

Winnepesaukee Watershed Advisory Group  
Subwatershed Committee - Gilford/Laconia/Meredith

**Gilford**

**Worksheet 4-1: What do we already know?**

- 1. What are the known or perceived impairments and problems in the watershed?**
  - a. Hazardous Waste sites
  - b. Road Salt and Storage
  - c. Nonpoint Source Pollution from Boating and Marinas
  - d. Residential Development
    - Residential Heating Fuel Storage
    - Household Hazardous Waste
    - Lawn Care
    - Septic Systems
  - e. Transportation Corridors
  - f. Commercial, Industrial and Municipal Land Users
  
- 2. Do we already know the causes and sources of any water quality impairments in watershed?**
  - a. Education and understanding by the public
  - b. Residential Activities – Yard Maintenance, Toxics disposal, Septic Systems
  - c. Storm water treatment
  - d. Questionable storage of petroleum products
  - e. Town brook and streams
  - f. Marina spills
  
- 3. What information is already available and what analyses have been performed to support development of a TMDL, watershed plan or other documents?**
  - a. Gilford Master Plan
  - b. Gilford Drinking Water protection Committee and Report
  - c. Proposed ordinances – Wetland Setbacks
  - d. Aquifer Ordinance enforcement
  - e. Limit development of slopes over 15%
  - f. Impervious surface restriction
  - g. Water quality monitoring

## Gilford

- 4. Have the relative contribution for major type of sources of the pollutant or stressors causing impairment been estimated ?**

NO

- 5. Are there any historical or ongoing management efforts aimed at controlling the problems and stressors?**

- a. Aquifer Ordinance
- b. Master Plan
- c. Gilford Drinking Water Committee
- d. Proposed Wetland Setbacks

- 6. Are there any threats to future conditions, such as accelerated development patterns?**

- a. Marina Activities
- b. Septic System
- c. Shoreline erosion
- d. Shoreline vegetative destruction
- e. Hillside Development
- f. Highway Development

- 7. Have any additional concerns or goals be identified by stakeholders ?**

TBD at next meeting

# Laconia

## Worksheet 4-1: What Do We Already Know?

### 1) What are the known or perceived impairments and problems in the watershed?

- a) Siltation
  - 1. bank destabilization:
    - i. from waterfront development clearing buffer trees and shrubs
    - ii. wave action/meandering (both natural/unnatural)
  - 2. Construction activity
- b) Increased nutrient loads from:
  - i. septic
  - ii. lawns
- c) Toxics
  - 1. petroleum inputs:
    - i. new gas stations
    - ii. old gas stations
    - iii. marina/jet ski rentals refueling
    - iv. boat traffic on the lake
- d) Loss of natural resources:
  - 1. increase of impervious surface (roads, driveways, houses) - Non Point Source Pollution (NPSP) with no treatment
- e) Invasive aquatics

### 2) Do we already know the causes and sources of any water quality impairments in the water shed? If so, what are they?

- a) Construction activity
- b) Residential activity:
  - i. improper yard maintenance
  - ii. use and disposal of toxics (cleaning/chemicals-fertilizers)
  - iii. poorly designed/maintained septic systems septic system/cesspool leachate
- c) Increase in impervious surfaces, decrease in natural filtering vegetation
- d) Use of outdated building and erosion materials and techniques
- e) Lack of understanding/public education
- f) Lack of maintenance on stormwater structures (municipal and private)
- g) Grandfathered gas stations

# Laconia

- h) Recreation vehicle inputs
  - i. petroleum spills and refueling in/near water
  - ii. sewage spills and improver disposal
  - iii. invasive aquatics carrier

### **3) What information is already available, and what analyses have been performed to support development of a TMDL, watershed plan, or other documents?**

- a) "Planning Study for Weirs, Paugus Bay, Opechee Bay and Winnepesaukee River Watersheds" February 2000
- b) "Paugus Bay Watershed Maps of Potential Non-Point Sources of Pollution" 1999
- c) "Model Rule For the Protection of Water Supply Watersheds" April 2000 (a NH DES Publication)
- d) "Lake Winnepesaukee Watershed Project Model Ordinance Manual, A Manual of Model Ordinances for Controlling Nonpoint Source Pollution" July 1994 (a Lakes Region Planning Commission Publication)
- e) On going water quality testing
- f) UNH Study on MTBE
- g) Baseline water quality tests by Watershed Advisory Planning Connruttee (at Paugus Bay)
- h) DPW stormwater discharge report

### **4) Have the relative contributions from major types of sources of the pollutant or stressor causing impairment been estimated?**

- a) Profession estimates of inputs and impairments from 2000 Paugus Bay report

### **5) Are there any historical or ongoing management efforts aimed at controlling the problem or stressors?**

- a) Prime wetland designation is in the works
- b) Zoning rewrite coming soon
- c) Revised Master Plan is almost complete
- d) Laconia Water Works Testing

### **6) Are there any threats to future conditions, such as accelerated development patterns?**

- a) Intense development patterns show that development is along and/or in very close proximity to Lake Winnepesaukee (nearly all recent proposals are in the watershed)
- b) additional nutrient loading will cause eutrophication. May also affect recreation
- c) Non treated impervious surface run off carrying silt, salty and petroleum products
- d) Increase in recreation vehicles (numbers and intensity (speed and size))

# Laconia

## 7) Have any additional concerns or goals be identified by the stakeholders?

- a. Goal - education of stakeholders
  - i. Science - example: what are the effects of fertilizer runoff in the lake?
  - ii. Policy - example: what are the pros and cons of a boat speed limit?
- b. Goal - provide a resource regarding other options to avoid impacts
  - i. Example: how do I design a better septic system?
  - ii. Example: How do I maintain my current septic system?
  - iii. Example: What plants can I plant that may not need additional fertilizers?
  - iv. Example: How can I require my city to treat its road runoff before out-letting into my lake's waters?
  - v. Example: Where can I empty my boat holding tank?
  - vi. Example: What does an invasive aquatic species look like and what do I do if I see one?

**WORKSHEET 4-1: What Do We Already Know? (MEREDITH)**

1. What are the known or perceived impairments and problems in the watershed?
  - o Chlorides/ conductivity- Hawkins Brook
  - o Milfoil/ milfoil treatments
  - o Sedimentation- Corliss Brook
  - o Stormwater runoff generally, village area, highways
  - o Septic systems- Pinnacle Park Road
  
2. Do we already know the causes and sources of any water quality impairments in the watershed?
  - o Not specifically for most of the non-point sources
  - o Wickes Lumber appears to be the source of sedimentation at Corliss Brook
  - o MCC looking to further the study of Hawkins Brook to identify source(s) of high conductivity readings
  
3. What information is available, and what analyses have been performed to support development of TMDL, watershed plan or other document?
  - o Meredith Community Plan, 2002
  - o Management Plan for the Waukegan Watershed, 2005
  - o Town of Meredith Natural Resources Inventory, 2005
  - o Meredith Bay Water Quality Monitoring: 2004, NH Lakes Lay Monitoring Program
  - o NH Volunteer River Assessment Program- Lake Winnepesaukee Tributaries Water Quality Report, 2004
  - o Water Quality Trend Analysis for Lake Winnepesaukee, LRPC, 1995
  - o Town beach, community beach e-coli sampling data
  - o MCC follow up study on Hawkins Brook-later 2006-07
  - o Selectmen study of septic systems along Pinnacle Park Road ???
  - o Other watershed studies, i.e. Squam Lake, Webster Lake, PSU Center for the Environment, etc.
  
4. Have the relative contributions from major types of sources of pollutant or stressor causing impairment been estimated?

No.
  
5. Are there any historical or ongoing management efforts aimed at controlling the problem pollutants or stressors?
  - o Installation of a structural BMP on/in Pleasant Street to reduce sediments
  - o Installation of a trench drain BMP at the Rt. 3 boat ramp
  - o Waukegan study, NHDES Pilot Grant re: tributary sampling
  - o Milfoil Treatment- 2-4D

6. Are there any threats to future conditions, such as accelerated development patterns?
  - o Aging and failing septic systems
  - o Boating! docks
  - o Hillside development
  - o Shoreline redevelopment
  - o Vegetative cutting in sensitive areas, shoreline, tributaries
  - o Highway improvements, widening
  - o Development along brooks and streams (tributaries)