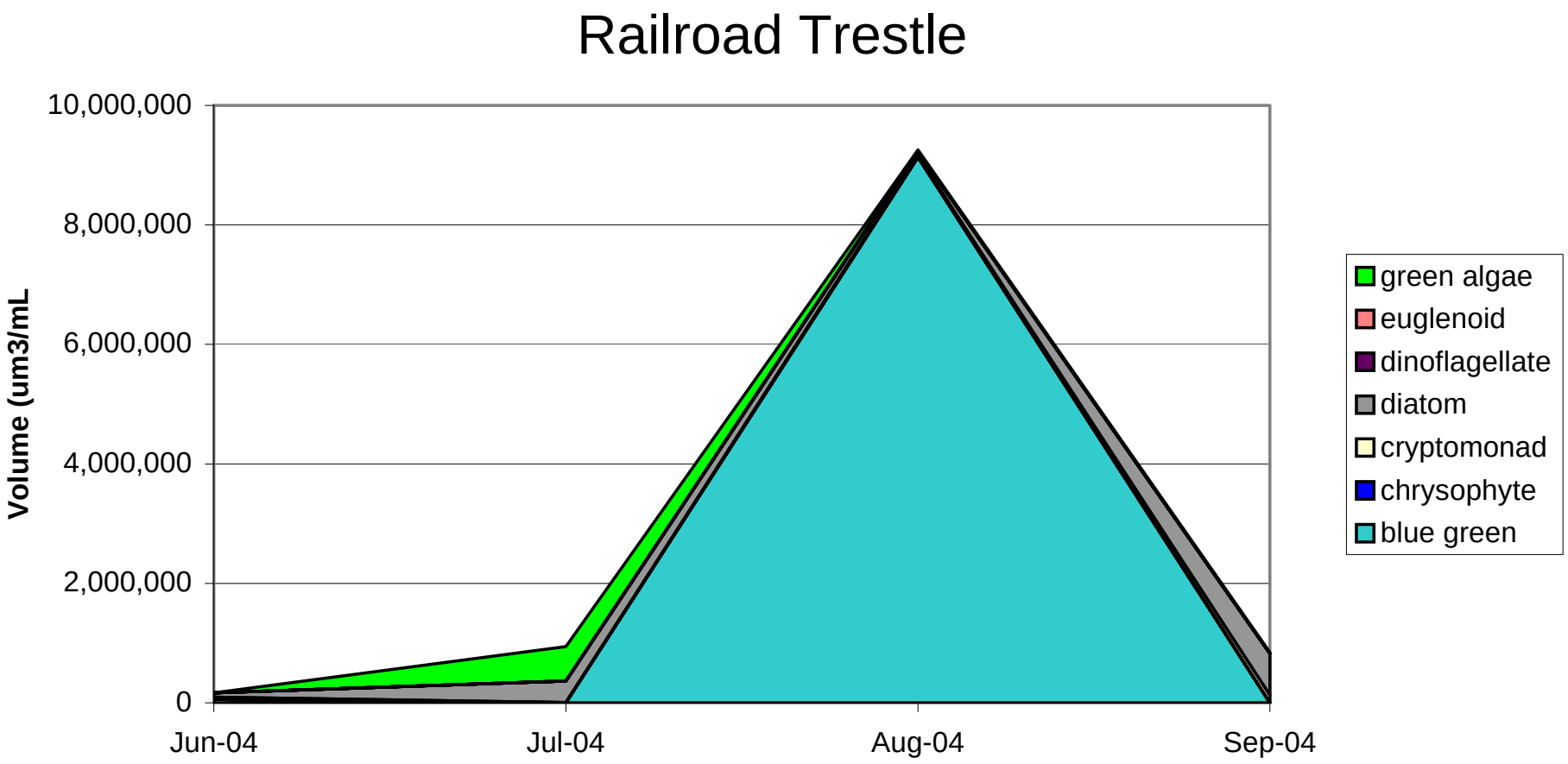
Capitol Lake Algae



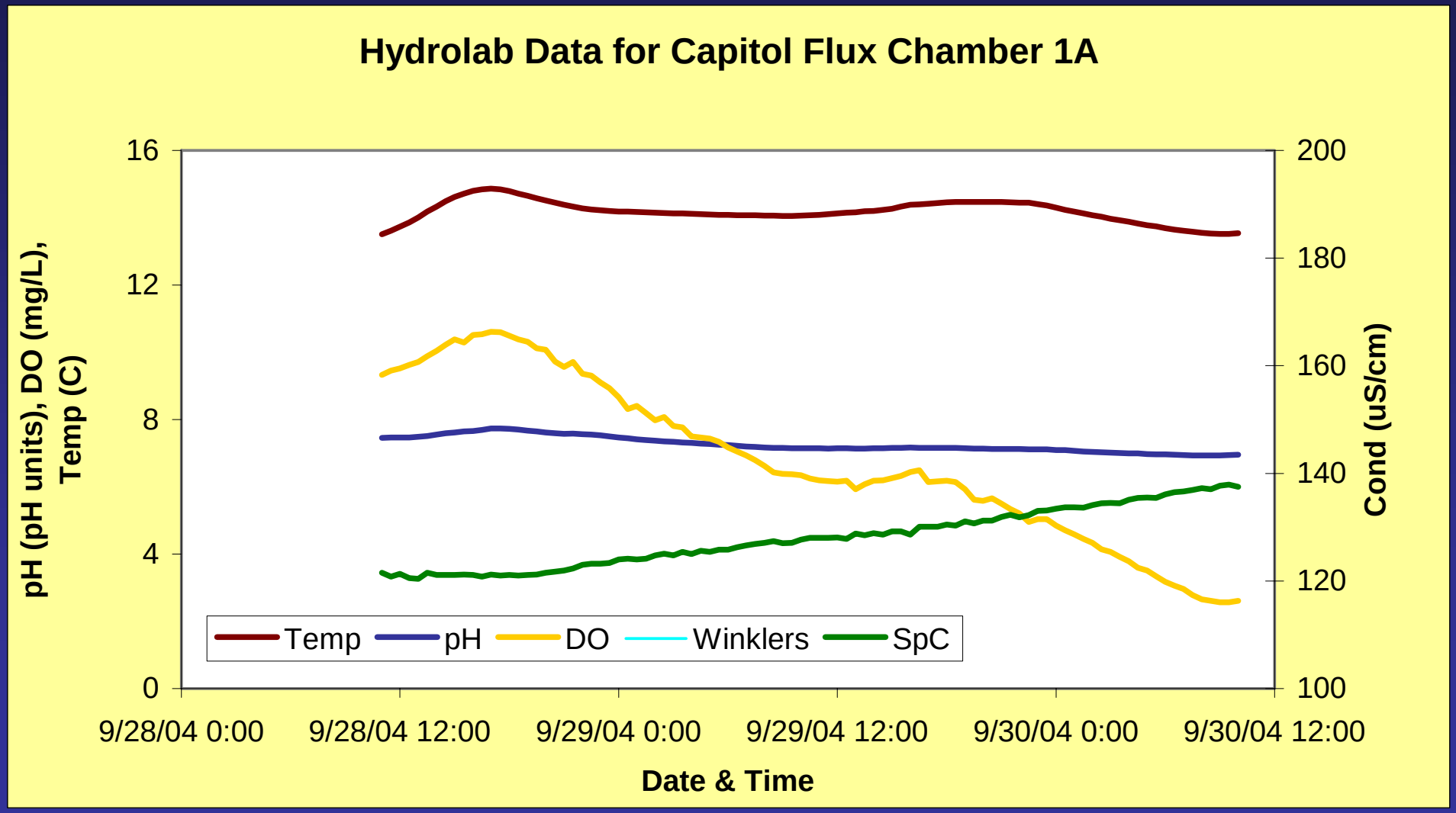
Capitol Lake Algae



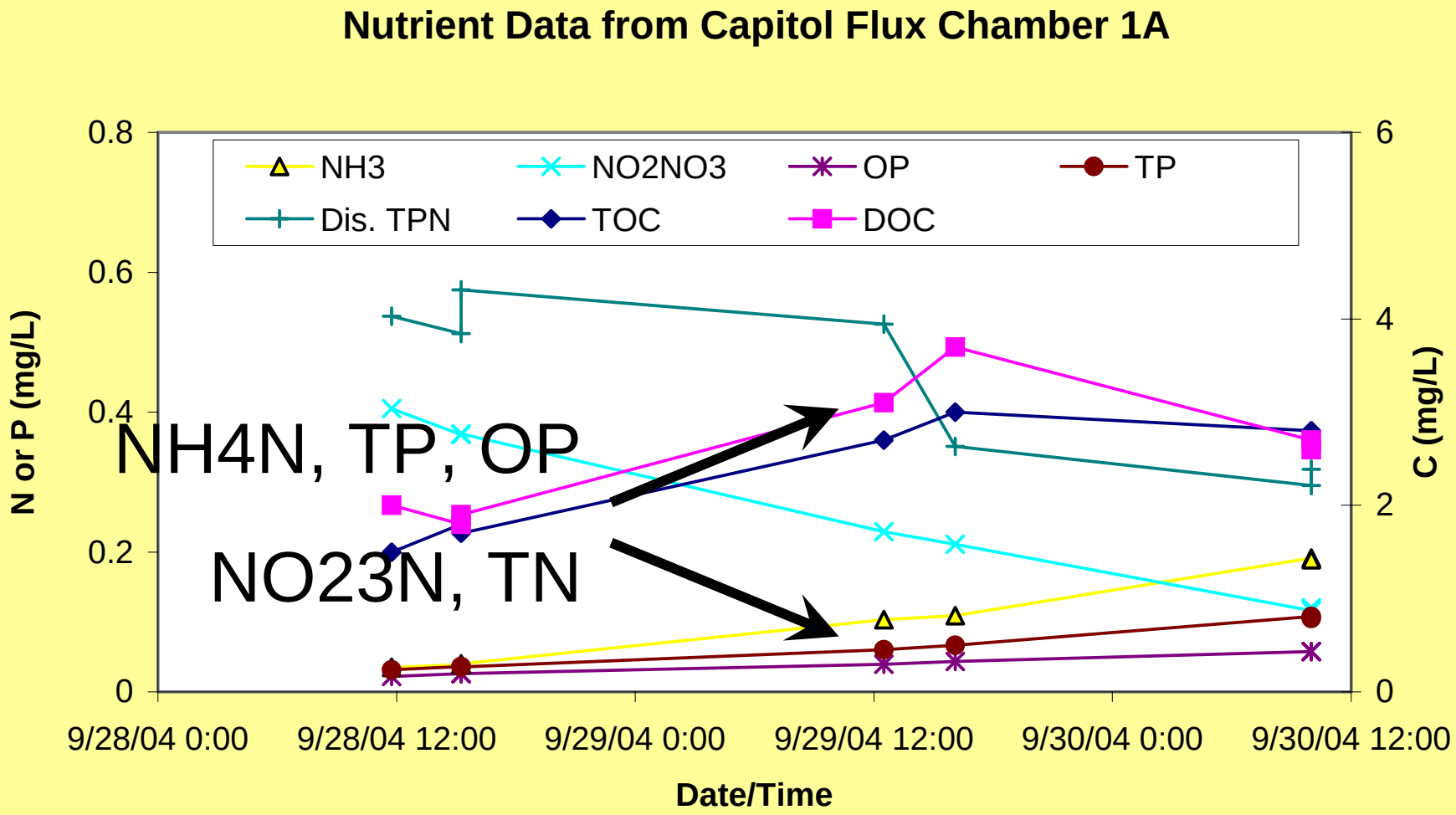
Capitol Lake Algae



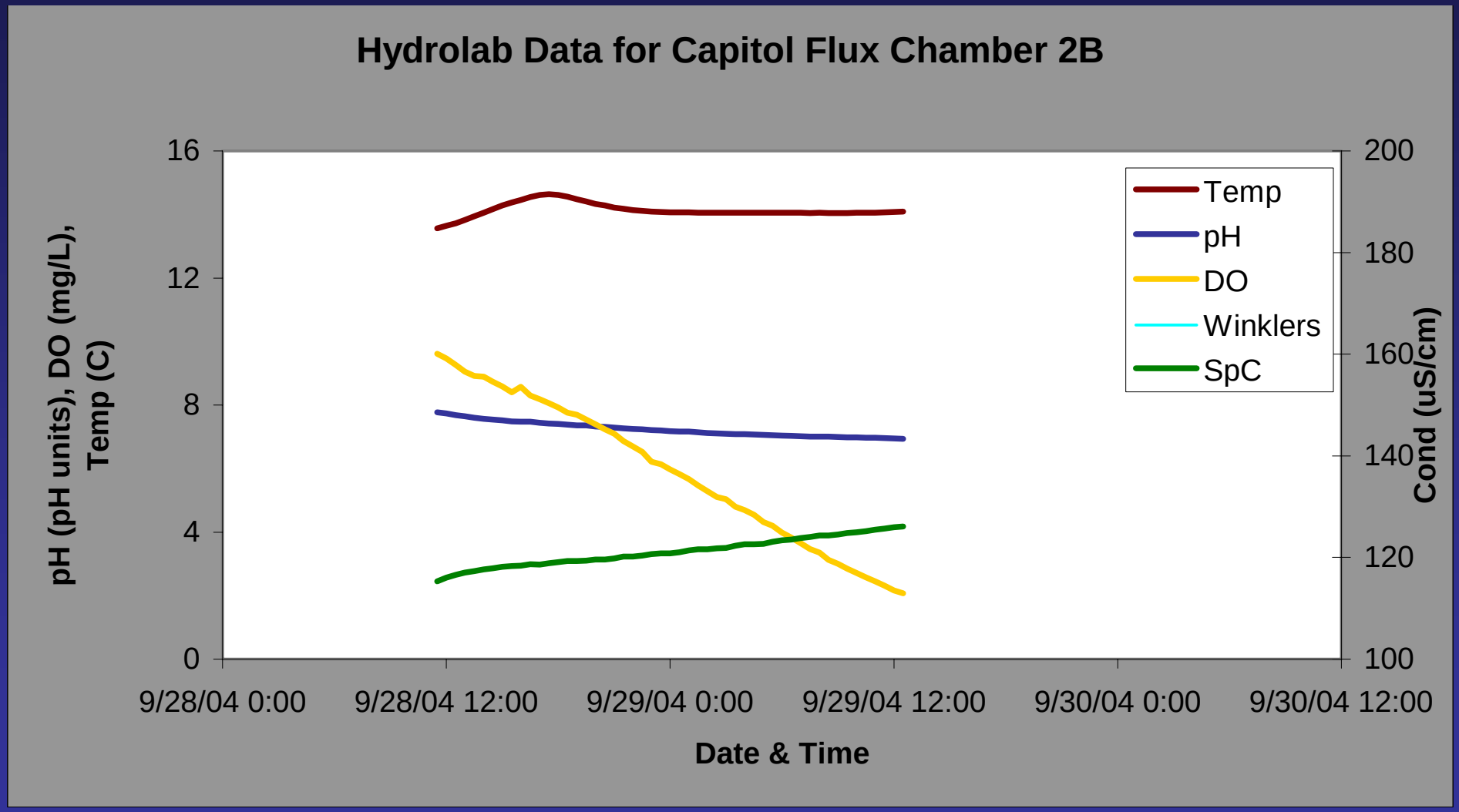
Capitol Lake Benthic Flux



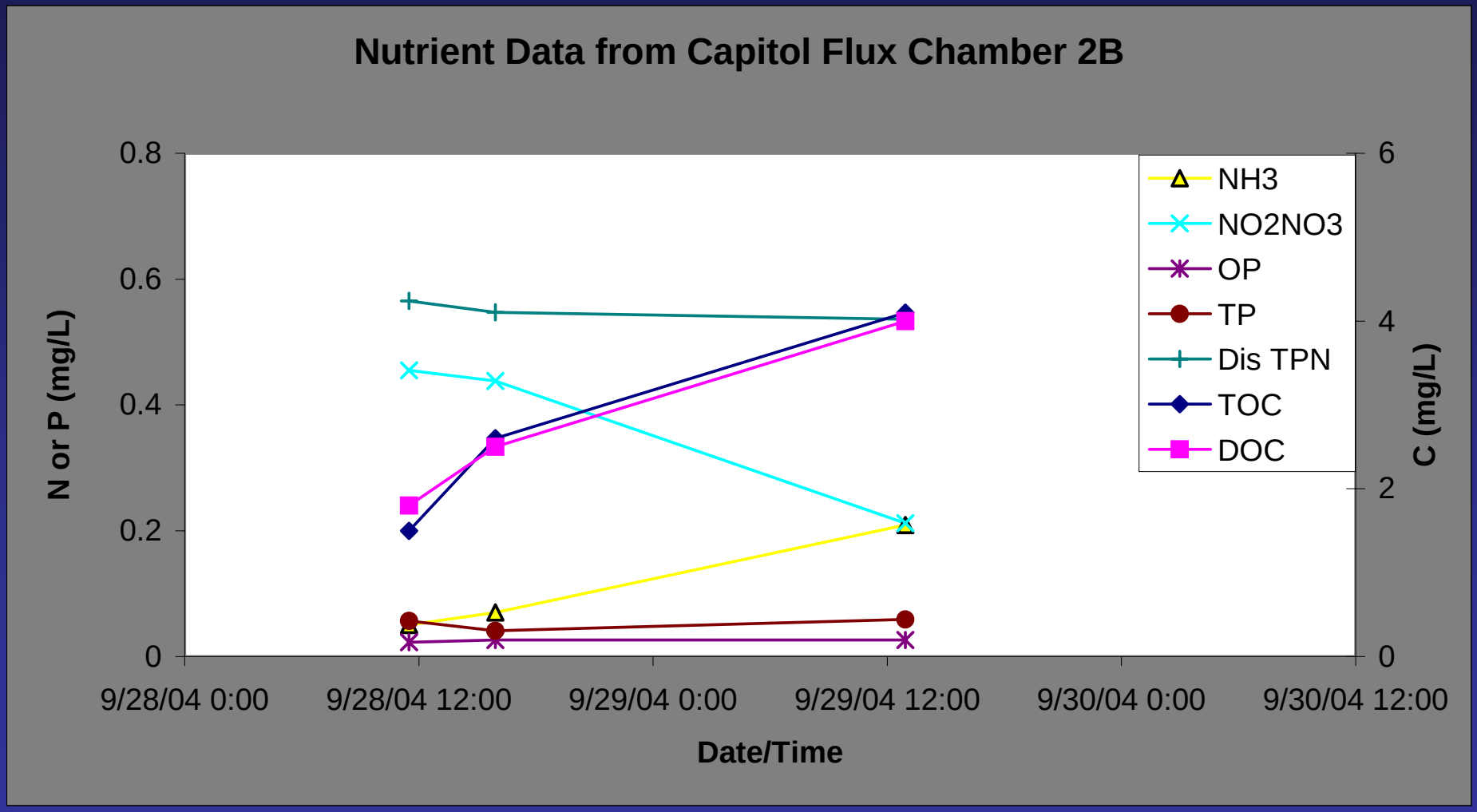
Capitol Lake Benthic Flux

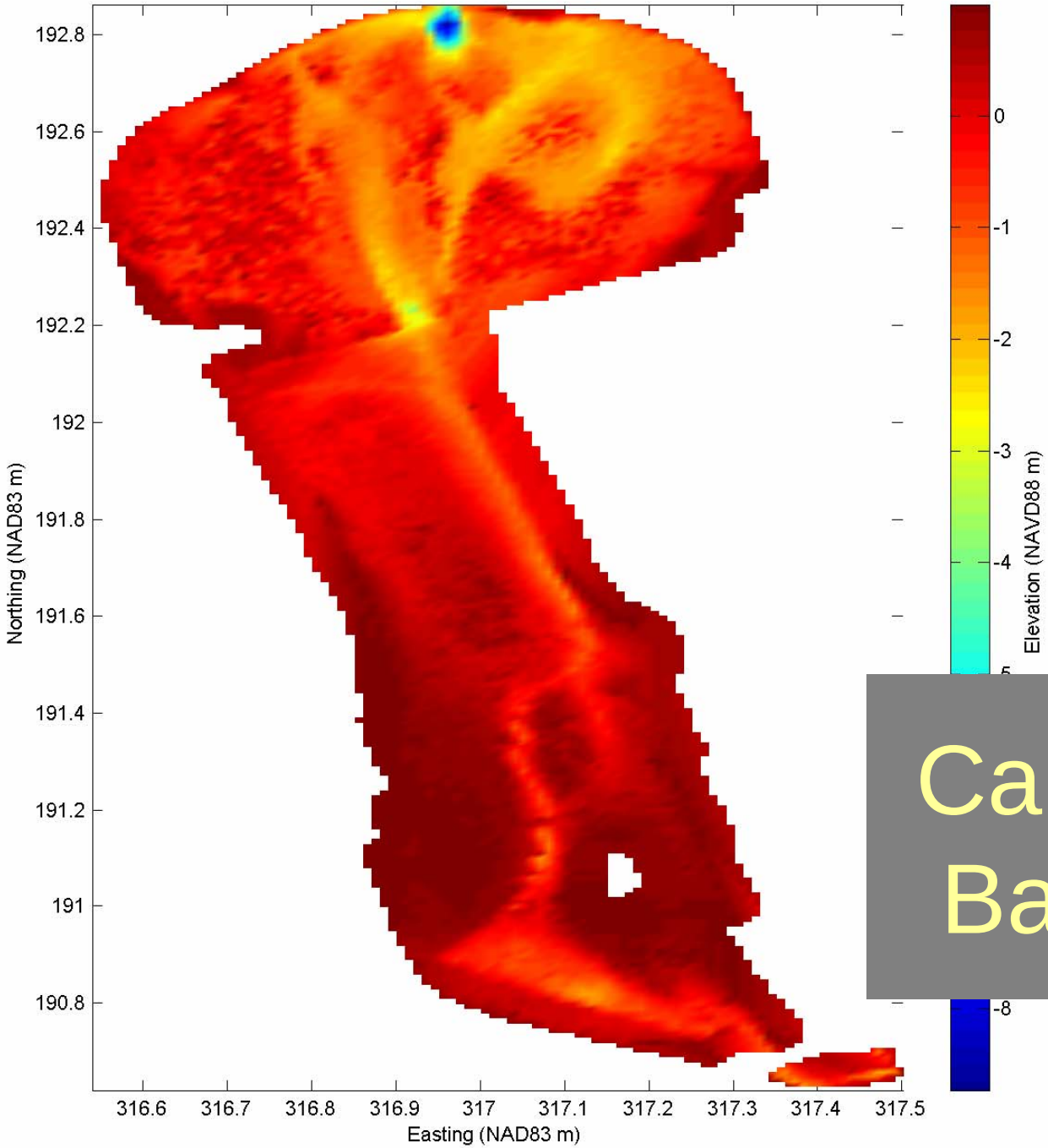


Capitol Lake Benthic Flux



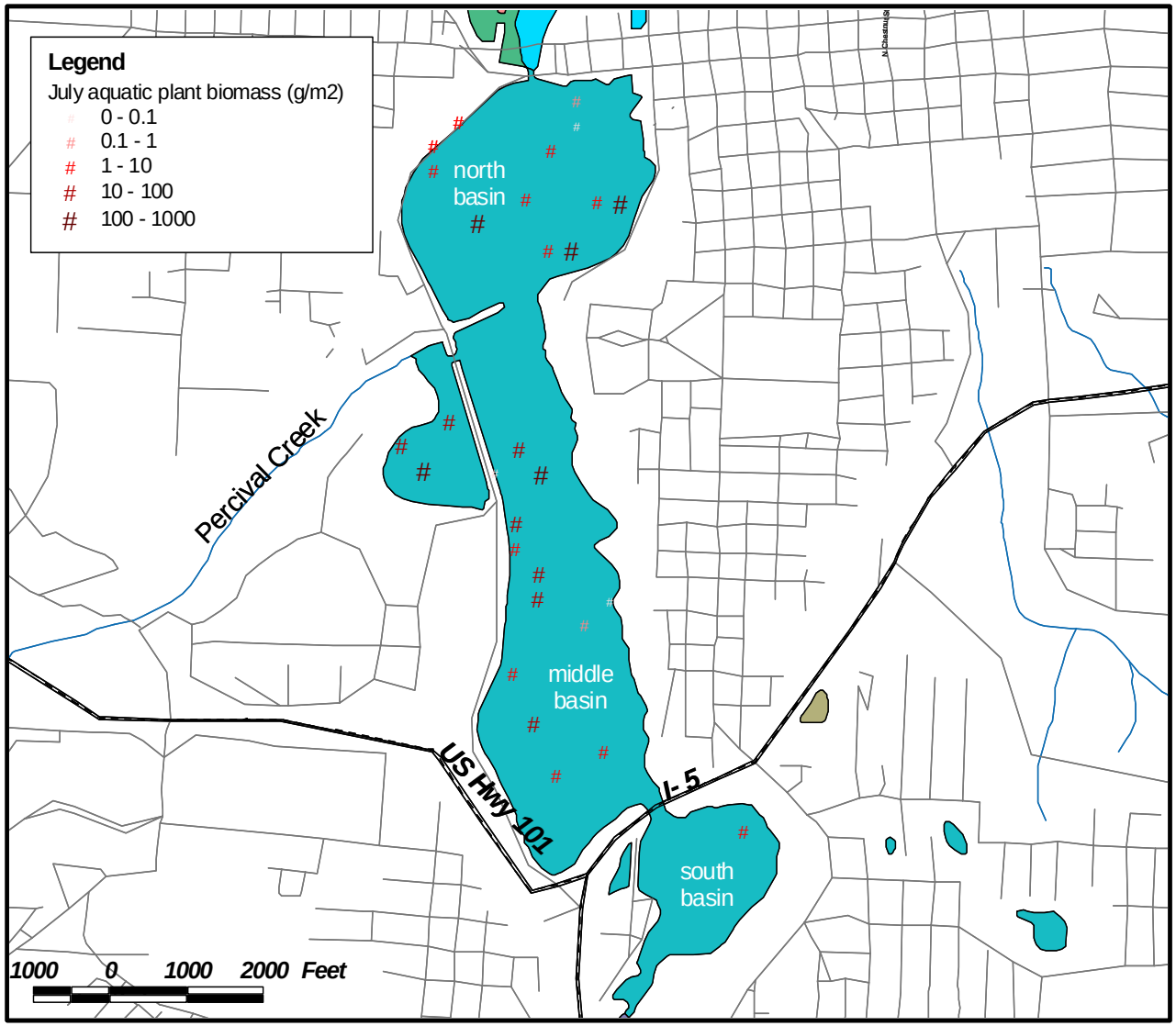
Capitol Lake Benthic Flux





Capitol Lake Bathymetry

Capitol Lake Macrophytes



Next Steps (2005)

- Stormwater monitoring (ongoing)
- Thurston County and City of Olympia continuing investigations
- Data analysis (FC, model input)

- *Continued reporting in quarterly reports*

Next Steps (2005)

- Models
  - QUAL2KW (Ecology)
    - Deschutes River temperature
    - Percival system temperature
    - Deschutes River DO and pH
    - *Capitol Lake pH (QUAL2KW)*
  - GEMSS (Edinger Associates and Ecology)
    - Capitol Lake and Budd Inlet DO

Expected Schedule

Initial model development	Fall 2005
Draft TMDL technical report for external review	March 2006
Final TMDL technical report for submittal to EPA	June 2006