

# Leon County Surface Water Management Activities

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# County activities involve many agencies

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- ❑ Tallahassee/Leon County Planning Department
  - ❑ Leon County Growth and Environmental Management
  - ❑ Leon County Public Works Department
    - Parks and Recreation
    - Roadway Operations
    - Mosquito Control and Stormwater Maintenance
    - Solid Waste
    - Engineering Services
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# Joint City/County Planning

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- ❑ Comprehensive Plan guides land use and infrastructure
  - ❑ Sector studies of the community to determine site specific management goals
  - ❑ Land use designation and management, such as site-specific zoning and delineating the Urban Services Area
  - ❑ Greenway and sensitive land acquisition to protect natural habitat and other features
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# County Growth and Environmental Management

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- ❑ Environmental permitting of development activity to comply with local standards
  - ❑ Develop ordinances for resource protection county-wide (eg., volume control)
  - ❑ Studies to establish basin-specific stormwater treatment and habitat protection standards (eg., Bradfordville)
  - ❑ Lakes monitoring to document conditions and identify trends
  - ❑ Map environmentally sensitive features
  - ❑ Enforcement of environmental ordinances
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# County Public Works

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- Parks and Recreation Department
  - Resource management
  - education



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## □ Roadway Operations

- Shoulder maintenance
  - Linear detention maintenance
  - Vegetation control
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□ Mosquito Control and Stormwater Maintenance

- Stormwater facility maintenance
- Natural drainage way monitoring and maintenance
- Licensed operators



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## □ Engineering Services

- Stormwater Program
  - Infrastructure design
  - Construction management
  - Development review and coordination
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# Stormwater Program

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- Utility management
  - NPDES compliance
  - TMDL coordination
  - Capital program development
  - Operations support
  - Emergency response and planning
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# Improve data supporting modeling and analysis

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- ❑ Improved watershed mapping detail with LIDAR (**L**Ight **D**etection **A**nd **R**anging)
  - ❑ Real-time rainfall and stream level gauge reporting through CAFWN (**C**apital **A**rea **F**lood **W**arning **N**etwork)
  - ❑ Countywide water quality and biological sampling program
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# Water Quality and Habitat Sampling for NPDES Compliance

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- ❑ Monitor inflow and discharge quality for existing treatment facilities to determine efficiency by facility type
  - ❑ Perform Stream Condition Index for three areas in the Lake Munson system
  - ❑ Quarterly trend monitoring in 12 tributaries
  - ❑ Coliform characterization at 5 locations
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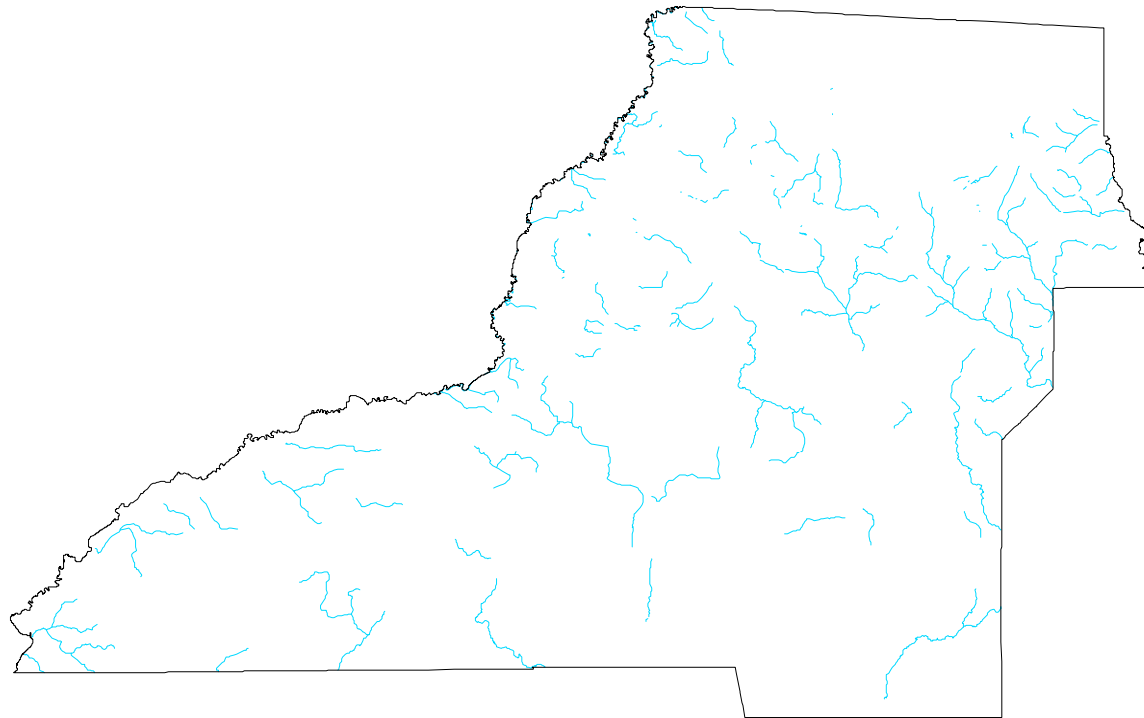
# Program enhancements

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- ❑ Improve GIS and base map data
  - ❑ Increase knowledge of flowway function and rainfall distribution
  - ❑ Document groundwater response to surface flows
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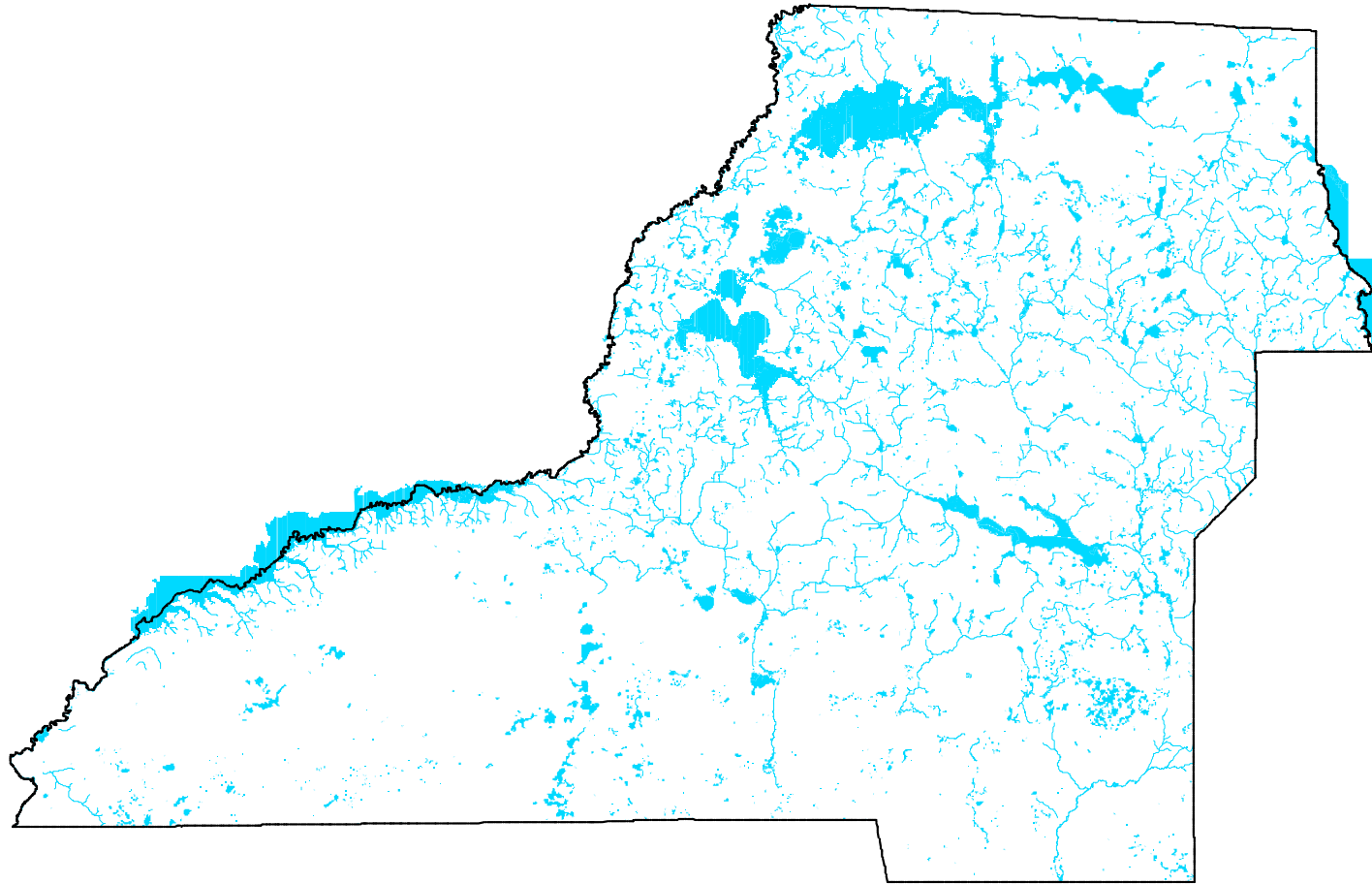
# USGS Quadrangle - Hydrography

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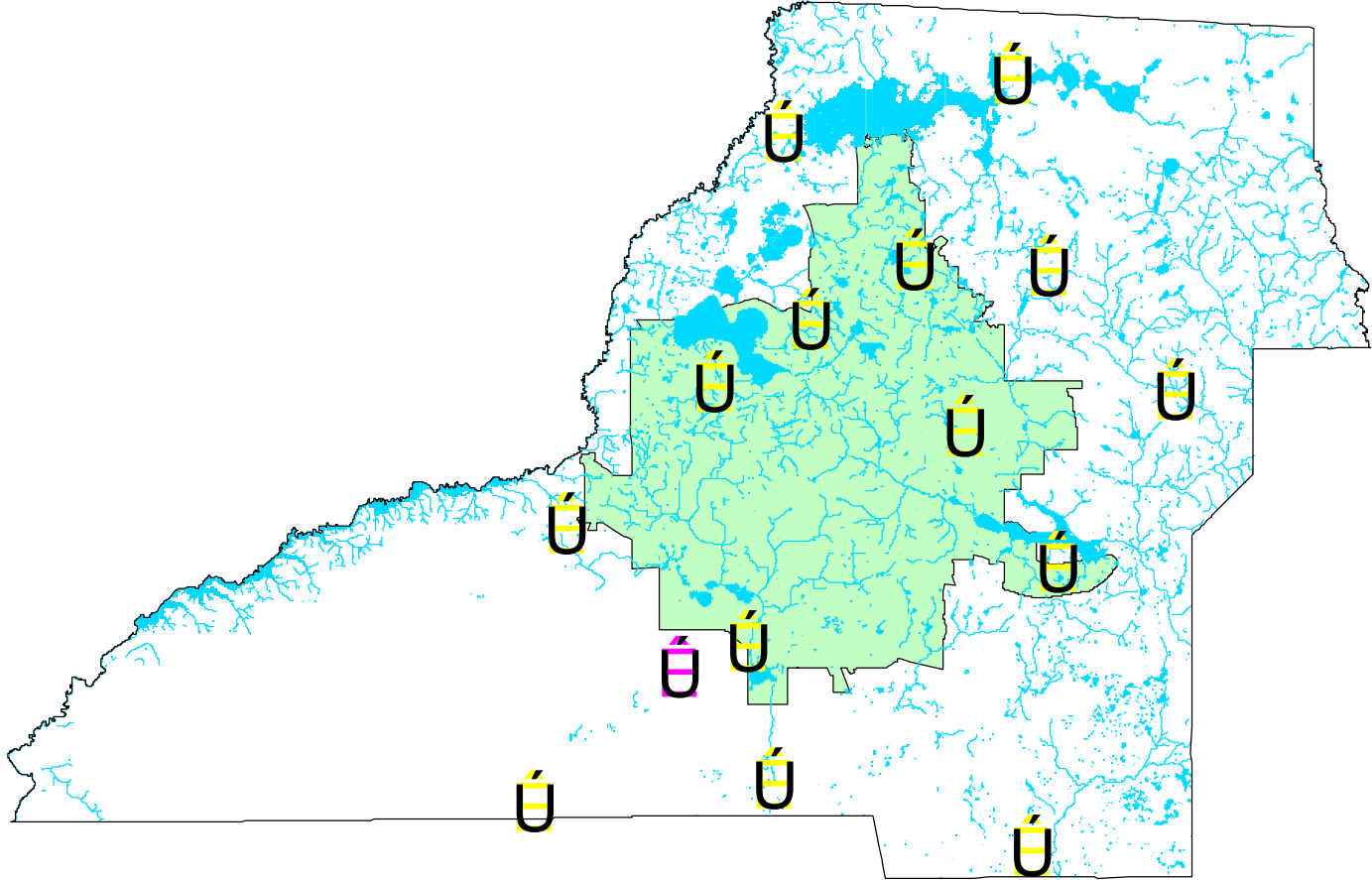
# Leon County GIS - Hydrography

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# Capital Area Flood Warning Network

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# Capital Projects for Surface Water Management

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- Gum Swamp Restoration
    - Public health required mosquito control ditching of wetland
    - Drained swamp was timbered and developed
    - 1980's plan evolved to "restore" Gum Swamp, at least what remained
    - Rehydration has caused tree loss
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# Lake Henrietta

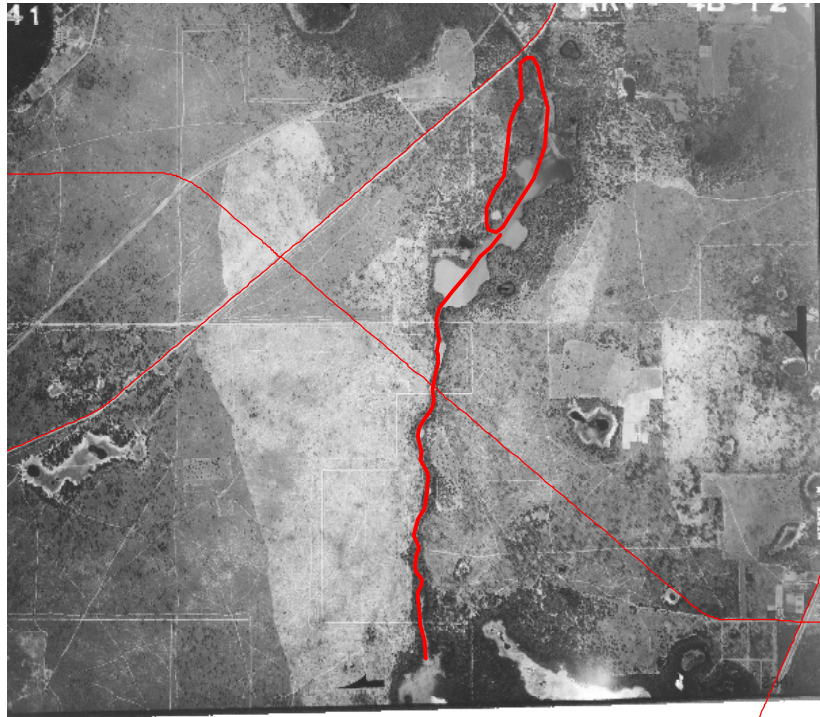
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- Baseflow up to 2-year storm (1-inch) will be captured and treated
  - High flows are directed through AND around the treatment pond
  - Natural wetlands along slough are rehydrated to provide nutrient uptake and peak flow storage
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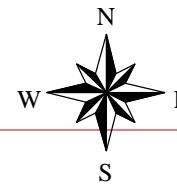
# Lake Henrietta Restoration

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## Lake Henrietta and Munson Slough North

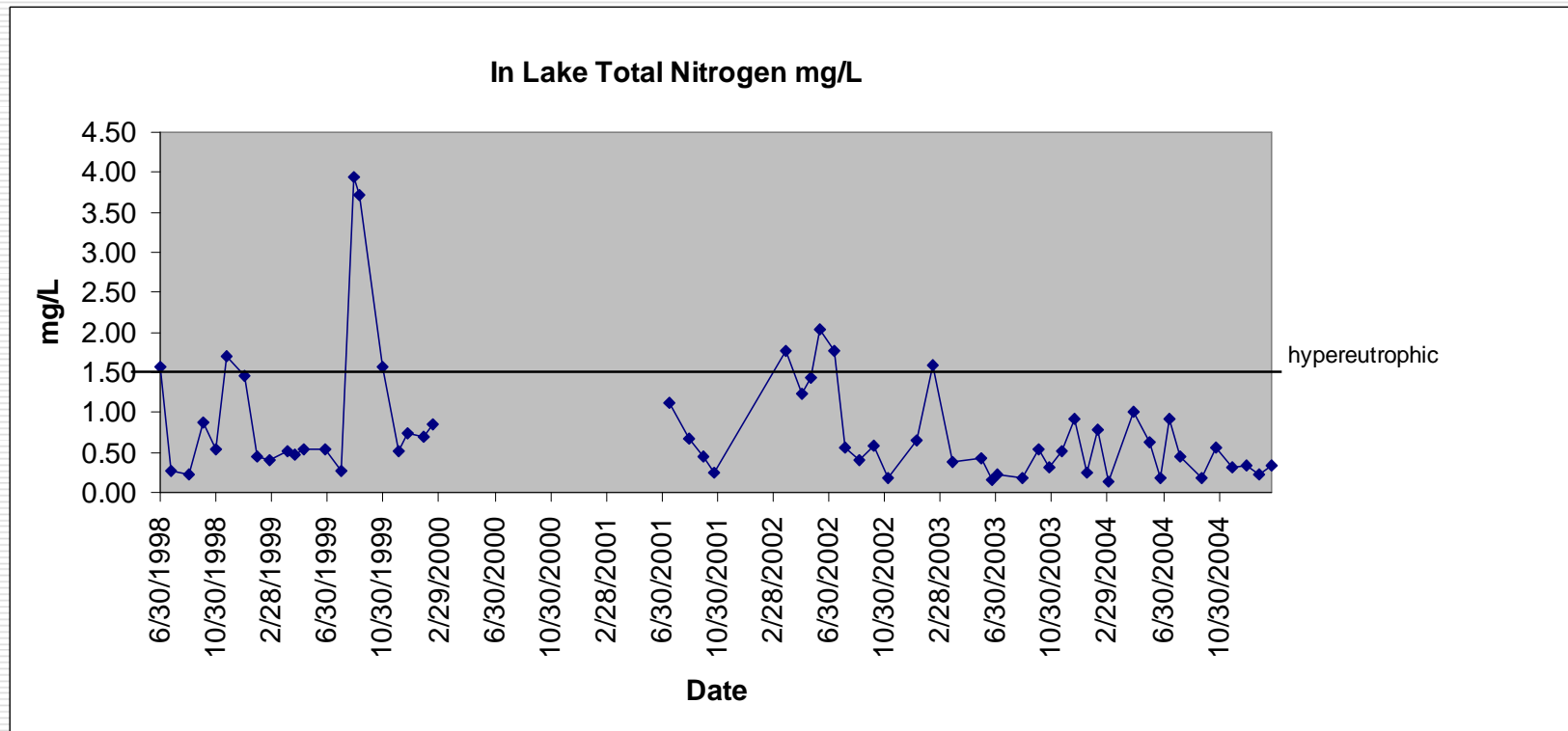


0.5 0 0.5 1 Miles



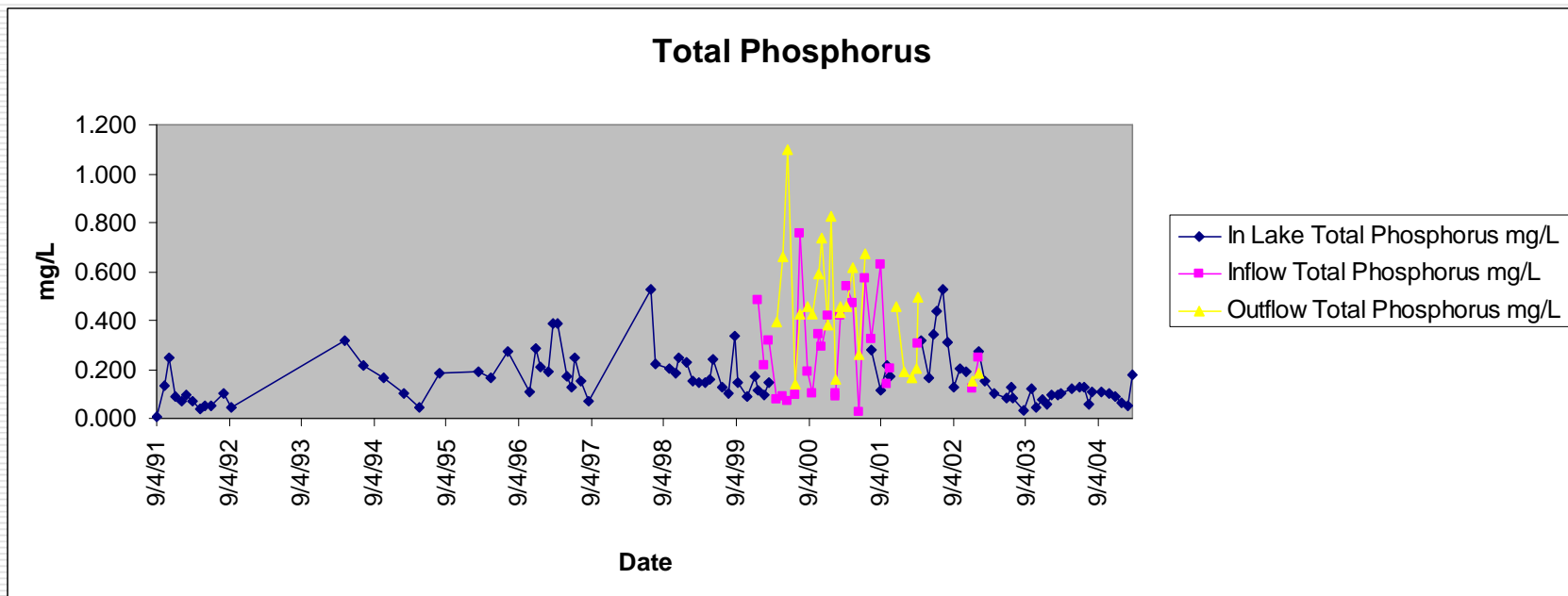
# Lake Munson Response

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# Lake Munson Response

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# Habitat has value to be considered in the cost/benefit analysis

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- ❑ Large regional ponds sacrifice creeks and wetlands
  - ❑ Designing based on relative alternative costs rather than net improvement to habitat due to intangible value of system
  - ❑ Altered hydroperiod of streams and receiving waters affect habitat
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