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### Long Pond Five Site Study

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# Long Pond Five Site Study

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Sienkewicz

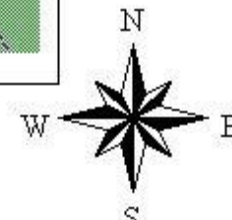


# Land Use for Long Pond



- Sub-basins
- Land Use
  - Crop Land
  - Pasture
  - Forest
  - Non-Forested Wetland
  - Mining
  - Open Land
  - Participation Rec.
  - Spectator Rec.
  - Water-based Rec.
  - Multi-Fam. Res.
  - High Density Res.
  - Medium Dens. Res.
  - Low Dens. Res.
  - Salt Water Wetland
  - Commercial
  - Industrial
  - Urban Open
  - Transportation
  - Waste Disposal
  - Water
  - Woody Perennial
- MA Towns

1 0 1 2 3 4 Miles



Created By:  
Kendra Merrill  
March 30, 2005

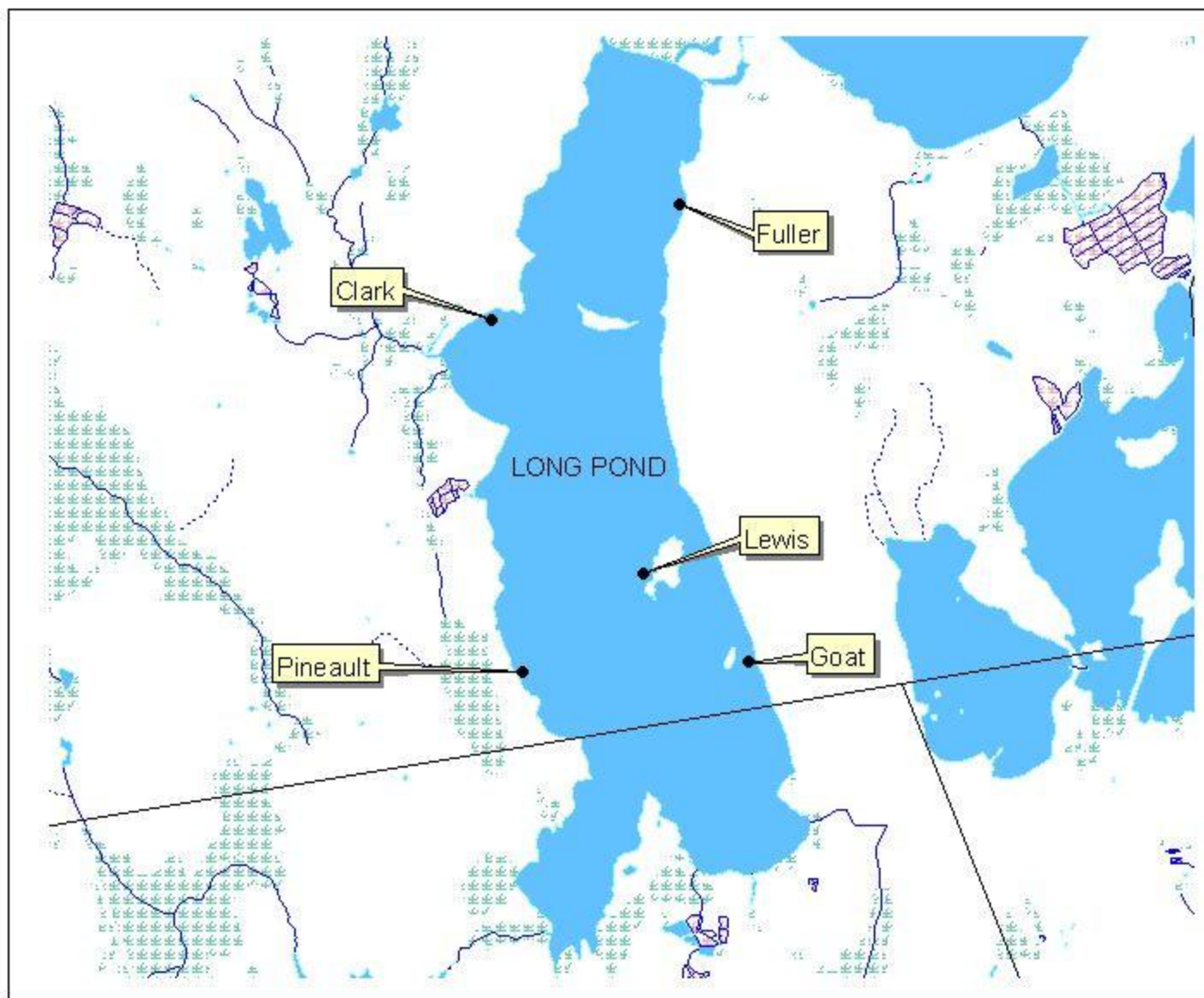




# Questions

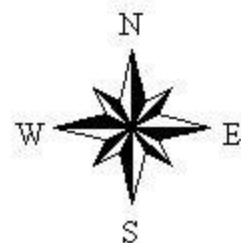
- Are coliforms and reactive phosphorous weather dependent in Long Pond?

# Five Site Study Site Location



## Rivers & Streams

- Stream
- Intermittent Stream
- MA Towns
- Lakes & Ponds
- Wetland / Salt Marsh
- Cranberry Bog
- Surface Water
- Tidal Flat
- Impoundment
- Dam



Created By:  
Matt Magalhaes

# Why?

- 2000-2001 study (western)
- weather has an impact
- location of houses
- water table/leach fields



The background image is a photograph of a calm pond. In the distance, a small, light-colored building with a dark roof is visible, surrounded by trees with autumn-colored foliage. The water reflects the sky and the surrounding landscape. In the foreground, there are large, smooth, light-colored rocks along the edge of the pond. The overall scene is peaceful and scenic.

Sites

# Pineault

Why?

- marina
- houses close to pond
- public use building and parking lot

# Sites

# Clark

## Why?

- recently studied
- demographics have changed
- septic system size
- compliance with state regulations



# Sites

# Fuller

## Why?

- year round and seasonal
- construction - runoff
- septic system failure

Sites

Lewis

Why?

- high density residential area
- small island



Sites

Goat

Why?

- seasonal residencies
- off shore of high density community

# General Issues

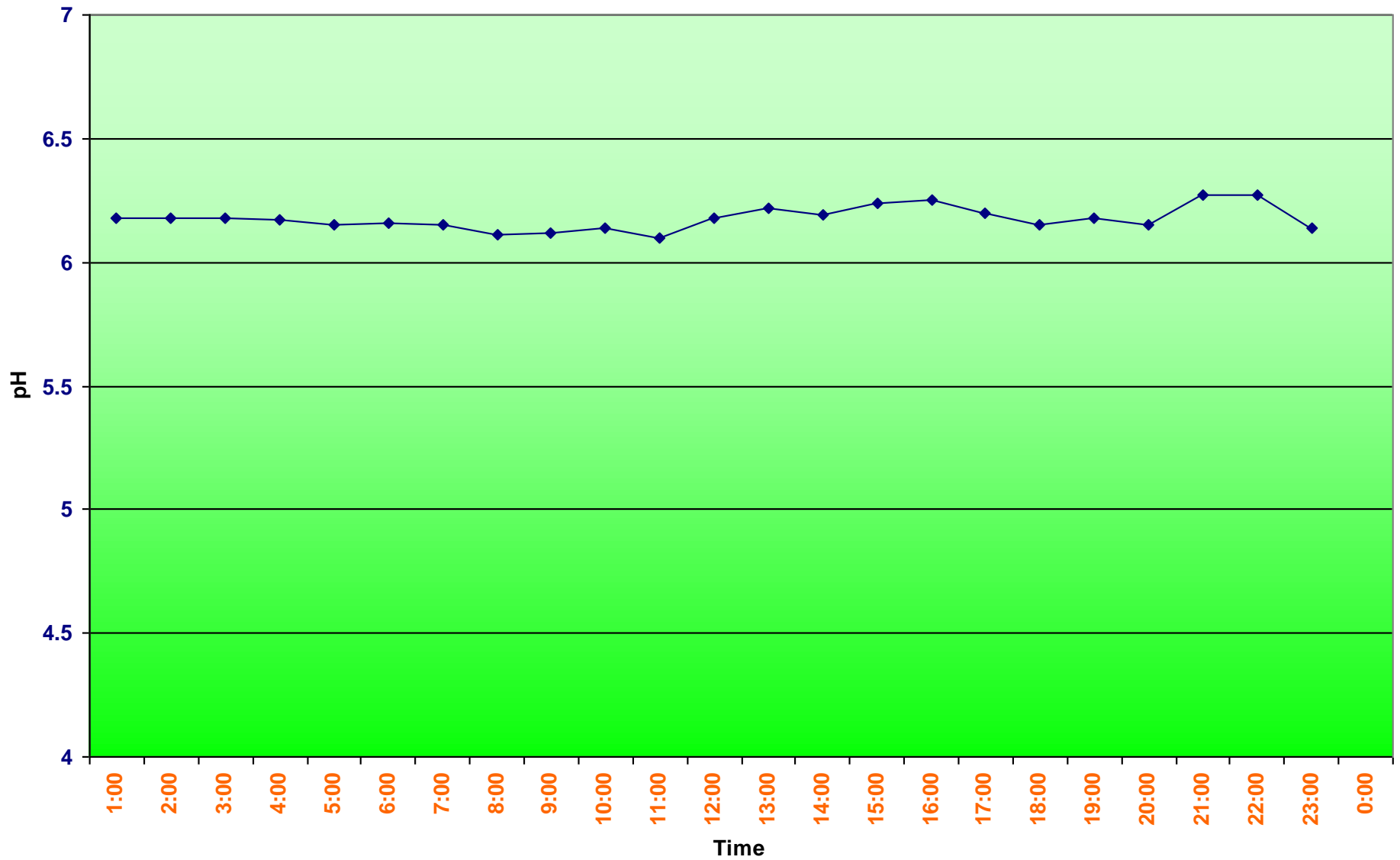
- residencies being converted
- population density in relation to lot size
- water quality and septic failure



# Title V

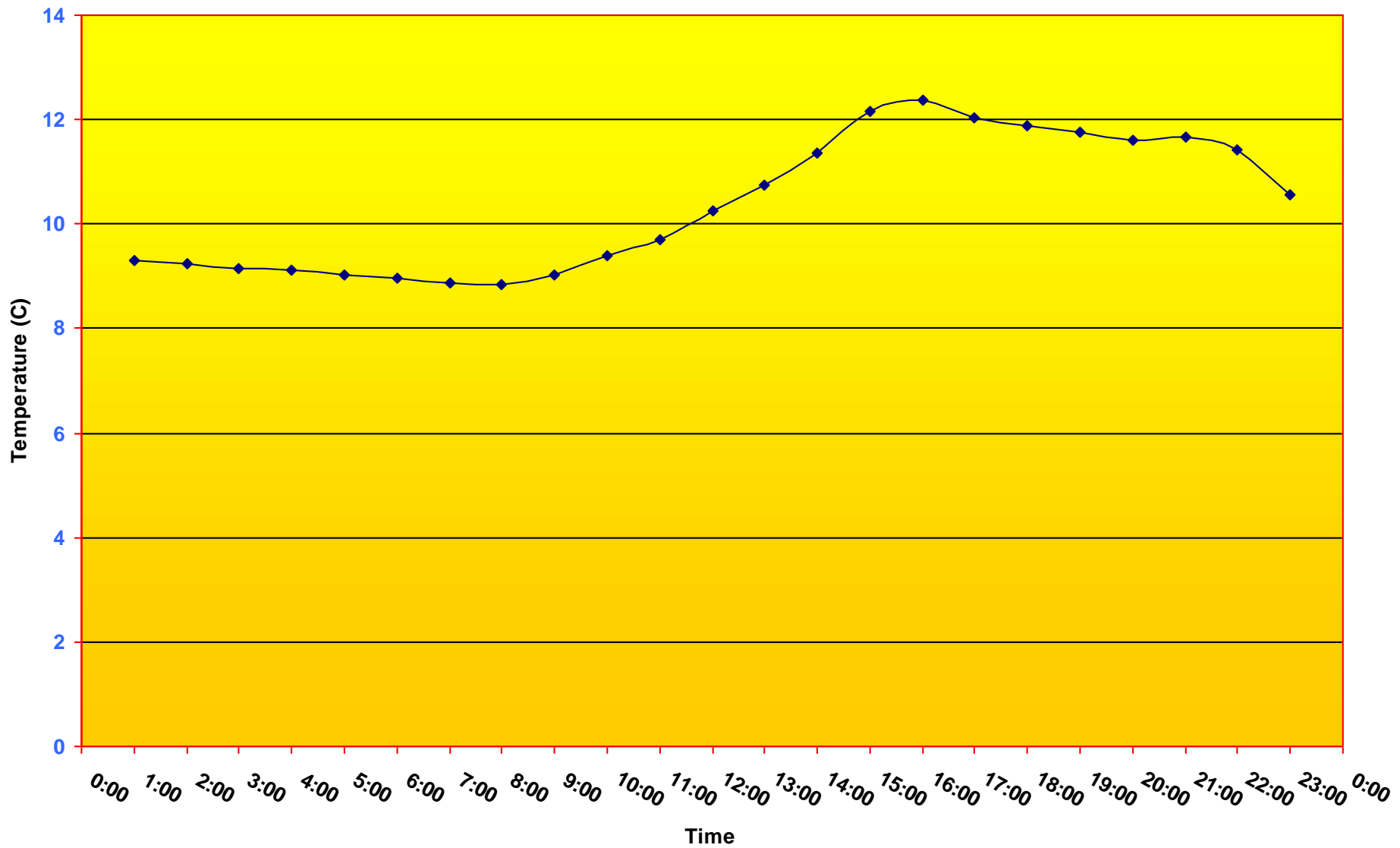
- guidelines for homeowners
- Department of Environmental Protection
- 4 ft of subsoil between leach field and water table
- only required when selling property

## Long Pond, Clark Shores, pH, April 6, 2005

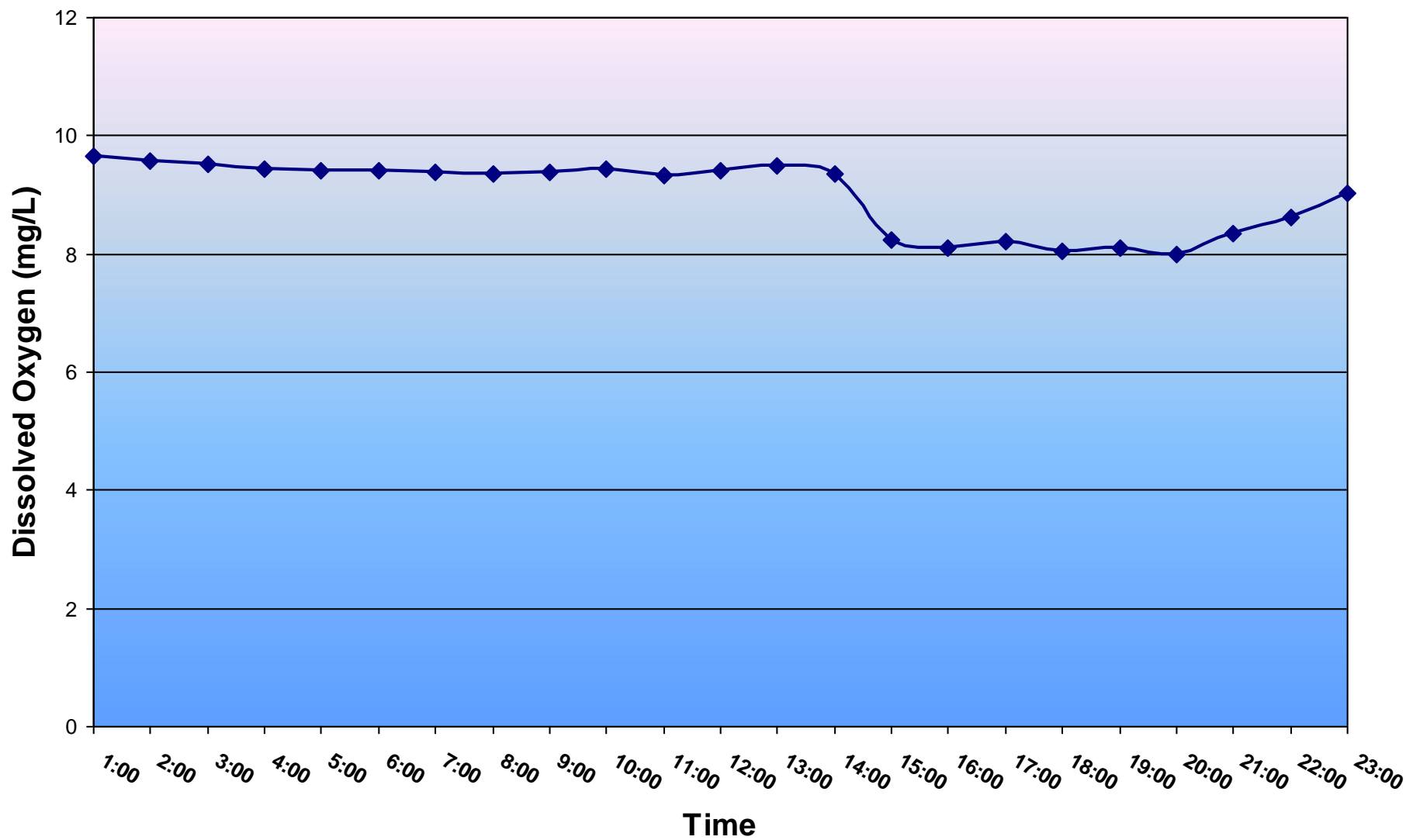




## Long Pond, Clark Shores, Temperature, April 6, 2005

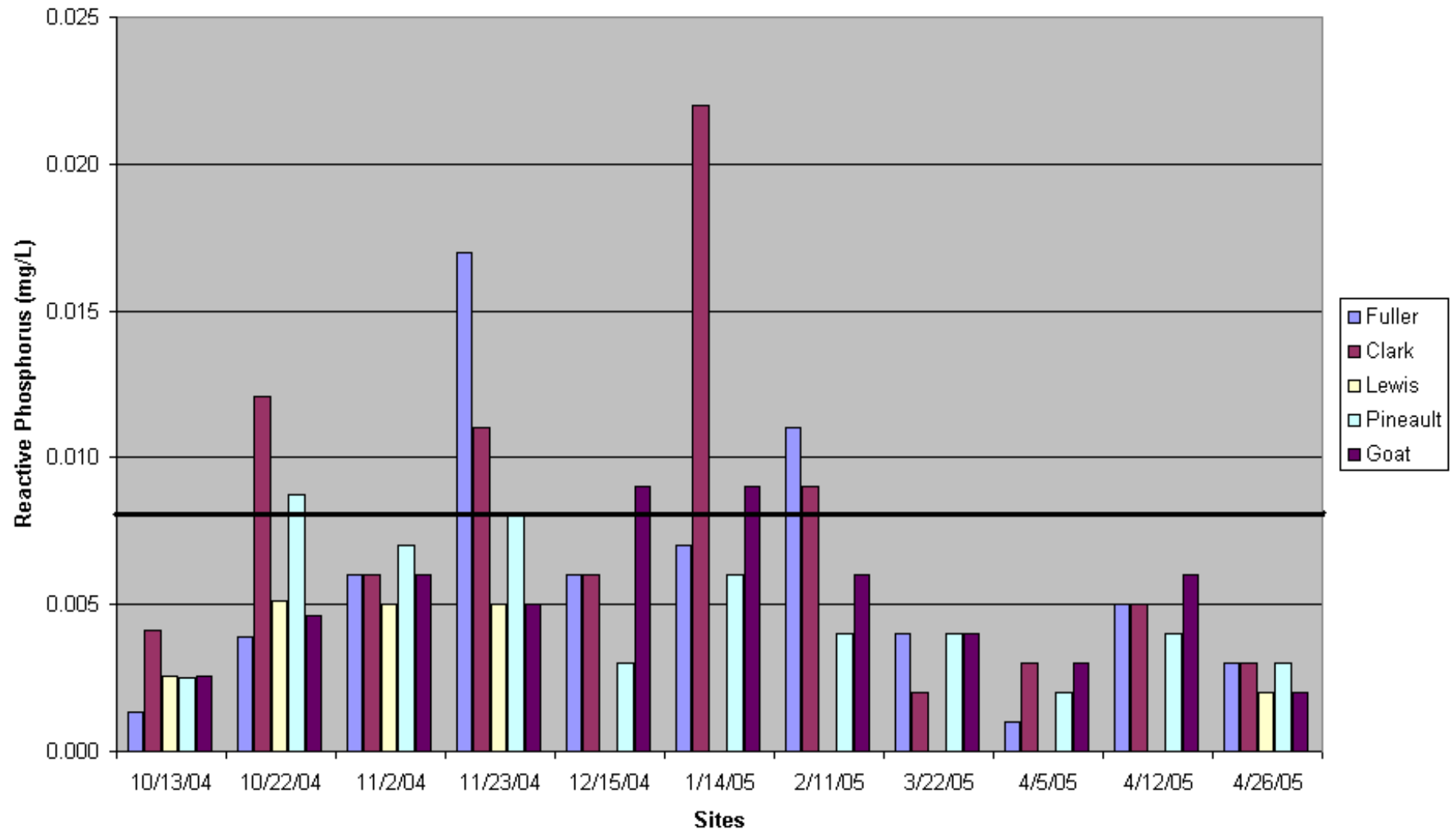


# Long Pond, Clark Shores, Dissolved Oxygen, April 6, 2005

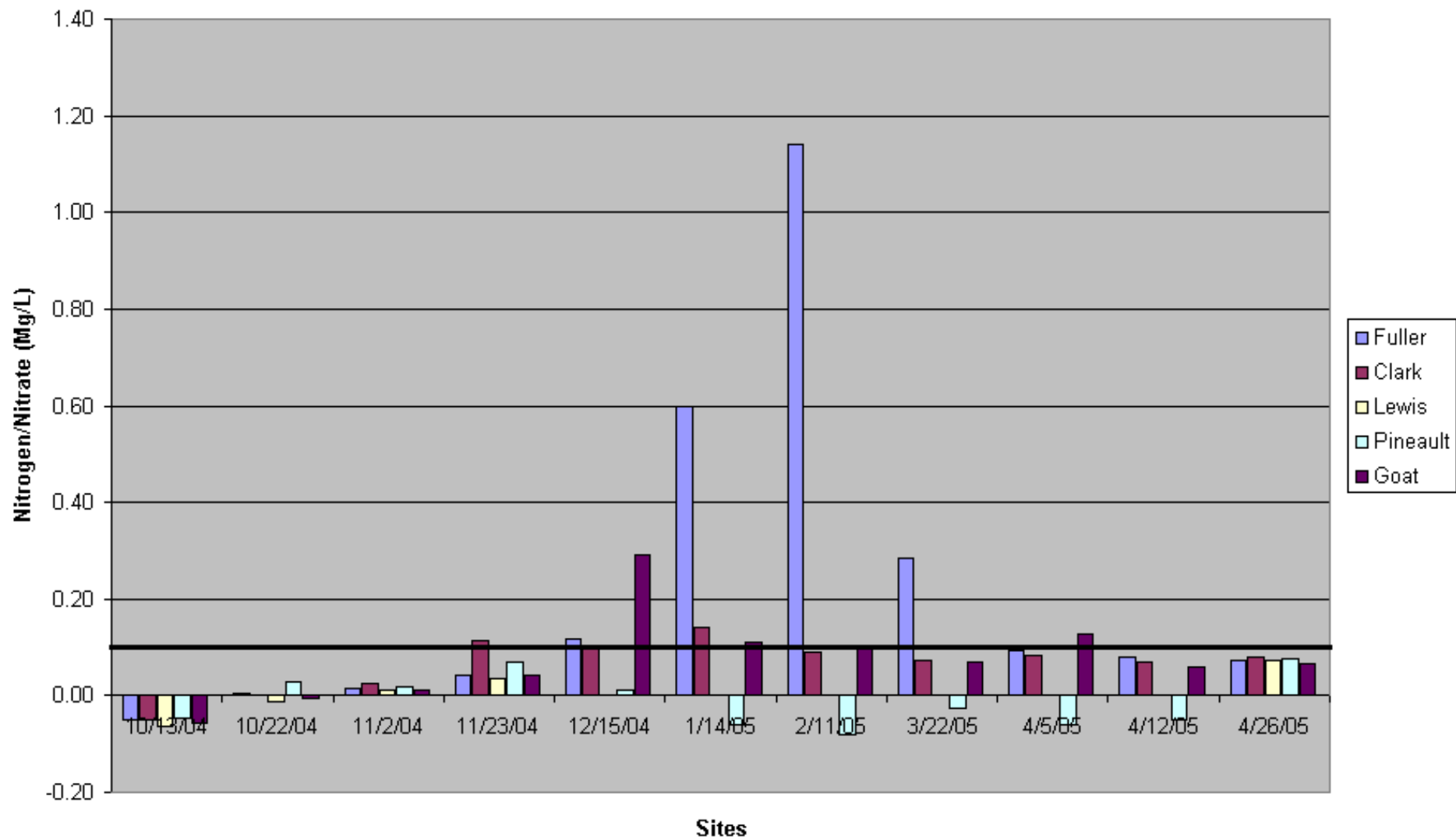




# Long Pond, Reactive Phosphorous, 2004-2005



# Long Pond, NO<sub>3</sub>, 2004-2005



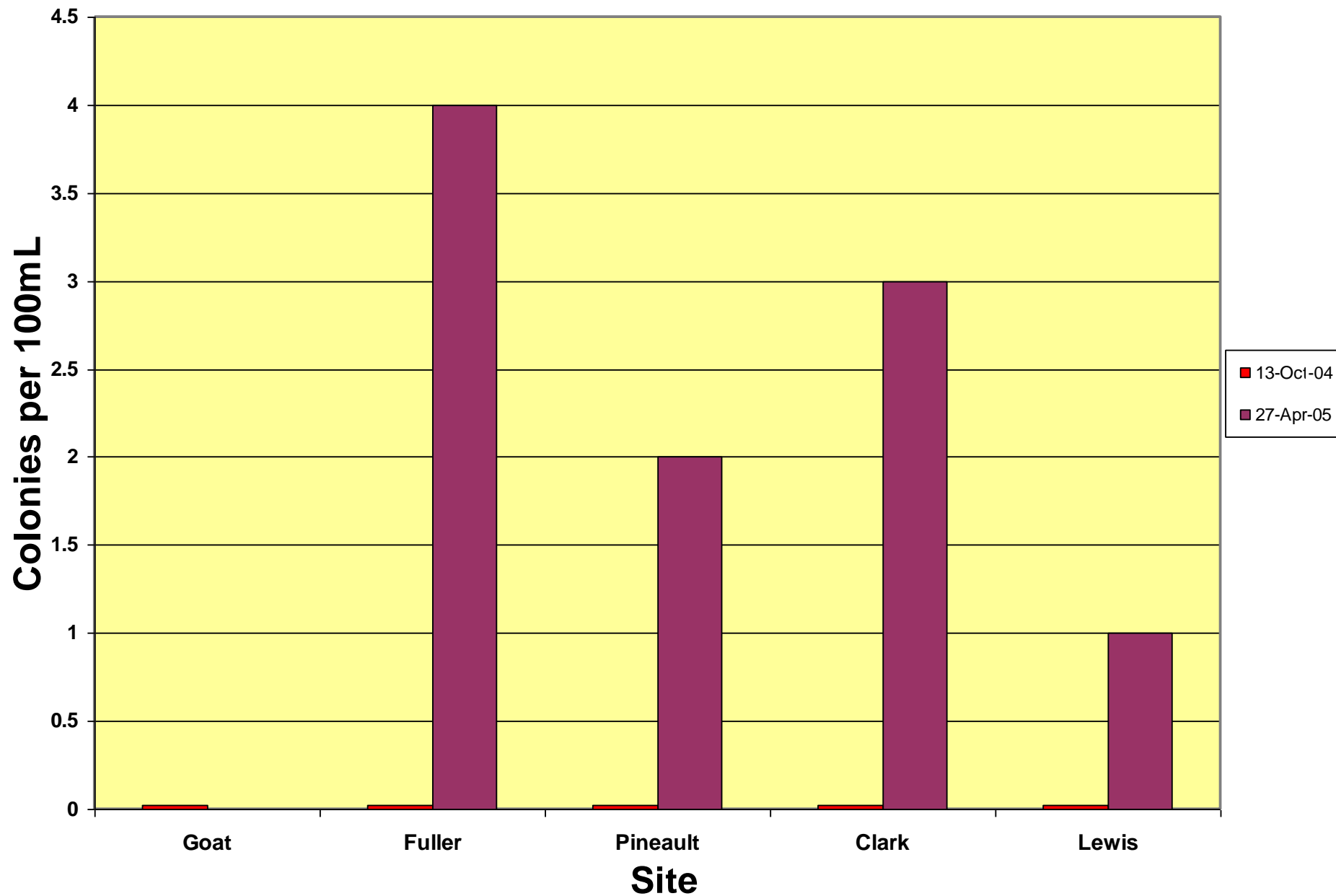
# Fecal Coliforms Info

- specific to feces
- fecal bacteria indicator
- excrement from humans and animals contain fecal coliform bacteria
- indicates contamination level of an aquatic environment
- reveals if there is contamination from home septic tanks





# Weather Dependency of Fecal Coliforms



# Conclusion

- Normal values
- pH
- Data indicative of good water quality
- Fluctuations due to specific circumstances
- Weather dependent

# Acknowledgements

- Nancy Yeatts
- Lakeville Conservation Commission
- Kim McCoy
- Mr. And Mrs. Edgar Pineault, County St., Lakeville
- Clark Shores Association
- Mr. And Mrs. Gilbert Arcouette



# Remedies

1. Update septic
  - health conditions
  - selling property
2. Tight tank and pump
3. Small municipal plant