

# Water Quality in the Great Bay Estuary

Dover City Council  
Workshop

February 16, 2010

# Agenda

- Background
- WWTP
- Fiscal Impacts
- Science

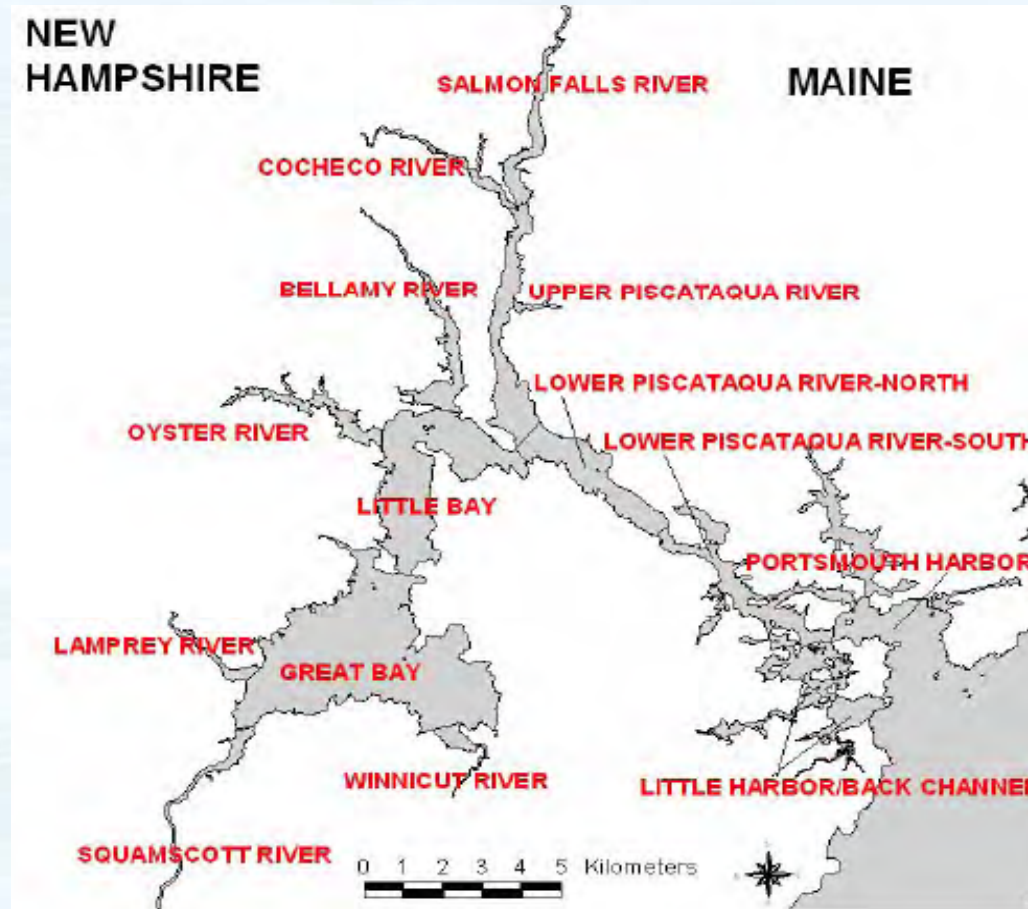
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# Piscataqua River Estuary



# UNH Research

- Water Quality
  - DO, Salinity, Temp, TSS, etc
  - Bacteria
  - Nutrients
  - Toxics
- Habitat
  - Shellfish
  - Eelgrass

# Estuary has Degraded

- Habitat loss
  - Oyster and clam beds decimated
  - Eelgrass loss
- Water Quality degraded
  - Bacteria
  - DO low ?
  - **NUTRIENTS** (nitrogen and phosphorous)

# Nutrients

- Nitrogen limiting nutrient in saltwater
  - Excess algae growth
  - Eelgrass loss
  - Depletion of oxygen
  - Fish kills

# Where Does It Come From

- 5% Atmospheric
- 25% – 30% Point Sources
  - Waste water treatment plants
- 65% - 70% Non-Point Sources
  - Septic systems
  - Fertilizer
  - Street and over land runoff

# What's Going On

- Some researchers and Environmental Advocacy groups have concluded that N is a big problem in the Estuary
- EPA required NHDES to establish Numeric Nutrient Criteria for the GB Estuary
- NHDES has drafted a Numeric Nutrient Criteria

# What's Going On

NHDES has drafted a Waste Load Allocation document

Coalition of Communities have collected additional water quality data

EPA is preparing to issue NPDES permits for all the WWTP's in the estuary