

# An Individual Site Story

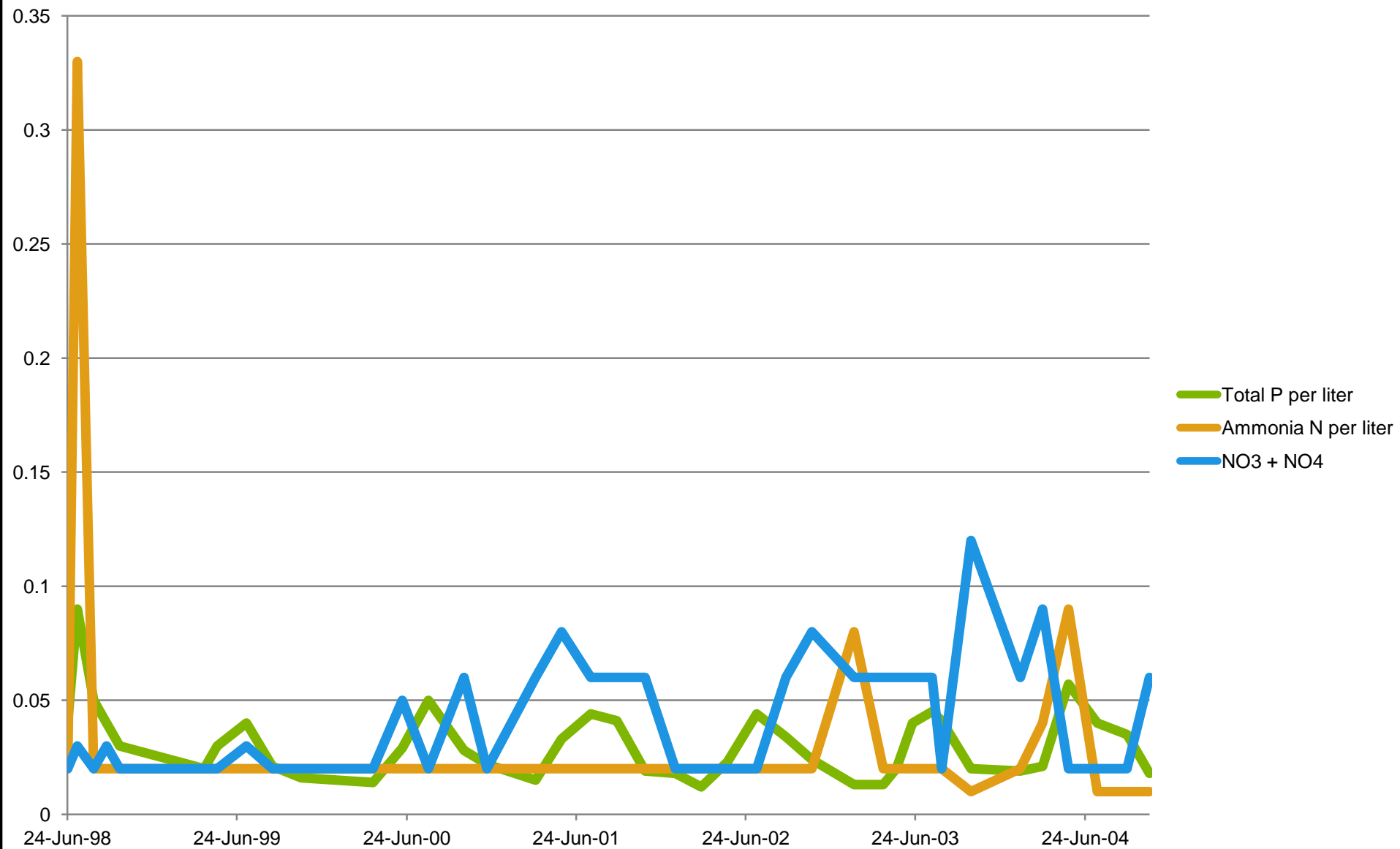
By Michael Silano



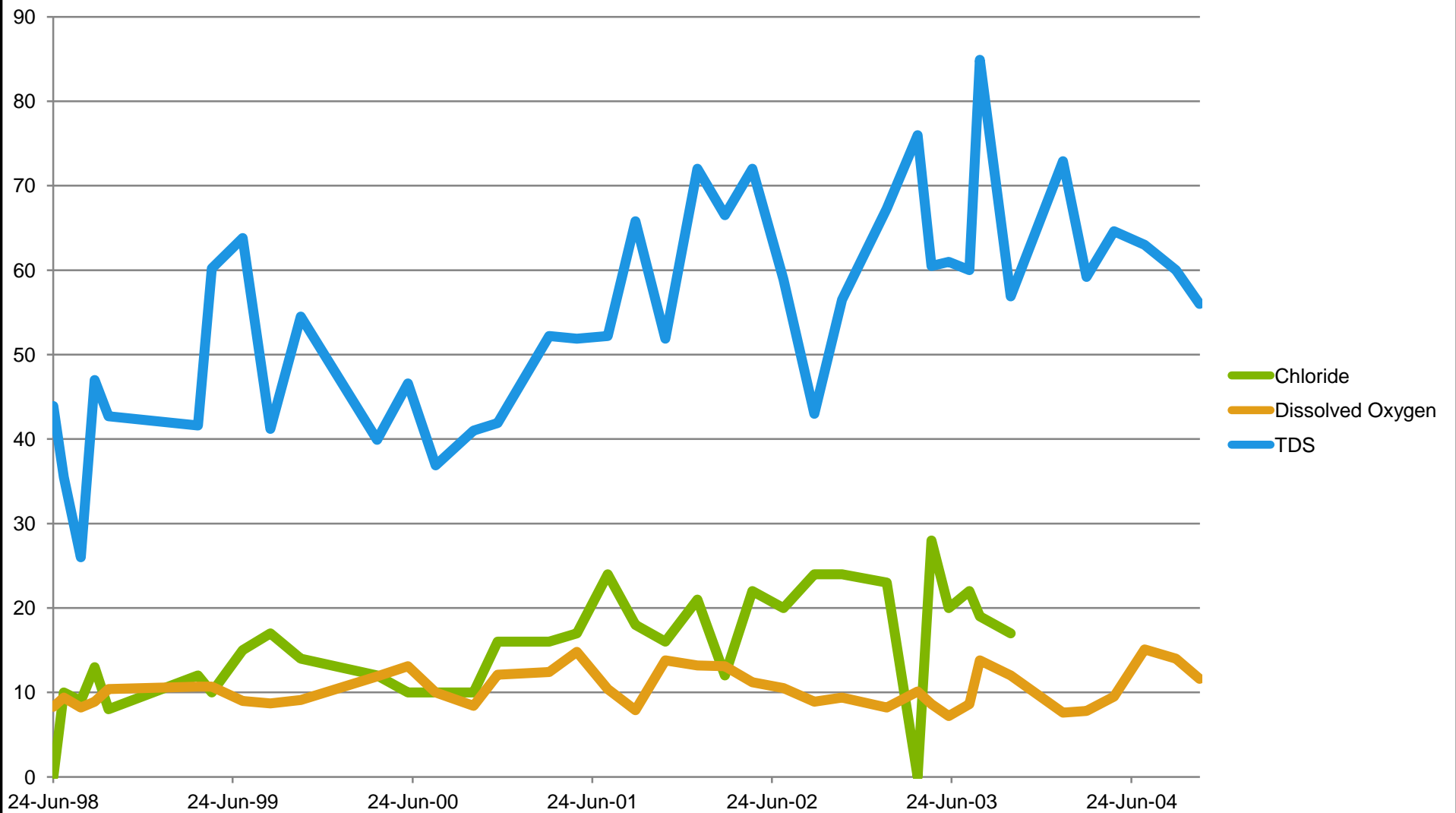
# Chicopee Basin, Ware River

- ◆ [Reference Satellite Image of site.](#)
- ◆ Convoluted process of extracting specific site areas. Need better organization for fewer step visualization.
- ◆ When visualized, the data alone is still difficult for everyone to understand, unless included with flow data. Trends become much clearer when converted to flux values.

# Levels Over Time



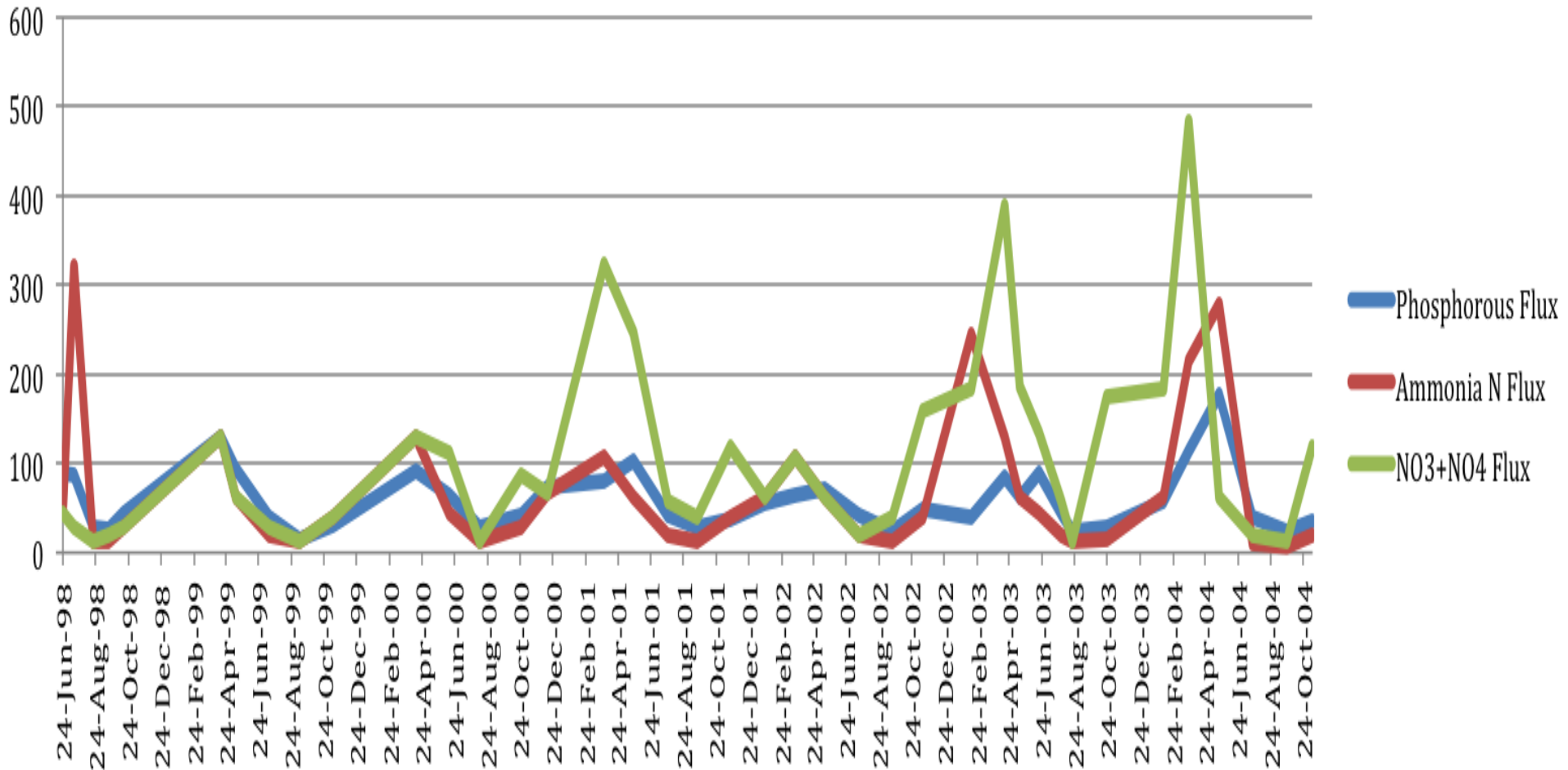
# Levels over Time



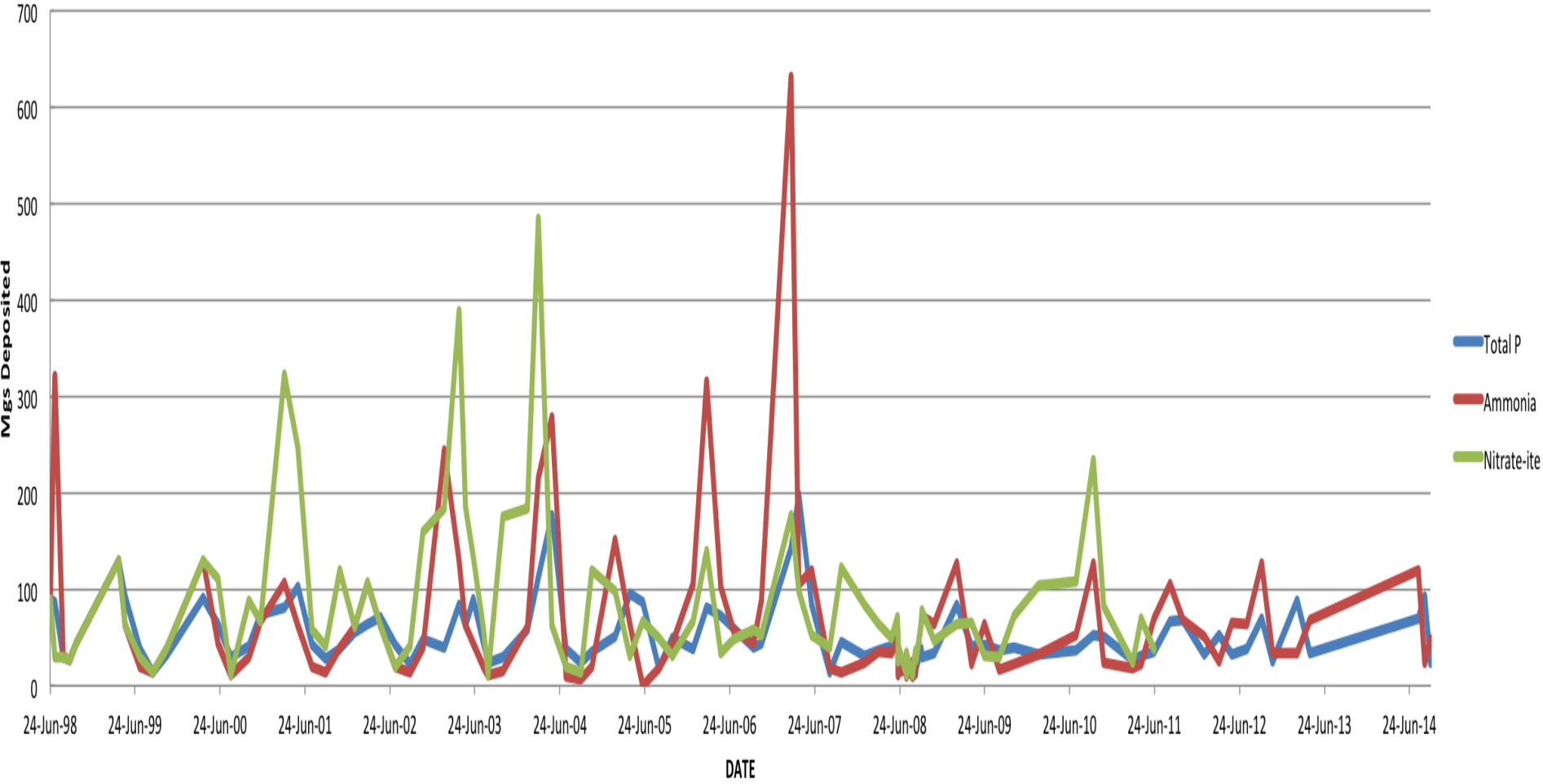
# Incorporating Flow

- ◆ Multiplying flow times the concentration will give us a unit of flux or total daily load.
- ◆ To ensure our calculation is correct, we need to multiply the concentration of mg per liter by the flow rate of liters per second.

# Chemical Flux (mg/L\*sec) Over Time



# Flux or Total Daily Load



# Patterns and Signs

- ◆ The seasonal pattern becomes much more evident, when taking into account the monthly flow rates.
- ◆ The deviation from the normal sine pattern and the extremity of the peaks is concerning. But the trend seems to stop when it gets its worst.
- ◆ Because the levels are all relatively low, it can be assumed that the pollution comes from fertilizers and urbanization.
- ◆ Locally the problem may have been addressed, but the site has seemed to be cleaned or influenced in some manor afterward.



# Works Cited

- ◆ USGS Flow Data.
  - ◆ USGS. “National Water Website.” USGS Current Conditions for USGS 01172500 WARE RIVER NEAR BARRE, MA, US Geological Society,.
- ◆ SMART Data