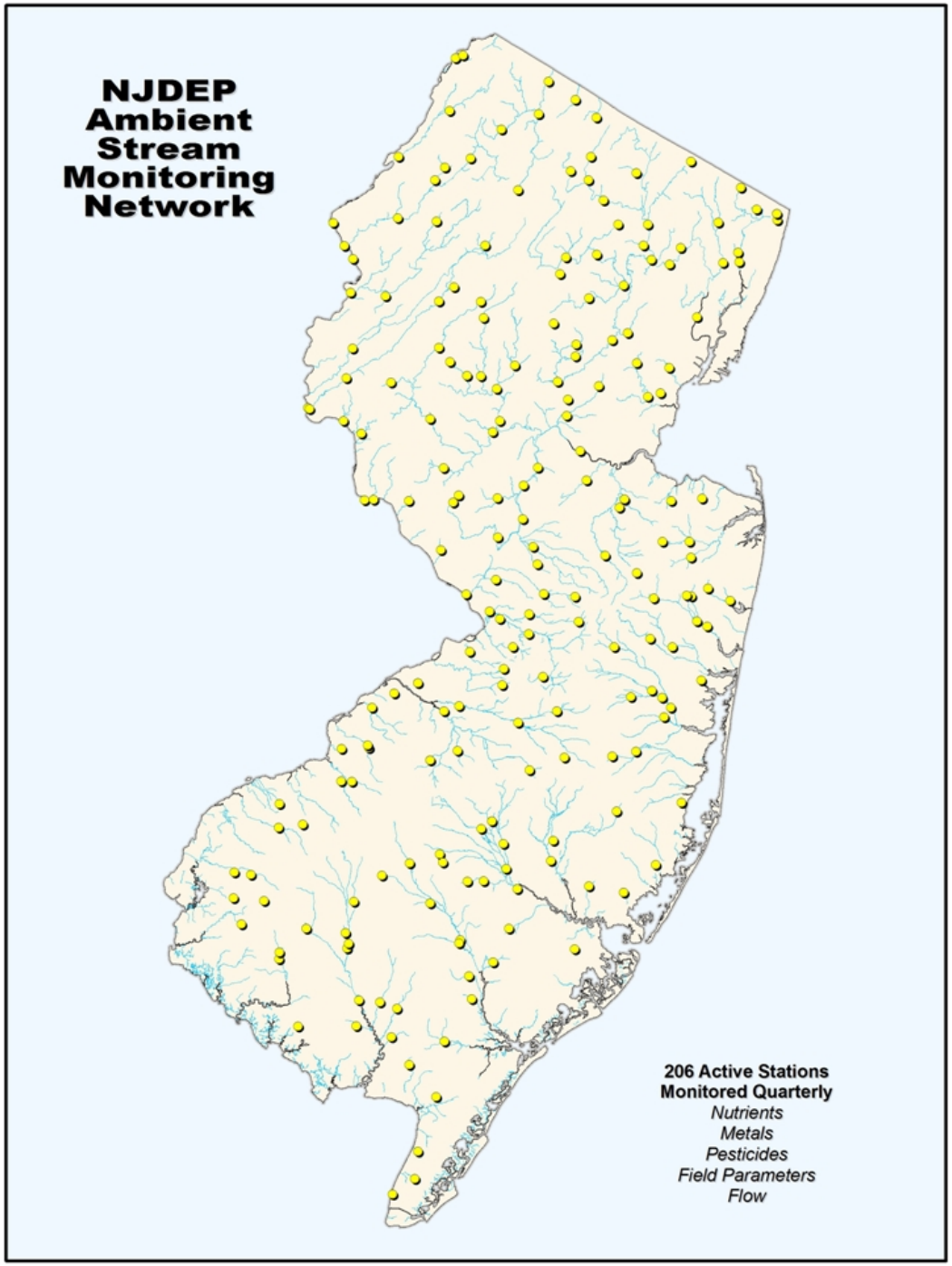
Water Monitoring and Standards Bureau of Freshwater and Biological Monitoring (BFBM)

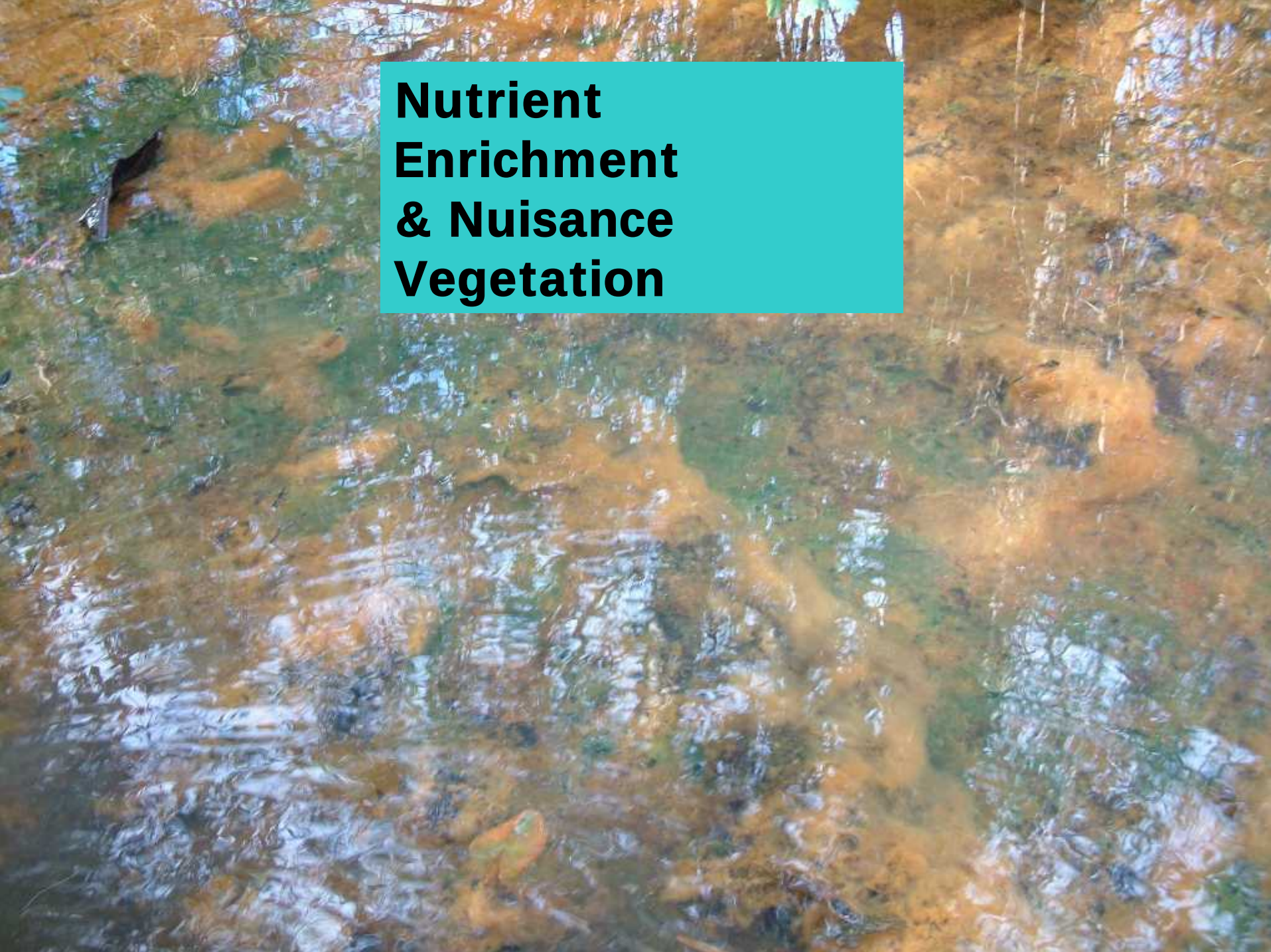
Physical Monitoring

Chemical Monitoring


NJDEP
Ambient
Stream
Monitoring
Network
206 Active Stations
Monitored Quarterly
Nutrients
Metals
Pesticides
Field Parameters
Flow

Types of Ambient Monitoring Stations (Stations are co-located with BFBM Macroinvertebrate Stations)

- Background/Reference Stations – undeveloped watersheds
- Landuse Stations – dominant land uses: Ag, forest, urban/suburban
- Integrator Stations – monitor larger watersheds with mixed land uses
- Random Stations – selected randomly to develop a representative view of water quality statewide



Nutrient Enrichment & Nuisance Vegetation

In-Stream Flow Measurements

Ambient Bacterial Monitoring Program

- May through September
- 5 samples collected within 30 days
- Parameter:

  1997 – 1999 fecal coliform and enterococcus

  2000 – 2006 fecal coliform, enterococcus and E. coli

  2007 – 2008 fecal coliform and E. coli

  2009 E. coli

Metals Monitoring

- EPA Method 1669 : Sampling Ambient Water for Trace Metals at EPA Water Quality Criteria Levels (1 ppb)

Clean Hands / Dirty Hands

Low Level Mercury Monitoring

Low Level Mercury Monitoring requires sample collection methods capable of producing uncontaminated samples at the sub part per trillion (ppt) level

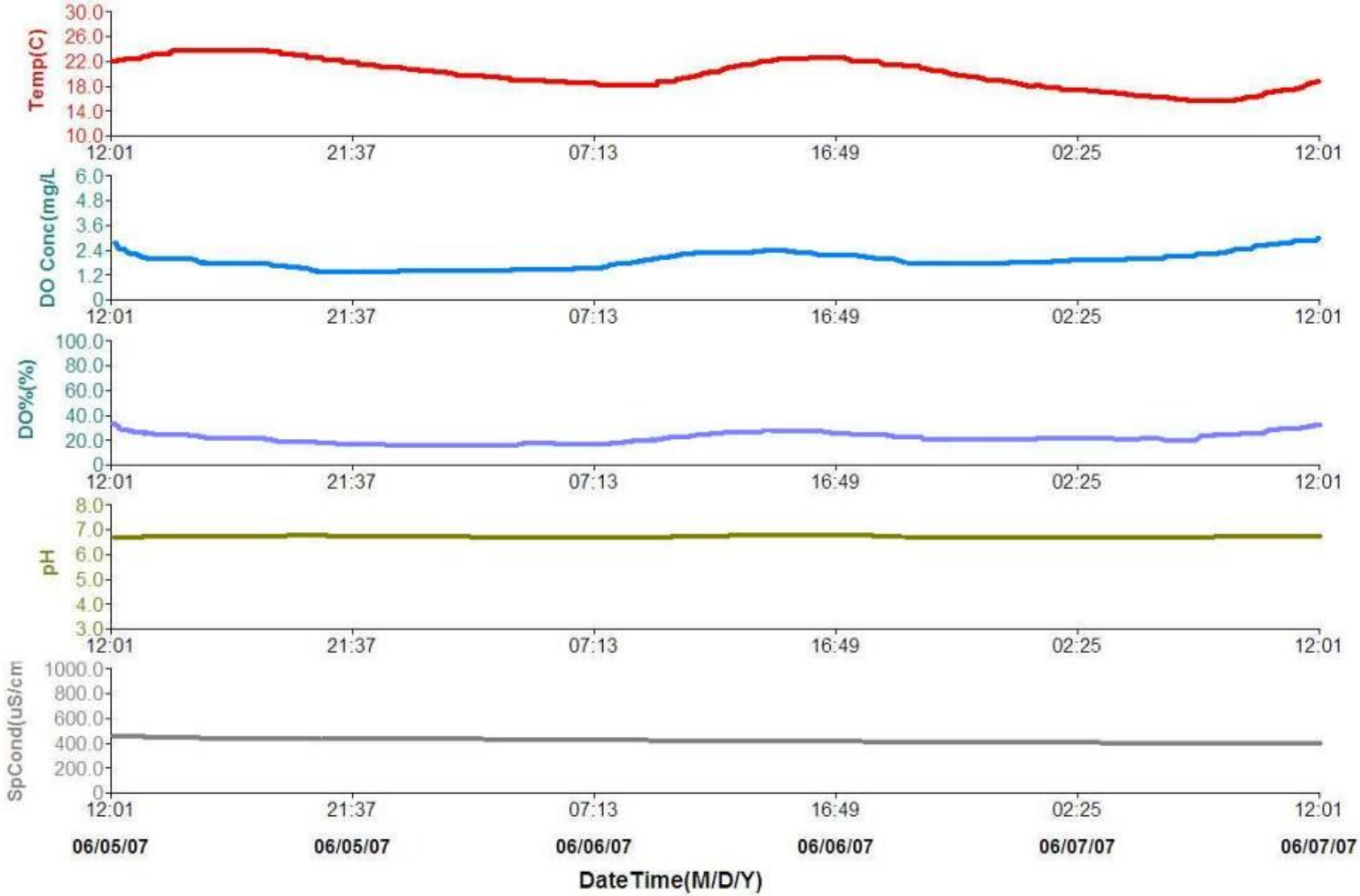
Note enclosed sample processing chamber

Physical Monitoring Parameters

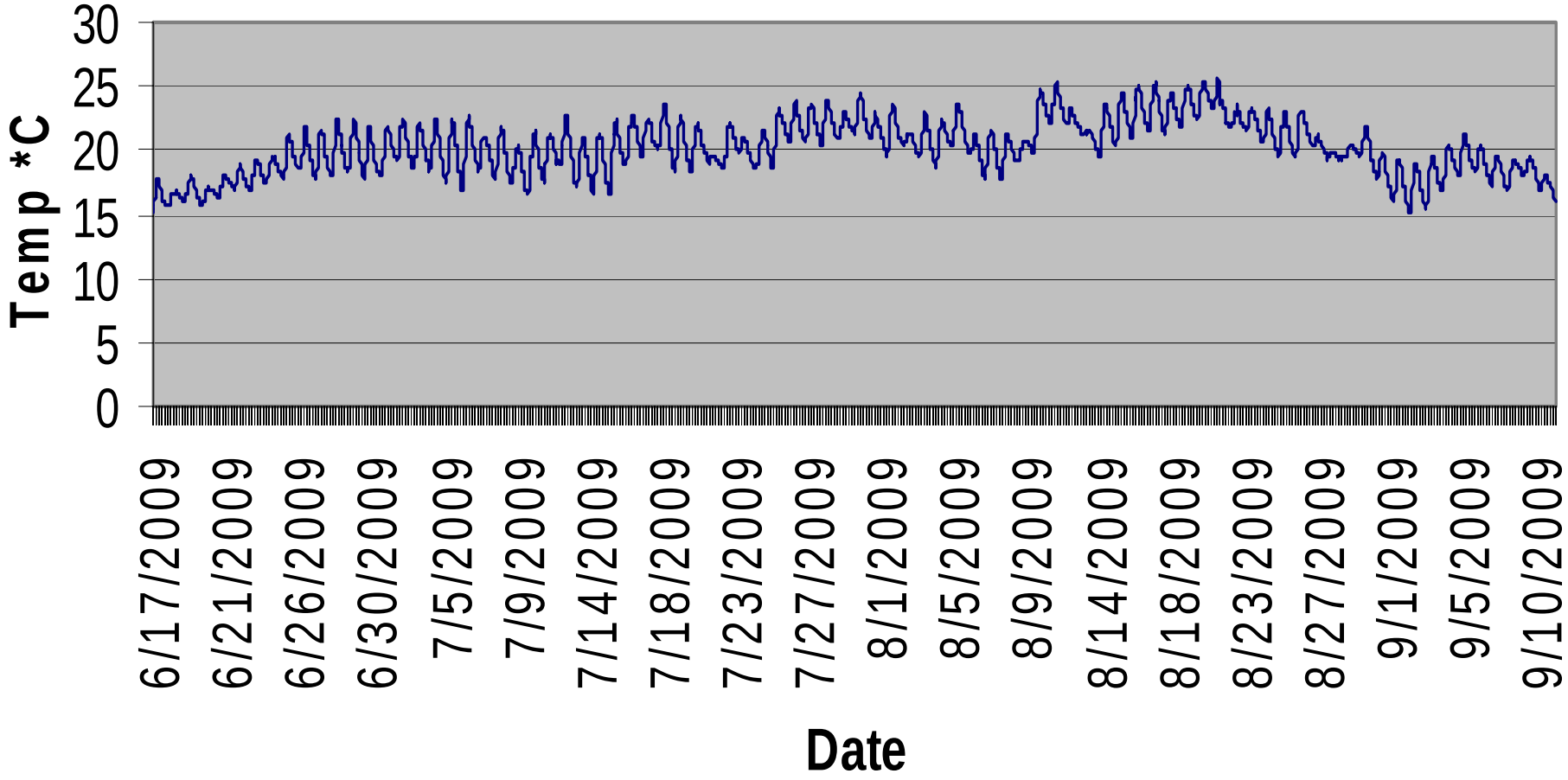
- Water temperature
- Dissolved Oxygen
- Dissolved Oxygen Saturation
- pH
- Specific Conductance
- Turbidity

01378895 :Black Brook @ New Vernon Rd

6/5/07-6/7/07



01403120 East Br Middle Brook at Gilbride Rd



Possible Revision to Ambient Stream Monitoring Network

- Increased HUC-14 coverage
- Enhanced Random Design

Thank you