WILLAND POND
Water Quality Issues and Status

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Surface Water Quality

• DES administers Water Quality Standards
• Water Quality Standards include
  - Designated uses: Aquatic life & Recreation
  - Criteria to support the uses (data/assessment)
• NOT JUST CHEMICALS - biology, hydrology, aquatic habitat, microbiology, water level, are all considerations for WQS
• DES maintains a catalog of all NH waters
• DES assesses all waters for which there are data every 2 years
What’s the process for impaired waters

• Willand Pond does not support either aquatic life or recreation: its impaired
  - See Natalie Landry’s memo
  - High water level damages aquatic habitat
  - Cyanobacteria bloom made recreation unsafe

• Willand Pond will be on the “impaired waters list” for 2008
Impaired Waters

• 1000 or so statewide
• Must be restored
  - DES has enforcement powers
  - DES also administers a small grant program
  - Sometimes takes a long time
  - Best restoration prospects are cooperative projects with local initiatives
Willand Pond’s WQ Problem

• Too much water in, too little water out
  = high water in the Pond

• Too many nutrients (mostly P) coming into the pond
  = higher concentrations in the Pond
  = good conditions for cyanobacteria bloom
LANDSCAPE CHANGE AND WATER QUALITY
WATER QUALITY CHANGES from DEVELOPMENT

• Changed Hydrology
  - More runoff volume, less infiltration
  - Increased peak runoff rates

• Increased runoff nutrient concentrations
  - P concentrations can be ~ 5x

• Habitat modifications
Cyanobacteria Results

- 7/12 Pea Soup color (anabaena dominant)
  - Advisory posted/not OK for recreation
- 8/27 cyanobacteria no longer dominant
- 9/26 cyanobacteria sparse
  - OK for recreation
ACTION ITEMS

• Cities
  - Plan and design outlet channel
  - Implement “no additional runoff volume and nutrient loading” for site plan review
  - Monitor Willand Pond
  - Apply for 319 grant
  - Begin planning retrofit projects
  - Educate the public

• DES
  - Technical assistance
  - Enforcement if appropriate