



Bare Hill Pond Watershed:

An In-Depth Survey of the Causes of
Pollution
& Recommendations for Action

Based on 2006 survey by Hannah Nestler
and Brittany Flaherty



Bare Hill Pond Watershed Action Plan
RECCOMENDATIONS FOR ACTION
Based on 2006 survey by Hannah Nestler and Brittany Flaherty

A. Reporting

Section 1 - Soccer Fields, Pond Road, Harvard Town Beach – Waste from fertilizers on soccer fields are seeping into the water. Popular use of town beach contributing pollution via parking lots etc. Sand runoff from Pond Road flows directly into pond.

Section 2 – Turner Lane, Camp Green Erie, Dam – Residential area may contribute excess pollution. Construction in this area is also a subject of concern.

Section 3 – Scorgie Conservation Land & Tufts Conservation Land, Clapp's Brook – Remains of abandoned house that is now demolished and is now a site of pollution and litter.

Section 4 – Willard Lane – Extremely dense housing creating erosion, litter and fertilization pollution. Runoff from roads flows straight into the pond.

Section 5 – Peninsula Road, Great South Bay, Bower's Brook Inlet – Agricultural land adjacent to tributary is most probably directly polluting the pond water. Tahanto Trail, a local road is sanded during the winter, and thus the runoff flows straight to the pond. Excess algae growth was also observed

Section 6 – Thurston's Beach, Warren Avenue – In the Thurston's Beach area, many houses with lush, fertilized lawns very close to shoreline. Also, at Thurston's litter and suspect foam was observed. Houses directly off Warren are not a threat, however runoff that flows down the steep hill slopes may cause problems.

B. Short Term

Goals: To increase homeowner awareness of potential pollution that they may be creating due to their actions.

Actions:

1. Landowners should be educated on the danger of phosphorus in lawn fertilizers, and how this substance contributes to excess weed growth and pollution in the pond. Also, concerning roads where runoff seeps directly into the pond, homeowners should understand that motor fuels might also increase phosphorus levels.
2. Inform town officials over the concern that any sand or other pollution from local roads flows directly into the pond. This is especially noted at the parking lot of the Town Beach and Willard Lane.
3. Also, town officials should be alerted of the potential biohazard site off the Scorgie/Tufts trail. There is an abandoned house that has been demolished; yet not cleaned up. Old chemicals, glass and other dangerous litter were noted.

4. Erosion, in general, is an issue that should be addressed. Because the pond is partially surrounded by steep slopes, development and any other cause of soil disturbance could cause erosion. Awareness of this should be increased.

C. Long Term

Goals: To prevent any further erosion, pollution or damage to the pond, by creating a plan that will decrease or halt any harmful activity. Also, it is necessary to evaluate the current preventative measures being taken to protect the pond, and then improve and update where needed.

Actions:

Section 1 – The area of greatest concern in this section is the Town Beach, where pollution due to human-environment interaction may be increasing phosphorus levels and litter. Town officials should work to remove the lower parking lot, because motor fuel runoff is harmful to wildlife and the pond's general health. If this proves impossible, some type of buffer zone between the parking lot and the water itself should be created. Furthermore, more trash receptacles should be available to decrease the amount of trash in and around the beach area. Animal restrictions should be better enforced in order to prevent animal waste pollution. Some form of a drainage infrastructure should be created in this area in order to reroute runoff from Pond Road and the parking lots. The use of fertilizer on Pond Road Field should also be monitored and prevented from sliding into the marsh and pond. A vegetative buffer zone would be useful in completing this task.

Section 2 – Turner Lane is a residential area that could experience expansion. In the future, homeowners and town officials should monitor where the development is taking place (i.e. how close to the water it is located). During construction, necessary precautions should be taken in order to prevent pollution and/or erosion. Vegetative buffer zones should also be created in front of existing and future homes in order to prevent phosphorus pollution.

Section 3 – A clean up should be planned for the abandoned house located off of the Scorgie/Tufts trail.

Section 4 – Precautions similar to those to be taken for Turner Lane are also necessary for Willard Lane. Vegetative buffers and construction regulations should be implemented as explained above in Section 2. Also observed was a large amount of rusting debris (i.e. pipes and other assorted metal items of litter) that should be cleared away. Town officials should encourage more environmentally friendly behavior on the part of Willard Lane residents.

Section 5 – Off of Tahanto Trail, a small farm is in operation directly beside a stream that flows into Bare Hill Pond. The animal waste and fertilizer that could potentially travel into the pond has the potential to raise phosphorus levels in the pond. To address this issue, the town should plant a vegetative buffer and encourage the homeowner to minimize fertilizer use and be conscious of possible manure pollution.

Section 6 – Once again, homeowners must be wary of their lawn fertilizer usage. Many of the houses along this road are located on steep slopes that lead into the pond. A small amount of trash was found at Thurston's Beach, probably due to the lack of trash receptacles, which should be installed immediately.

D. General Recommendations (in ranking order of priority)

1. Landowners and visitors to areas in and surrounding Bare Hill Pond should be informed of various factors that contribute to pollution in the pond:
 - a. Lawn fertilizers
 - b. Motor oils
 - c. Pet waste/manure
 - d. Detergents
 - e. Any form of litter or abandoned debris
 - f. Toxic chemicals
2. Seeing as phosphorus is the biggest source of pollution in Bare Hill Pond, preventing and minimizing the pollution factors stated above should be the main focus of any preventive measures.
3. Buffer zones should be repaired, replanted, and created.

SURVEYING A LAKE WATERSHED

Data Collection Forms



GUIDANCE FOR COMMUNITY VOLUNTEERS IN MASSACHUSETTS

Data sheets based on materials from

Massachusetts Department of Environmental Protection
Massachusetts Riverways Programs, Adopt-A-Stream Program,
Department of Fisheries, Wildlife, and Environmental Law Enforcement
Massachusetts Water Watch Partnership
Maine Department of Environmental Protection

2003

PRE-SURVEY

LAKE and POND WATERSHED FORM

Lake and Watershed Name: Bare Hill Pond
*Survey Area Name & Number: _____
Surveyors Names: Hannah Nestler and Brittany Flaherty

A. Description of the Area from a Topographic Map (Maps will be available at the training session.)

1. Consider the developed (white) and undeveloped areas (green) on your map? What % of each do you see?
16 % developed 85 % undeveloped

2. Are there steep slopes in the sub-watershed, indicating a potential for increased runoff or erosion?
(How close together are the contour lines?)
✓ Yes No

3. How many tributaries enter or cross your area? yes → Bowers Brook, from 2 → 5

4. What kinds of development are shown on the map?

(Include major development in the watershed, as well as the shoreline, that could have an impact on the lake.)

Bromfield, Camp Green Erie, Bellevue Cemetery & houses along shore 4 & 2

B. General Categories of Land Uses in your Area – (From general knowledge)

0 % Construction

0 % Agricultural land

90 % Residential

0 % Commercial, Industrial and Urban Areas

5 % Roads

0 % Logging/forestry

5 % Other (please specify, e.g., rural, open, or recreational) educational

C. If Residential (Estimate % of area; information will be available at the training.)

0 Multifamily

 year round 80 %

2 <1/4 acre lots

 seasonal 20 %

18 1/2-1 acre lots

80 >1 acre

D. Is the area sewered? or unsewered ?

Do you know of any major discharges to the waterbody or its tributaries? (e.g., permitted, stormwater)

E. Watershed History and Characteristics What do people know about this area?

General description: _____

Historical information: Originally Pond was open field

Problems to look for during site visit: (e.g., If there is a new development near a stream, you will want to look upstream and downstream of the site for evidence of erosion and sedimentation and excessive vegetation in the stream. If you see erosion downstream of the development you may be able to track the problem back to its source.)

1. Construction near Old Bromfield - any chance of drainage? Erosion?

2. Cleanliness of Town Beach & Thurston's Beach

3. _____

CONTINUE YOUR SURVEY:

- If your survey section is a **near-shore area**, continue on to the next page and fill out the near shore area field sheets (the yellow page).
- If your survey section is an **upland watershed area**, skip the next page and use the upland watershed area field sheets (the orange page).

Lake Watershed Survey

Area Summary Sheet 2: Priorities for Action

Surveyor's Names: _____

Section Name & Number: _____

Look back at your data sheets and include your observations. The information from this sheet will be used to develop the Watershed Survey Report and Action Plan.

| PROBLEMS: | ASSETS: | PRIORITIES FOR ACTION: |
|--|--|--|
| <p>Problems found in your area, such as pipes or culverts discharging in dry weather, erosion, runoff, trash, dense algae, water quality problems (odor, color, oil, foam, sewage), and degraded wetlands (phragmites, loosestrife) (Describe and give location).</p> <p>1.</p> <p>.</p> <p>2.</p> | <p>Assets found in your area, such as good habitat, wildlife species, businesses, or landowners using the river (in a friendly way), recreational access (canoe, trails, parks), potential recreational access, and potential park/conservation land, scenic views (Describe and give location).</p> <p>1.</p> <p>2.</p> | <p>List items from problems/assets columns that you feel need more work.</p> <p>1.</p> <p>2.</p> |

FIELD SHEETS – NEAR SHORE

LAKE and POND WATERSHED SURVEY FORM – NEAR SHORE AREA

C. Site drainage, *continued*

2. Site runoff is from...

- Construction: ☐ disturbed areas <1 acre ☐ disturbed areas >1 acre ☐ exposed soil
☐ altered drainage pathways ☐ absence/failure of erosion controls
- Residential: ☐ driveways ☐ lawns (☐ <1 acre ☐ >1 acre)
☐ lush lawns ☐ exposed soil ☐ evidence of erosion
☐ pet waste ☐ pipe drains
- Roads: ☐ pavement to catch basin ☐ bridge ☐ shoulders/country drainage
☐ drainage to waterbody ☐ evidence of erosion ☐ sand build up in road
☐ sediment in ditches/culverts/drains
- Agricultural: ☐ field ☐ animal grazing area ☐ manure storage area
☐ exposed soil ☐ animals in waterbody ☐ storage areas uncovered
- Commercial, ☐ parking lot ☐ vehicle maintenance yard ☐ industrial area
Industrial ☐ waste storage area ☐ drain pipes to waterbody ☐ sediment in ditches/culverts
& Urban: ☐ paved areas ☐ trash/waste storage near waterbodies
- Logging/ ☐ logging yard ☐ roads/trails ☐ stream crossings
Forestry: ☐ forested areas ☐ exposed soil ☐ poor roads
☐ brush/slash near waterbodies
- Other: ☐ (specify) _____

D. Land disturbances that affect water quality

1. Do you see evidence of excess nutrients? (Check all that apply)

- ☐ Soil erosion: ☐ silt ☐ sand ☐ soil ☐ stockpiled soil
☐ Evidence of runoff: ☐ rills ☐ gullies ☐ channel ☐ sedimentation
☐ Evidence of nutrients: ☐ pet waste/manure ☐ fertilizer use ☐ green lawns ☐ other(specify) _____

2. Do you see any of the following? If there are tributaries, catch basins drain pipes, and/or culverts on the site, explain your observation.

- ☐ Tributaries bringing in siltation: _____
☐ Pipes/culverts (describe conditions): _____
 - Describe what is going into the pipe (Add color and odor): _____
 - Describe any discharge from the pipe (Add color and odor): _____☐ Full catch basins: full with (circle): trash sand pet waste oil other _____
**Note problem catch basins on your map.*

E. Water quality concerns (Check all that apply, describe the location and cause, and indicate site on map)

- ☐ Oily sheen or smell: _____
☐ Sewage: (odor, milky color, toilet paper) _____
☐ Foam or scum: (does a stick break it up? If it does, foam is probably natural.) _____
☐ Fishy odor or fish kill: _____
☐ Algae or aquatic weeds (excessive growth): _____
☐ Floating trash: _____
☐ Obvious sedimentation: (e.g., sand) _____

F. Habitat and wildlife (Evidence of...)

- ☐ Fish: (fish, fish nests, anglers) Identify species if known _____
☐ Other aquatic life: ☐ insects, ☐ turtles, ☐ frogs, ☐ snails, ☐ mussels, ☐ clams, other: _____
Identify species if known: _____
☐ Waterfowl: ☐ herons, ☐ ducks, ☐ geese, ☐ loons, other _____
☐ Areas of good habitat with wildlife: Describe _____

End of Near Shore Area Field Sheets: Skip the next page, go to Pipe, Narrative, Priority & Map Pages

FIELD SHEETS – NEAR-SHORE

LAKE and POND WATERSHED SURVEY FORM – NEAR SHORE AREA

Lake and Watershed: _____ Survey Date: _____
Surveyors Names: _____ Area Name & Number: _____
Weather Today: _____ Weather (past 2-5 days) _____
Landowners Contacted During Survey: ____yes ____no

A. General Categories of Land Uses Around and Upstream of Your Survey Section *(Identify the land use category on the site. May be more than one land use.)*

____ % Construction ____ % Agricultural land
____ % Residential ____ % Commercial, Industrial and Urban Areas
____ % Roads ____ % Logging/forestry
____ % Other *(please specify, e.g., rural, open, or recreational)* _____

A.1. Specific Land Use on the Your Survey Section *(Estimate % of site in each use. May be more than one land use.)*

| | | |
|-----------------|----------------------|-----------------------------------|
| ____ commercial | ____ dirt road | ____ protected open space |
| ____ industrial | ____ local road | ____ undeveloped land |
| ____ junk yard | ____ parking lot | ____ meadow |
| ____ railroad | ____ golf course | ____ forest |
| ____ bridge | ____ grazing/pasture | ____ wetland |
| ____ highway | ____ park or beach | ____ other <i>(specify)</i> _____ |

A.2. If Residential *(Estimate % of site that is...)*

____ Multifamily ____ year round
____ <1/4 acre lots ____ seasonal
____ 1/2-1 acre lots
____ >1 acre (400 x 100 feet)

B. Site characteristics

- Dominant shoreline material is...
____ gravel ____ sand ____ silt ____ clay ____ dark organic muck & peat ____ other
- Slope of site is... ____ flat ____ moderate ____ steep
- The shoreline or riverbank is... *(Check a or b, if there is a stream, ditch, shoreline, or steep bank on site.)*
 - ____ vegetated with...
 ____ exposed roots
 ____ shrubs and native grasses (< 20 feet)
 ____ trees taller than 20 feet
 - ____ unstable and...
 ____ undercut
 ____ eroded
- Vegetated Cover:
 - How much of the near-shore water is shaded by trees and shrubs? *(estimate shading from 10 AM - 2 PM)*
 ____ 0-25% ____ 25-50% ____ 50-75% ____ 75-100%
 - The % of the bank area that is covered by each of these vegetation types is...
 ____ % grasses ____ % shrubs ____ % trees (>20 feet) ____ % little or none
 - How far back from the shoreline does the band of trees, shrubs, or grasses extend?
 ____ 0-5 feet ____ 5-50 feet ____ 50-100 feet ____ greater than 100 feet

C. Site drainage

- Site runoff is directly to...
____ lake ____ stream ____ ditch ____ catch basin ____ vegetated buffer ____ wetland other *(describe)* _____

Over

FIELD SHEETS - UPLAND

LAKE & POND WATERSHED SURVEY FORM - UPLAND WATERSHED AREA

Lake/Watershed: _____ Survey Date: _____
Surveyors' Names: _____ Area Name & Number: _____
Weather Today: _____ Weather - past 2-5 days: _____

A. General Categories of Land Uses in Your Survey Section

(Identify the land use category on the site.
May be more than one land use.)

____ % Construction ____ % Agricultural land
____ % Residential ____ % Commercial, Industrial & Urban Areas
____ % Roads ____ % Logging/forestry
____ % Other (please specify, e.g., rural, open, or recreational) _____

A.1. Specific Land Use in Your Survey Section (Estimate % of site in each use. May be more than one land use.)

| | | |
|-----------------|----------------------|----------------------------|
| ____ commercial | ____ dirt road | ____ protected open space |
| ____ industrial | ____ local road | ____ undeveloped land |
| ____ junk yard | ____ parking lot | ____ meadow |
| ____ railroad | ____ golf course | ____ forest |
| ____ bridge | ____ grazing/pasture | ____ wetland |
| ____ highway | ____ park or beach | ____ other (specify) _____ |

A.2. If Residential (Estimate % of site that is...)

____ Multifamily ____ year round
____ <1/4 acre lots ____ seasonal
____ 1/2-1 acre lots
____ >1 acre (400 x 100 feet)

C. Site drainage

1. Site runoff is directly to...

____ lake ____ stream ____ ditch ____ catch basin ____ vegetated buffer ____ wetland other (describe) _____

2. Site runoff from...

Construction Sites

Is there a direct pathway for runoff to reach the lake, streams or wetlands? _____

Do you see:

____ Exposed soil and erosion.
____ Alteration to drainage pathways or alteration near waterbodies or wetlands.
____ Absence or ____ Failure of erosion controls, such as silt fences and hay bales.
____ Evidence of erosion, such as gullies or rills on the surface of the soil.
____ Cloudy or discolored water in ditches, streams, wetlands, or lake.
____ Sediment build-up in ditches, streams, wetlands, or lake.
____ Construction on overly steep slopes.

***Describe most important issues found in the field in your narrative & on priority sheet and note on your maps.**

Roads:

Is there a direct pathway for runoff to reach the lake, streams or wetlands? _____

Do you see:

____ Absence of vegetation or buffer between road and waterbody.
____ Roads located on steep slopes.
____ Street drains, storm sewers, and pipes that discharge directly to streams, lake, or wetland. See Pipe Survey
____ Full or clogged catch basins? Full with (circle): trash sand pet waste oil other _____
*Note problem catch basins on your map.
____ Damaged or eroded pipe or culvert outlets.
____ Sediment buildup below pipe or along roadside.
____ Washouts and crumbling pavement on roads and sidewalks.

Over

LAKE & POND WATERSHED SURVEY FORM – UPLAND WATERSHED AREA

C. Site drainage

2. Site runoff from...

Roads: continued

- ☐ Ditch, culvert, or pipe washouts, undercutting, or gullies and rills along sides and bottom of road or ditch.
- ☐ Exposed soil in ditch channel.
- ☐ Long ditches without discharge points into vegetated areas.
- ☐ Erosion around inlets and outlets of culverts.
- ☐ Washed out or damaged culvert

**Describe most important issues found in the field in your narrative & on priority sheet and note on your maps.*

Residential areas:

Is there a direct pathway for runoff to reach the lake, streams or wetlands? _____

Do you see:

- ☐ Areas of bare soil.
- ☐ Turbid (cloudy) water.
- ☐ Evidence of erosion on driveways or other areas, such as gullies or rills on the surface of the soil, or sediment accumulation in ditches and streams.
- ☐ Bank instability—bare soil, slumping, or undercut banks.
- ☐ Removal of vegetation near shoreline, resulting in increased vulnerability to erosion.
- ☐ Absence of vegetation or vegetated buffer.
- ☐ Evidence of septic system problems— lawn with green patch, soggy or wet lawn, and/or sewage odor.
- ☐ Lush lawns.
- ☐ Pet waste.
- ☐ Improperly stored trash (e.g., trash barrels or dumpsters) or organic debris (grass clippings, leaves, compost) near a waterbody.

**Describe most important issues found in the field in your narrative & on priority sheet and note on your maps.*

Commercial, Industrial and Urban Areas:

Is there a direct pathway for runoff to reach the lake, streams or wetlands? _____

Do you see:

- ☐ Street drains, storm sewers, and pipes that discharge directly to streams, lake, or wetland. **See Pipe Survey**
- ☐ Full or clogged catch basins? Full with (circle): trash sand pet waste oil other _____
- *Note problem catch basins on your map.*
- ☐ Damaged or eroded pipe or culvert outlets. ☐ Sediment buildup below pipe or along roadside.
- ☐ Eroded or undercut banks due to increased stormwater volumes and flows.
- ☐ Cloudy, discolored, or smelly water in ditches,
- ☐ Green scum, oily sheen, or floatables on water.
- ☐ Absence of vegetation or vegetated buffer near waterbody.
- ☐ Altered and paved areas near waterbodies.
- ☐ Trash, vehicles, manure, or waste storage near waterbodies.
- ☐ Lush lawns.
- ☐ Pet waste problems.

**Describe most important issues found in the field in your narrative & on priority sheet and note on your maps.*

Agricultural:

Is there a direct pathway for runoff to reach the lake, streams or wetlands? _____

- Do you see: ☐ exposed soil ☐ lack of vegetated buffer between fields and water body
☐ livestock in waterbody ☐ manure storage area not enclosed

Logging / Forestry:

Is there a direct pathway for runoff to reach the lake, streams or wetlands? _____

- Do you see: ☐ exposed soil ☐ eroding roads/trails ☐ clear-cut near waterbody/wetlands
☐ evidence of erosion at stream crossings ☐ turbid (cloudy) water in stream
☐ brush/slash near waterbodies

End of Upland Watershed Area Field Sheets: go to Pipe, Narrative, Priority & Map Pages

Date: November 8, 2005

Surveyors: Brittany Flaherty & Hannah Nestler

Today's weather: clear

Weather over past 24-48 hours: snow showers

Survey Section: 1

Site Description:

We surveyed the upper east side of Bare Hill Pond, which includes the soccer field behind The Bromfield School, the surrounding marshland, the Town Beach, and Pond Road. There is rather large expanse of marshland located behind the school, and beside the Pond Road soccer fields. The Town Beach is the biggest recreational area on the pond, and therefore has many opportunities for pollution. Pond Road runs alongside the pond, and the area around this parking lot and the town beach is mostly undeveloped land and forest.

Problem Areas:

- A) The Town Beach is usually densely populated during the summer, and may therefore experience a great deal of pollution in a concentrated amount of time due to litter, pet waste, and people who may have detergent on their bathing suits or have applied hair products at a recent time. The abundance of activity may also encourage erosion in the sand and soil surrounding the beach. The two parking lots, especially the one that is situated directly beside the pond's shore, may add to phosphorus levels due to motor fuels. This parking lot needs attention if phosphorus levels are to decrease or, at the very least, stabilize. Gasoline pollution may also occur due to motorboats.
- B) The marsh area appeared overall to be extremely healthy, and also has a great forest buffer zone between the Bromfield School and the pond itself. However, we found a few pieces of litter, such as a soda bottle, scattered along the woods beside the marsh.
- C) Pond Road is at a higher level than the pond, and motor fuels would be able to drain down the slope into the pond, thereby causing pollution. There are few houses in this area, decreasing likelihood of fertilizer pollution.
- D) The soccer field is located right beside the marshland, and fertilizers used in the process of its upkeep may travel in certain observed channels directly down to the marsh area, and therefore seep into the pond.

FIELD SHEETS - NEAR-SHORE

LAKE and POND WATERSHED SURVEY FORM - NEAR SHORE AREA

Lake and Watershed: Bare Hill Pond Survey Date: November 8, 2005
 Surveyors Names: Brittany Flaherty & Hannah Newler Area Name & Number: 1-Town Beach, Pond
 Weather Today: Clear Weather (past 2-5 days): Snow
 Landowners Contacted During Survey: yes ☒ no

A. General Categories of Land Uses Around and Upstream of Your Survey Section (Identify the land use category on the site. May be more than one land use.)

15 % Construction 0 % Agricultural land pond
0 % Residential 20 % Commercial, Industrial and Urban Areas
5 % Roads 0 % Logging/forestry
72 % Other (please specify, e.g., rural, open, or recreational) swamp, system, recreational, preserved forest

A.1. Specific Land Use on the Your Survey Section (Estimate % of site in each use. May be more than one land use.)

| | | |
|-----------------------|----------------------------|---------------------------------|
| <u>2</u> % commercial | <u>1</u> % dirt road | <u>0</u> % protected open space |
| <u>0</u> % industrial | <u>5</u> % local road | <u>60</u> % undeveloped land |
| <u>0</u> % junk yard | <u>5</u> % parking lot | <u>0</u> % meadow |
| <u>0</u> % railroad | <u>0</u> % golf course | <u>0</u> % forest |
| <u>0</u> % bridge | <u>0</u> % grazing/pasture | <u>19</u> % wetland |
| <u>0</u> % highway | <u>0</u> % park or beach | other (specify) _____ |

A.2. If Residential (Estimate % of site that is...)

☐ Multifamily ☐ year round
☐ <1/4 acre lots ☐ seasonal
☐ 1/2-1 acre lots
☐ >1 acre (400 x 100 feet)

B. Site characteristics

- Dominant shoreline material is...
☐ gravel ☒ sand ☐ silt ☒ clay ☒ dark organic muck & peat ☐ other
- Slope of site is... ☐ flat ☒ moderate ☐ steep
- The shoreline or riverbank is... (Check a or b, if there is a stream, ditch, shoreline, or steep bank on site.)
 a) ☒ vegetated with...
☒ exposed roots
☒ shrubs and native grasses (< 20 feet)
☒ trees taller than 20 feet
 b) ☒ unstable and...
☐ undercut
☒ eroded
- Vegetated Cover:
 a) How much of the near-shore water is shaded by trees and shrubs? (estimate shading from 10 AM - 2 PM)
☐ 0-25% ☒ 25-50% ☐ 50-75% ☐ 75-100%
 b) The % of the bank area that is covered by each of these vegetation types is...
☐ % grasses ☐ % shrubs ☐ % trees (>20 feet) ☐ % little or none
 c) How far back from the shoreline does the band of trees, shrubs, or grasses extend?
☐ 0-5 feet ☐ 5-50 feet ☒ 50-100 feet ☐ greater than 100 feet

C. Site drainage

- Site runoff is directly to...
☒ lake ☐ stream ☐ ditch ☐ catch basin ☒ vegetated buffer ☒ wetland other (describe) _____

Over

FIELD SHEETS - NEAR SHORE

LAKE and POND WATERSHED SURVEY FORM - NEAR SHORE AREA

C. Site drainage, continued

2. Site runoff is from...

- Construction: ☐ disturbed areas <1 acre) ☐ disturbed areas >1 acre ☒ exposed soil
☒ altered drainage pathways ☐ absence/failure of erosion controls
- Residential: ☐ driveways ☐ lawns (☐ <1 acre ☐ >1 acre)
☐ lush lawns ☐ exposed soil ☐ evidence of erosion
☐ pet waste ☐ pipe drains
- Roads: ☐ pavement to catch basin ☐ bridge ☐ shoulders/country drainage
☒ drainage to waterbody ☒ evidence of erosion ☒ sand build up in road
☐ sediment in ditches/culverts/drains
- Agricultural: ☐ field ☐ animal grazing area ☐ manure storage area
☐ exposed soil ☐ animals in waterbody ☐ storage areas uncovered
- Commercial, Industrial & Urban: ☒ parking lot ☐ vehicle maintenance yard ☐ industrial area
☐ waste storage area ☐ drain pipes to waterbody ☐ sediment in ditches/culverts
☒ paved areas ☒ trash/waste storage near waterbodies
- Logging/ Forestry: ☐ logging yard ☒ roads/trails ☐ stream crossings
☐ forested areas ☐ exposed soil ☐ poor roads
☐ brush/slash near waterbodies
- Other: (specify)

D. Land disturbances that affect water quality

1. Do you see evidence of excess nutrients? (Check all that apply)

- ☒ Soil erosion: ☐ silt ☒ sand ☒ soil ☐ stockpiled soil
☒ Evidence of runoff: ☒ rills ☒ gullies ☒ channel ☐ sedimentation
☒ Evidence of nutrients: ☐ pet waste/manure ☒ fertilizer use ☐ green lawns ☐ other (specify) _____

2. Do you see any of the following? If there are tributaries, catch basins drain pipes, and/or culverts on the site, explain your observation.

- ☐ Tributaries bringing in siltation: _____
☐ Pipes/culverts (describe conditions): _____
 * Describe what is going into the pipe (Add color and odor): _____
 * Describe any discharge from the pipe (Add color and odor): _____
☐ Full catch basins: full with (circle): trash sand pet waste oil other _____
 *Note problem catch basins on your map.

E. Water quality concerns (Check all that apply, describe the location and cause, and indicate site on map)

- ☐ Oily sheen or smell: _____
☒ Sewage: (odor, milky color, toilet paper) odor, bit of trash near pond field
☐ Foam or scum: (does a stick break it up? If it does, foam is probably natural.) _____
☒ Fishy odor or fish kill: Beach area, due to high levels of phosphorus?
☒ Algae or aquatic weeds (excessive growth): all over, especially due to phosphorus levels
☐ Floating trash: _____
☐ Obvious sedimentation: (e.g., sand) _____

F. Habitat and wildlife (Evidence of...)

- ☒ Fish: (fish, fish nests, anglers) Identify species if known _____
☒ Other aquatic life: ☒ insects, ☒ turtles, ☒ frogs, ☒ snails, ☒ mussels, ☐ clams, other: snails
☐ Waterfowl: ☒ herons, ☒ ducks, ☒ geese, ☐ loons, other _____
☐ Areas of good habitat with wildlife: Describe wetlands / undeveloped land

End of Near Shore Area Field Sheets: Skip the next page, go to Pipe, Narrative, Priority & Map Pages

Lake Watershed Survey Area Summary Sheet 2: Priorities for Action

Surveyor's Name: Brittany Stewart
Section Name & Number: 1

Look back at your data sheets and include your observations. The information from this sheet will be used to develop the Watershed Survey Report and Action Plan.

| PROBLEMS: | ASSETS: | PRIORITIES FOR ACTION: |
|--|---|--|
| <p>Problems found in your area, such as pipes or culverts discharging in dry weather, erosion, runoff, trash, dense algae, water quality problems (odor, color, oil, foam, sewage), and degraded wetlands (phragmites, loosestrife) (Describe and give location).</p> <p>1. little trash + watered lot of concrete & piece of wood → conservation/library??</p> <p>2. fertilizer from field runs down into marsh, then pond</p> <p>3. little kids peeing (Town Beach)</p> <p>4. animal waste</p> <p>5. car runoff → straight into pond</p> <p>6. tran from people.</p> <p>7. motor boats → aqueduct</p> <p>8. dirt erosion</p> | <p>Assets found in your area, such as good habitat, wildlife species, businesses, or landowners using the river (in a friendly way), recreational access (canoe, trails, parks), potential recreational access, and potential park/conservation land, scenic views (Describe and give location).</p> <p>1. pussy willows (trees), water zone good habitat btr street + pond.</p> <p>2. friendly football -</p> <p>3. plants</p> <p>4. lot of wildlife in pond / good habitat</p> <p>5. recreational place</p> <p>6. fairly controlled commercial use - no industrial, agricultural areas throughout</p> | <p>List items from problems/assets columns that you feel need more work.</p> <p>1. drainage</p> <p>2. plant or better zone</p> <p>3. hard to solve → ban animals or</p> <p>4. Endure common restrictions</p> <p>5. remove parking lot from right next to pond → boat house / more sand</p> <p>6. more trancons</p> <p>8.</p> |

Based on sheets provided by the Massachusetts Riverways Programs/DfW/EL

9. pipe/stream carries water w/ potential pollution
pollution to marsh

9.

Date: November 30, 2005

Surveyors: Hannah Nestler & Brittany Flaherty

Weather Today: Cloudy & Rainy

Weather- past 2-5 days: Cloudy & Rainy

Survey Section: 2

Site Description:

This site encompassed Turner Lane, Camp Green Erie and the dam. Turner Lane is paved for the majority yet once it passes the pond it becomes a dirt road. There are about fifteen houses along the shoreline of the pond, so it is a fairly densely residential area. Camp Green Erie is about 45% of this site. There are around 15 buildings that make up its campus, along with a parking lot and a small beach. The dam is a small culvert, and route 110 runs over. Most of the shoreline is heavily vegetated with trees, expect for the residential areas. The shoreline along those sites is all manicured lawn.

Problem Areas:

A) About 50 feet from the shore of the pond is a septic construction site. There are hay bales placed to presumably provide a buffer for any runoff, and the conclusion is that this septic is within code and thus allowed to be so close to the water.

However, this is not the only construction being done. A new cabin is being built very near the water, only adding to the density of this residential area. Is there an ordinance passed restricting the amount of residential development in this area? And if not, this is an advised measure.

B) Also, this new construction means that trees are being cut down, and we observed a logging truck sitting in this construction site. Removal of trees means less of buffer preventing harmful substances from the roads and houses from reaching the pond. This includes the areas of lawn, for there is absolutely no buffer zone between the lawns and the pond. Therefore, immediate action is needed to create some sort of solution for this problem. This is definitely a direct contributor to the excess amount of fertilizer and phosphorus in the pond.

C) Because this is a residential area, there is the possibility that children and pets could contribute waste to the pond. This is another source of phosphorus.

FIELD SHEETS - UPLAND

LAKE & POND WATERSHED SURVEY FORM - UPLAND WATERSHED AREA

Lake/Watershed: Dave Hill Pond Survey Date: 11/31
 Surveyors' Names: Brittany & Hannah Area Name & Number: 2
 Weather Today: cloudy & rainy Weather - past 2-5 days: cloudy & rainy

A. General Categories of Land Uses in Your Survey Section

(Identify the land use category on the site.
 May be more than one land use.)

0 % Construction 0 % Agricultural land
10 % Residential 45 % Commercial, Industrial & Urban Areas
25 % Roads 0 % Logging/forestry
15 % Other (please specify, e.g., rural, open, or recreational) _____

A.1. Specific Land Use in Your Survey Section (Estimate % of site in each use. May be more than one land use.)

| | | |
|----------------------|--------------------------|--------------------------------|
| <u>45</u> commercial | <u>1</u> dirt road | <u>35</u> protected open space |
| <u>0</u> industrial | <u>4</u> local road | <u>35</u> undeveloped land |
| <u>0</u> junk yard | <u>1</u> parking lot | <u>0</u> meadow |
| <u>0</u> railroad | <u>0</u> golf course | <u>35</u> forest |
| <u>5</u> bridge | <u>0</u> grazing/pasture | <u>0</u> wetland |
| <u>5</u> highway | <u>4</u> park or beach | <u>0</u> other (specify) _____ |

A.2. If Residential (Estimate % of site that is...)

0 Multifamily 85 year round
0 <1/4 acre lots 15 seasonal
100 1/2-1 acre lots
0 >1 acre (400 x 100 feet)

C. Site drainage

1. Site runoff is directly to...

☒ lake ☒ stream ☐ ditch ☐ catch basin ☐ vegetated buffer ☐ wetland other (describe) _____

2. Site runoff from...

Construction Sites

Is there a direct pathway for runoff to reach the lake, streams or wetlands? no

Do you see:

- ☒ Exposed soil and erosion.
- ☐ Alteration to drainage pathways or alteration near waterbodies or wetlands.
- ☐ Absence or ☐ Failure of erosion controls, such as silt fences and hay bales.
- ☒ Evidence of erosion, such as gullies or rills on the surface of the soil.
- ☐ Cloudy or discolored water in ditches, streams, wetlands, or lake.
- ☐ Sediment build-up in ditches, streams, wetlands, or lake.
- ☐ Construction on overly steep slopes.

**Describe most important issues found in the field in your narrative & on priority sheet and note on your maps.*

Roads:

Is there a direct pathway for runoff to reach the lake, streams or wetlands? no

Do you see:

- ☐ Absence of vegetation or buffer between road and waterbody.
- ☐ Roads located on steep slopes.
- ☐ Street drains, storm sewers, and pipes that discharge directly to streams, lake, or wetland. See Pipe Survey
- ☐ Full or clogged catch basins? Full with (circle): trash sand pet waste oil other _____

**Note problem catch basins on your map.*

- ☐ Damaged or eroded pipe or culvert outlets.
- ☐ Sediment buildup below pipe or along roadside.
- ☒ Washouts and crumbling pavement on roads and sidewalks.

Over

LAKE & POND WATERSHED SURVEY FORM – UPLAND WATERSHED AREA

C. Site drainage

2. Site runoff from...

Roads: continued

- ☒ Ditch, culvert, or pipe washouts, undercutting, or gullies and rills along sides and bottom of road or ditch.
- ☐ Exposed soil in ditch channel.
- ☐ Long ditches without discharge points into vegetated areas.
- ☐ Erosion around inlets and outlets of culverts.
- ☐ Washed out or damaged culvert

**Describe most important issues found in the field in your narrative & on priority sheet and note on your maps.*

Residential areas:

Is there a direct pathway for runoff to reach the lake, streams or wetlands? no

Do you see:

- ☐ Areas of bare soil.
- ☐ Turbid (cloudy) water.
- ☒ Evidence of erosion on driveways or other areas, such as gullies or rills on the surface of the soil, or sediment accumulation in ditches and streams.
- ☐ Bank instability—bare soil, slumping, or undercut banks.
- ☒ Removal of vegetation near shoreline, resulting in increased vulnerability to erosion.
- ☒ Absence of vegetation or vegetated buffer.
- ☐ Evidence of septic system problems— lawn with green patch, soggy or wet lawn, and/or sewage odor.
- ☒ Lush lawns.
- ☐ Pet waste.
- ☐ Improperly stored trash (e.g., trash barrels or dumpsters) or organic debris (grass clippings, leaves, compost) near a waterbody.

**Describe most important issues found in the field in your narrative & on priority sheet and note on your maps.*

Commercial, Industrial and Urban Areas:

Is there a direct pathway for runoff to reach the lake, streams or wetlands? yes

Do you see:

- ☐ Street drains, storm sewers, and pipes that discharge directly to streams, lake, or wetland. **See Pipe Survey**
- ☐ Full or clogged catch basins? Full with (circle): trash sand pet waste oil other _____
- *Note problem catch basins on your map.*
- ☐ Damaged or eroded pipe or culvert outlets. ☐ Sediment buildup below pipe or along roadside.
- ☐ Eroded or undercut banks due to increased stormwater volumes and flows.
- ☐ Cloudy, discolored, or smelly water in ditches,
- ☐ Green scum, oily sheen, or floatables on water.
- ☒ Absence of vegetation or vegetated buffer near waterbody.
- ☒ Altered and paved areas near waterbodies.
- ☐ Trash, vehicles, manure, or waste storage near waterbodies.
- ☐ Lush lawns.
- ☐ Pet waste problems.

**Describe most important issues found in the field in your narrative & on priority sheet and note on your maps.*

Agricultural:

Is there a direct pathway for runoff to reach the lake, streams or wetlands? _____

Do you see: ☐ exposed soil ☐ lack of vegetated buffer between fields and water body
☐ livestock in waterbody ☐ manure storage area not enclosed

Logging / Forestry:

Is there a direct pathway for runoff to reach the lake, streams or wetlands? _____

Do you see: ☐ exposed soil ☐ eroding roads/trails ☐ clear-cut near waterbody/wetlands
☐ evidence of erosion at stream crossings ☐ turbid (cloudy) water in stream
☐ brush/slash near waterbodies

End of Upland Watershed Area Field Sheets: go to Pipe, Narrative, Priority & Map Pages

Lake Watershed Survey

Area Summary Sheet 2: Priorities for Action

Surveyor's Names: Hannah Nestler & Brittany F.

Section Name & Number: Turner Rd 2

Look back at your data sheets and include your observations. The information from this sheet will be used to develop the Watershed Survey Report and Action Plan.

| <p>PROBLEMS: Problems found in your area, such as pipes or culverts discharging in dry weather, erosion, runoff, trash, dense algae, water quality problems (odor, color, oil, foam, sewage), and degraded wetlands (phragmites, loosestrife) (Describe and give location).</p> | <p>ASSETS: Assets found in your area, such as good habitat, wildlife species, businesses, or landowners using the river (in a friendly way), recreational access (canoe, trails, parks), potential recreational access, and potential park/conservation land, scenic views (Describe and give location).</p> | <p>PRIORITIES FOR ACTION: List items from problems/assets columns that you feel need more work.</p> |
|--|---|---|
| <p>1. construction → contributes to erosion 2. logging 3. fertilized lawns 4. horses close to shore → septic!! 5. pets a possibility for each horse 6. Children</p> | <p>1. beautiful view 2. boating, recreation, etc 3. Camp Area Zone 4. wildlife 5. good fishing</p> | <p>1. enforce building requirements for where horses can be built 2. buffer zones 3. are septic's up to date and within code?</p> |

Date: January 28, 2006

Surveyors: Brittany Flaherty & Hannah Nestler

Today's weather: clear and sunny

Weather over past 24-48 hours: clear with scattered showers

Survey Section: 3

Site Description:

We surveyed the upper west side of Bare Hill Pond along Route 110, from the Bellevue Cemetery to the paths leads down to various parts of the Scorgie/Tufts conservation land and Clapp's Brook. One main site that we found most problematic was located down a particular trail where an abandoned house had been demolished and left to rot.

Problem Areas:

- A) The conversation land appears healthy and well kept, a lovely habitat for animals. It is far enough away from 110 that we do not believe motor fuels or any such highway debris could possibly reach the pond, even though the trails slope downward toward the water. A great deal of vegetation and dense forest definitely act as buffers. If this conservation land is not respected, however, trash and erosion-causing trails could change the health of this area and therefore, of the pond.
- B) The area of greatest concern to us was the remnants of an abandoned house that we found at the end of one conservation trail. This house appears to have been intentionally demolished, and then allowed to waste, all of its toxic chemical elements left to infect the soil and the pond. Just a small sample of the damaging wreckage that we encountered would include: a refrigerator, a broken chimney with a rusting top, rusting cans and chairs, paint buckets and painted wood, roof shingles, shards of broken glass, a broken typewriter (thrown right beside the pond's edge), and an array of beer cans and lighters. It appears that people have been abusing the privacy of this area, and using it for recreational purposes, an activity which should be immediately halted. This area must be cleaned up as soon as possible in order to minimize the damage that must have already begun on the conservation land.

FIELD SHEETS - UPLAND

LAKE & POND WATERSHED SURVEY FORM - UPLAND WATERSHED AREA

Lake/Watershed: Baye Hill Pond Survey Date: 1/28/06
 Surveyors' Names: B+H Area Name & Number: 3
 Weather Today: clear & sunny Weather - past 2-5 days: clear w/ scattered showers

A. General Categories of Land Uses in Your Survey Section

(Identify the land use category on the site.
 May be more than one land use.)

☐ % Construction ☐ % Agricultural land
☒ % Residential ☐ % Commercial, Industrial & Urban Areas
☒ % Roads ☐ % Logging/forestry
☒ % Other (please specify, e.g., rural, open, or recreational) _____

A.1. Specific Land Use in Your Survey Section (Estimate % of site in each use. May be more than one land use.)

☐ commercial ☒ dirt road
☐ industrial ☐ local road
☐ junk yard ☐ parking lot
☐ railroad ☐ golf course
☐ bridge ☐ grazing/pasture
☒ highway ☐ park or beach
☒ protected open space
☒ undeveloped land
☐ meadow
☐ forest
☐ wetland
☐ other (specify) _____

A.2. If Residential (Estimate % of site that is...)

☐ Multifamily ☒ year round
☐ <1/4 acre lots ☐ seasonal
☐ 1/2-1 acre lots
☒ >1 acre (400 x 100 feet)

C. Site drainage

1. Site runoff is directly to...

☐ lake ☐ stream ☐ ditch ☐ catch basin ☒ vegetated buffer ☐ wetland other (describe) _____

2. Site runoff from...

Construction Sites

Is there a direct pathway for runoff to reach the lake, streams or wetlands? _____

Do you see:

- ☐ Exposed soil and erosion.
- ☐ Alteration to drainage pathways or alteration near waterbodies or wetlands.
- ☐ Absence or ☐ Failure of erosion controls, such as silt fences and hay bales.
- ☐ Evidence of erosion, such as gullies or rills on the surface of the soil.
- ☐ Cloudy or discolored water in ditches, streams, wetlands, or lake.
- ☐ Sediment build-up in ditches, streams, wetlands, or lake.
- ☐ Construction on overly steep slopes.

**Describe most important issues found in the field in your narrative & on priority sheet and note on your maps.*

Roads:

Is there a direct pathway for runoff to reach the lake, streams or wetlands? _____

Do you see:

- ☐ Absence of vegetation or buffer between road and waterbody.
- ☒ Roads located on steep slopes.
- ☐ Street drains, storm sewers, and pipes that discharge directly to streams, lake, or wetland. See Pipe Survey
- ☐ Full or clogged catch basins? Full with (circle): trash sand pet waste oil other _____
- *Note problem catch basins on your map.*
- ☐ Damaged or eroded pipe or culvert outlets.
- ☐ Sediment buildup below pipe or along roadside.
- ☐ Washouts and crumbling pavement on roads and sidewalks.

Over

LAKE & POND WATERSHED SURVEY FORM – UPLAND WATERSHED AREA

C. Site drainage

2. Site runoff from...

Roads: continued

- ☐ Ditch, culvert, or pipe washouts, undercutting, or gullies and rills along sides and bottom of road or ditch.
- ☐ Exposed soil in ditch channel.
- ☐ Long ditches without discharge points into vegetated areas.
- ☐ Erosion around inlets and outlets of culverts.
- ☐ Washed out or damaged culvert

**Describe most important issues found in the field in your narrative & on priority sheet and note on your maps.*

Residential areas:

Is there a direct pathway for runoff to reach the lake, streams or wetlands? NO

Do you see:

- ☐ Areas of bare soil.
- ☐ Turbid (cloudy) water.
- ☐ Evidence of erosion on driveways or other areas, such as gullies or rills on the surface of the soil, or sediment accumulation in ditches and streams.
- ☐ Bank instability—bare soil, slumping, or undercut banks.
- ☐ Removal of vegetation near shoreline, resulting in increased vulnerability to erosion.
- ☐ Absence of vegetation or vegetated buffer.
- ☐ Evidence of septic system problems— lawn with green patch, soggy or wet lawn, and/or sewage odor.
- ☐ Lush lawns.
- ☐ Pet waste.
- ☐ Improperly stored trash (e.g., trash barrels or dumpsters) or organic debris (grass clippings, leaves, compost) near a waterbody.

**Describe most important issues found in the field in your narrative & on priority sheet and note on your maps.*

Commercial, Industrial and Urban Areas:

Is there a direct pathway for runoff to reach the lake, streams or wetlands? NO

Do you see:

- ☐ Street drains, storm sewers, and pipes that discharge directly to streams, lake, or wetland. **See Pipe Survey**
- ☐ Full or clogged catch basins? Full with (circle): trash sand pet waste oil other _____
- *Note problem catch basins on your map.*
- ☐ Damaged or eroded pipe or culvert outlets. ☐ Sediment buildup below pipe or along roadside.
- ☐ Eroded or undercut banks due to increased stormwater volumes and flows.
- ☐ Cloudy, discolored, or smelly water in ditches,
- ☐ Green scum, oily sheen, or floatables on water.
- ☐ Absence of vegetation or vegetated buffer near waterbody.
- ☐ Altered and paved areas near waterbodies.
- ☒ Trash, vehicles, manure, or waste storage near waterbodies.
- ☐ Lush lawns.
- ☐ Pet waste problems.

**Describe most important issues found in the field in your narrative & on priority sheet and note on your maps.*

Agricultural:

Is there a direct pathway for runoff to reach the lake, streams or wetlands? NO

- Do you see: ☐ exposed soil ☐ lack of vegetated buffer between fields and water body
☐ livestock in waterbody ☐ manure storage area not enclosed

Logging / Forestry:

Is there a direct pathway for runoff to reach the lake, streams or wetlands? NO

- Do you see: ☐ exposed soil ☐ eroding roads/trails ☐ clear-cut near waterbody/wetlands
☐ evidence of erosion at stream crossings ☐ turbid (cloudy) water in stream
☐ brush/slash near waterbodies

End of Upland Watershed Area Field Sheets: go to Pipe, Narrative, Priority & Map Pages

Lake Watershed Survey Area Summary Sheet 2: Priorities for Action

Surveyor's Names: B + H
Section Name & Number: 3

Look back at your data sheets and include your observations. The information from this sheet will be used to develop the Watershed Survey Report and Action Plan.

| <p>PROBLEMS: Problems found in your area, such as pipes or culverts discharging in dry weather, erosion, runoff, trash, dense algae, water quality problems (odor, color, oil, foam, sewage), and degraded wetlands (phragmites, loosestrife) (Describe and give location).</p> | <p>ASSETS: Assets found in your area, such as good habitat, wildlife species, businesses, or landowners using the river (in a friendly way), recreational access (canoe, trails, parks), potential recreational access, and potential park/conservation land, scenic views (Describe and give location).</p> | <p>PRIORITIES FOR ACTION: List items from problems/assets columns that you feel need more work.</p> |
|--|---|--|
| <p>1. abandoned horse barn down & left to rot → PAINT (lead) & other 2. dangerous chemicals & trash paint 3. TRASH # → beer cans, glass, chairs, toy cooler 4. refrigerators</p> | <p>1. nice view 2. various species including herons 3. no pollution</p> | <p>1. cleanup of old horse barn 2.</p> |

Date: January 30, 2005

Surveyors: Hannah Nestler & Brittany Flaherty

Weather Today: clear and warm

Weather- past 2-5 days: Mixture of rain and sun

Survey Section: 4

Site Description:

Site four consists of Willard Lane. The site stretches approximately between Minister's Island and Great South Bay. The lane is paved from the beginning, yet right along the pond the asphalt has crumbled into rubble. Along the shoreline it is very densely populated. There is also a small beach located to the left of the end of Willard Lane. Currently, there is some construction going on, though it is slightly set back from the water. There is also a new septic that was just recently installed.

Problem Areas:

- A) The extremely dense housing is definitely something that needs to be addressed. Though the houses can not be removed, something could be done to watch the number of houses built in the future. By developing so close together and so near the shore, the houses erode away the soil, especially since there are few trees right next to the shoreline. Without those trees acting not only as a buffer zone, but also as a support for the soil, runoff from open earth, fertilized lawns, and Willard Lane flows straight into the pond. This is unhealthy for the watershed.
- B) Scattered throughout this site is a large amount of debris in the form of rusting cans and pipes along with old appliances just laying about. The danger of this litter is that any chemical residue can flow right into the pond. A large clean-up of this area could remedy this issue, along with increased awareness by the habitants along this lane.

FIELD SHEETS – NEAR-SHORE

LAKE and POND WATERSHED SURVEY FORM – NEAR SHORE AREA

Lake and Watershed: Bare Hill Pond Survey Date: January 30, 2006
 Surveyors Names: Brittany Flaherty & Hannah Nestler Area Name & Number: 4-Sprague Conservation &
 Weather Today: Clear + Warm Weather (past 2-5 days) Rain & Sun W. Had here
 Landowners Contacted During Survey: yes ☒ no

A. General Categories of Land Uses Around and Upstream of Your Survey Section *(Identify the land use category on the site. May be more than one land use.)*

1 % Construction 0 % Agricultural land
20 % Residential 0 % Commercial, Industrial and Urban Areas
9 % Roads 0 % Logging/forestry
70 % Other (please specify, e.g., rural, open, or recreational) marsh, rural, conservation land recreational

A.1. Specific Land Use on the Your Survey Section *(Estimate % of site in each use. May be more than one land use.)*

| | | |
|---------------------|--------------------------|--------------------------------|
| <u>0</u> commercial | <u>0</u> dirt road | <u>62</u> protected open space |
| <u>0</u> industrial | <u>1</u> local road | <u>13</u> undeveloped land |
| <u>0</u> junk yard | <u>0</u> parking lot | <u>0</u> meadow |
| <u>0</u> railroad | <u>0</u> golf course | <u>13</u> forest |
| <u>0</u> bridge | <u>0</u> grazing/pasture | <u>15</u> wetland |
| <u>0</u> highway | <u>0</u> park or beach | <u>0</u> other (specify) _____ |

A.2. If Residential *(Estimate % of site that is...)*

3 Multifamily 55 year round
87 <1/4 acre lots 45 seasonal
10 1/2-1 acre lots
— >1 acre (400 x 100 feet)

B. Site characteristics

- Dominant shoreline material is...
✓ gravel — sand — silt ✓ clay ✓ dark organic muck & peat — other
- Slope of site is... — flat — moderate ✓ steep
- The shoreline or riverbank is... *(Check a or b, if there is a stream, ditch, shoreline, or steep bank on site.)*
 a) ✓ vegetated with...
— exposed roots — undercut
✓ shrubs and native grasses (< 20 feet) ✓ eroded
✓ trees taller than 20 feet
- Vegetated Cover:
 a) How much of the near-shore water is shaded by trees and shrubs? *(estimate shading from 10 AM - 2 PM)*
— 0-25% ✓ 25-50% — 50-75% — 75-100%
 b) The % of the bank area that is covered by each of these vegetation types is...
2 % grasses 50 % shrubs 25 % trees (>20 feet) 23 % little or none
 c) How far back from the shoreline does the band of trees, shrubs, or grasses extend?
— 0-5 feet ✓ 5-50 feet — 50-100 feet — greater than 100 feet

C. Site drainage

1. Site runoff is directly to...

✓ lake — stream — ditch — catch basin ✓ vegetated buffer — wetland other (describe) _____

Over

FIELD SHEETS – NEAR SHORE

LAKE and POND WATERSHED SURVEY FORM – NEAR SHORE AREA

C. Site drainage, *continued*

2. Site runoff is from...

- Construction: ☒ disturbed areas <1 acre ☐ disturbed areas >1 acre ☐ exposed soil
☐ altered drainage pathways ☐ absence/failure of erosion controls
- Residential: ☐ driveways ☒ lawns (100% <1 acre ☐ >1 acre)
☐ lush lawns ☒ exposed soil ☒ evidence of erosion
☒ pet waste ☒ pipe drains
- Roads: ☐ pavement to catch basin ☐ bridge ☐ shoulders/country drainage
☒ drainage to waterbody ☒ evidence of erosion ☐ sand build up in road
☐ sediment in ditches/culverts/drains
- Agricultural: ☐ field ☐ animal grazing area ☐ manure storage area
☐ exposed soil ☐ animals in waterbody ☐ storage areas uncovered
- Commercial, ☐ parking lot ☐ vehicle maintenance yard ☐ industrial area
Industrial ☐ waste storage area ☐ drain pipes to waterbody ☐ sediment in ditches/culverts
& Urban: ☐ paved areas ☐ trash/waste storage near waterbodies
- Logging/ ☐ logging yard ☐ roads/trails ☐ stream crossings
Forestry: ☐ forested areas ☐ exposed soil ☐ poor roads
☐ brush/slash near waterbodies
- Other: ☐ (specify) _____

D. Land disturbances that affect water quality

1. Do you see evidence of excess nutrients? (Check all that apply)

- ☒ Soil erosion: ☐ silt ☐ sand ☒ soil ☐ stockpiled soil
☒ Evidence of runoff: ☐ rills ☐ gullies ☒ channel ☐ sedimentation
☒ Evidence of nutrients: ☒ pet waste/manure ☐ fertilizer use ☐ green lawns ☐ other(specify) _____

2. Do you see any of the following? If there are tributaries, catch basins drain pipes, and/or culverts on the site, explain your observation.

- ☐ Tributaries bringing in siltation: _____
☐ Pipes/culverts (describe conditions): _____
 - Describe what is going into the pipe (Add color and odor): _____
 - Describe any discharge from the pipe (Add color and odor): _____☐ Full catch basins: full with (circle): trash sand pet waste oil other _____
**Note problem catch basins on your map.*

E. Water quality concerns (Check all that apply, describe the location and cause, and indicate site on map)

- ☐ Oily sheen or smell: _____
☐ Sewage: (odor, milky color, toilet paper) _____
☐ Foam or scum: (does a stick break it up? If it does, foam is probably natural.) _____
☐ Fishy odor or fish kill: _____
☐ Algae or aquatic weeds (excessive growth): _____
☒ Floating trash: (in) _____
☐ Obvious sedimentation: (e.g., sand) _____

F. Habitat and wildlife (Evidence of...)

- ☒ Fish: (fish, fish nests, anglers) Identify species if known _____
☐ Other aquatic life: ☐ insects, ☐ turtles, ☐ frogs, ☐ snails, ☐ mussels, ☐ clams, other: _____
Identify species if known: _____
☒ Waterfowl: ☒ herons, ☒ ducks, ☐ geese, ☐ loons, other _____
☒ Areas of good habitat with wildlife: Describe beautiful conservation land _____

End of Near Shore Area Field Sheets: Skip the next page, go to Pipe, Narrative, Priority & Map Pages

Lake Watershed Survey

Area Summary Sheet 2: Priorities for Action

Look back at your data sheets and include your observations. The information from this sheet will be used to develop the Watershed Survey Report and Action Plan.

Surveyor's Names: Brittany F. + Hannah N
 Section Name & Number: Willard Lane #4

| PROBLEMS: Problems found in your area, such as pipes or culverts discharging in dry weather, erosion, runoff, trash, dense algae, water quality problems (odor, color, oil, foam, sewage), and degraded wetlands (phragmites, loosestrife) (Describe and give location). | ASSETS: Assets found in your area, such as good habitat, wildlife species, businesses, or landowners using the river (in a friendly way), recreational access (canoe, trails, parks), potential recreational access, and potential park/conservation land, scenic views (Describe and give location). | PRIORITIES FOR ACTION: List items from problems/assets columns that you feel need more work. |
|---|--|---|
| <p>1. Construction</p> <p>2. septic</p> <p>3. DENSE HOUSING</p> <p>4. erosion</p> <p>5. running pipes and other debris</p> <p>6. on slope, so all run off goes DIRECTLY into pond - no buffer</p> | <p>1. "no trash zone" trash can → community involvement</p> <p>2. great view</p> <p>3. lots of recreation - boating, swimming, fishing, birding</p> | <p>1. A cleanup is needed - old debris just sitting & waiting</p> <p>2.</p> |

Date: December 15, 2005

Surveyors: Hannah Nestler & Brittany Flaherty

Weather Today: Cloudy & chance of flurries

Weather- past 2-5 days: Cloudy

Survey Section: 5

Site Description:

The area lies along the southern side of the pond. It includes Peninsula Road, Great South Bay and the Bower's Brook Inlet. Overall, this is an excellent area for all wildlife and recreation- boating and fishing. The marshland looks very healthy. There is some residential development but it is all fairly set back from the road. Between the residential areas and the pond is a good size tree buffer, and there is not an excess of clearing to make way for houses.

Problem Areas:

- A) The main problem with this area is a farm that is located directly next to a tributary that runs straight into the pond. The grazing pen for the animals is right next to the stream, so that any manure runoff could flow into the pond. This is definitely an area that needs immediate addressing. Some form of buffer should be planted. Also, Tahanto Trail runs right over this stream, so that any sand or runoff from the asphalt would flow right into the pond. We observed clumps of soil deposits in the water, probably due to the runoff created by both the farm and the road.
- B) A second problem is the overgrowth of algae in the open water adjacent to the marsh. This is definitely due to the excess amounts of phosphorus in the pond, which is probably due to the farm and road runoff which flows into the stream, and thus into the pond. To regulate this overgrowth, it is necessary to first address the problems summarized in A.

FIELD SHEETS - NEAR-SHORE

LAKE and POND WATERSHED SURVEY FORM - NEAR SHORE AREA

Lake and Watershed: Bare Hill pond Survey Date: 12/15/05
 Surveyors Names: B + H Area Name & Number: 5
 Weather Today: Sunny, chance of freeze Weather (past 2-5 days) snowy
 Landowners Contacted During Survey: yes ☒ no

A. General Categories of Land Uses Around and Upstream of Your Survey Section *(Identify the land use category on the site. May be more than one land use.)*

0 % Construction 10 % Agricultural land
50 % Residential 0 % Commercial, Industrial and Urban Areas
15 % Roads 0 % Logging/forestry
25 % Other *(please specify, e.g., rural, open, or recreational)*

A.1. Specific Land Use on the Your Survey Section *(Estimate % of site in each use. May be more than one land use.)*

| | | |
|---------------------|--------------------------|---------------------------------|
| <u>0</u> commercial | <u>4</u> dirt road | <u>0</u> protected open space |
| <u>0</u> industrial | <u>10</u> local road | <u>50</u> undeveloped land |
| <u>0</u> junk yard | <u>0</u> parking lot | <u>0</u> meadow |
| <u>0</u> railroad | <u>0</u> golf course | <u>50</u> forest |
| <u>1</u> bridge | <u>5</u> grazing/pasture | <u>0</u> wetland |
| <u>0</u> highway | <u>0</u> park or beach | <u>0</u> other <i>(specify)</i> |

A.2. If Residential *(Estimate % of site that is...)*

0 Multifamily 100 year round
— <1/4 acre lots — seasonal
30 1/2-1 acre lots
70 1 acre (400 x 100 feet)

B. Site characteristics

- Dominant shoreline material is...
— gravel — sand — silt — clay ☒ dark organic muck & peat — other
- Slope of site is... — flat — moderate ☒ steep
- The shoreline or riverbank is... *(Check a or b, if there is a stream, ditch, shoreline, or steep bank on site.)*
 a) ☒ vegetated with...
 ☒ exposed roots
 ☒ shrubs and native grasses (< 20 feet) 0
 ☒ trees taller than 20 feet
 b) — unstable and...
 — undercut
 — eroded
 there is eroded land
- Vegetated Cover:
 a) How much of the near-shore water is shaded by trees and shrubs? *(estimate shading from 10 AM - 2 PM)*
 — 0-25% — 25-50% — 50-75% ☒ 75-100%
 b) The % of the bank area that is covered by each of these vegetation types is...
 15 % grasses 15 % shrubs 70 % trees (>20 feet) — % little or none
 c) How far back from the shoreline does the band of trees, shrubs, or grasses extend?
 — 0-5 feet — 5-50 feet — 50-100 feet ☒ greater than 100 feet

C. Site drainage

1. Site runoff is directly to...

☒ lake ☒ stream — ditch — catch basin ☒ vegetated buffer — wetland other *(describe)*

Over

FIELD SHEETS – NEAR SHORE

LAKE and POND WATERSHED SURVEY FORM – NEAR SHORE AREA

C. Site drainage, *continued*

2. Site runoff is from...

Construction: ☐ disturbed areas <1 acre ☐ disturbed areas >1 acre ☐ exposed soil
☐ altered drainage pathways ☐ absence/failure of erosion controls

Residential: ☒ driveways ☒ lawns (30 <1 acre 70 >1 acre)
☒ lush lawns ☒ exposed soil ☒ evidence of erosion
☒ pet waste ☐ pipe drains

Roads: ☐ pavement to catch basin ☐ bridge ☒ shoulders/country drainage
☐ drainage to waterbody ☐ evidence of erosion ☒ sand build up in road
☐ sediment in ditches/culverts/drains

Agricultural: ☒ field ☒ animal grazing area ☒ manure storage area
☐ exposed soil ☐ animals in waterbody ☐ storage areas uncovered

Commercial, ☐ parking lot ☐ vehicle maintenance yard ☐ industrial area
Industrial ☐ waste storage area ☐ drain pipes to waterbody ☐ sediment in ditches/culverts
& Urban: ☐ paved areas ☐ trash/waste storage near waterbodies

Logging/
Forestry: ☐ logging yard ☐ roads/trails ☐ stream crossings
☐ forested areas ☐ exposed soil ☐ poor roads
☐ brush/slash near waterbodies

Other: (specify)

D. Land disturbances that affect water quality

1. Do you see evidence of excess nutrients? (Check all that apply)

☒ Soil erosion: ☐ silt ☒ sand ☒ soil ☐ stockpiled soil
☒ Evidence of runoff: ☒ fills ☐ gullies ☒ channel ☐ sedimentation
☒ Evidence of nutrients: ☒ pet waste/manure ☐ fertilizer use ☒ green lawns other (specify) _____

2. Do you see any of the following? If there are tributaries, catch basins drain pipes, and/or culverts on the site, explain your observation.

☒ Tributaries bringing in siltation: water catering on soil buildup
Pipes/culverts (describe conditions): _____
• Describe what is going into the pipe (Add color and odor): _____
• Describe any discharge from the pipe (Add color and odor): _____

Full catch basins: full with (circle): trash sand pet waste oil other _____

*Note problem catch basins on your map.

E. Water quality concerns (Check all that apply, describe the location and cause, and indicate site on map)

☐ Oily sheen or smell: _____
☐ Sewage: (odor, milky color, toilet paper) _____
☐ Foam or scum: (does a stick break it up? If it does, foam is probably natural.) _____
☐ Fishy odor or fish kill: _____
☒ Algae or aquatic weeds (excessive growth): Green South Bay → phosphorus → weed growth
☐ Floating trash: _____
☐ Obvious sedimentation: (e.g., sand) _____

F. Habitat and wildlife (Evidence of...)

☒ Fish: (fish, fish nests, anglers) Identify species if known: _____
☐ Other aquatic life: ☐ insects, ☐ turtles, ☐ frogs, ☐ snails, ☐ mussels, ☐ clams, other: _____
☒ Waterfowl: ☒ herons, ☐ ducks, ☐ geese, ☐ loons, other: _____
☒ Areas of good habitat with wildlife: Describe marsh overall, very healthy

End of Near Shore Area Field Sheets: Skip the next page, go to Pipe, Narrative, Priority & Map Pages

Lake Watershed Survey

Area Summary Sheet 2: Priorities for Action

Look back at your data sheets and include your observations. The information from this sheet will be used to develop the Watershed Survey Report and Action Plan.

Surveyor's Names: Brittany Guberty & Hannah Nettle
 Section Name & Number: 5

| PROBLEMS: Problems found in your area, such as pipes or culverts discharging in dry weather, erosion, runoff, trash, dense algae, water quality problems (odor, color, oil, foam, sewage), and degraded wetlands (phragmites, loosestrife) (Describe and give location). | ASSETS: Assets found in your area, such as good habitat, wildlife species, businesses, or landowners using the river (in a friendly way), recreational access (canoe, trails, parks), potential recreational access, and potential park/conservation land, scenic views (Describe and give location). | PRIORITIES FOR ACTION: List items from problems/assets columns that you feel need more work. |
|--|--|---|
| <p>1. PIPE → gross water coming out of it</p> <p>2. houses close together and right next to pond</p> <p>3. Car Knoff</p> <p>4. rusting roof</p> <p>4. erosion (on steep slope)</p> <p>5. stream RIGHT next to animal farm → manure goes into stream</p> <p>6. some trash</p> | <p>1. Nice view</p> <p>2. lots of forest</p> <p>3. good wildlife habitat</p> <p>4. excellent boating area</p> <p>5. plant life → winterberry?</p> <p>6. not OVERLY developed</p> <p>7. marsh looks healthy</p> <p>9.</p> | <p>1. buffers need to be updated</p> <p>2. pipe needs to be organized and regulary checked</p> <p>3. regulate farm & is it so enough from the stream?</p> |

Date: November 22, 2005

Surveyors: Brittany Flaherty & Hannah Nestler

Today's weather: clear and cool

Weather over past 24-48 hours: scattered snow and rain showers

Survey Section: 6

Site Description:

We surveyed the east side of Bare Hill Pond from Warren Avenue inward, up to Thurston's Beach. Warren Avenue runs through the middle of this section, upland of the pond, and approximately 15-20 houses inhabit the area around the road. Nearer to the pond, several residences are built right near the pond's shore. About five houses are also found on Sheep Island.

Problem Areas:

A) At Thurston's Beach, a small stream runs from directly near a house into the water, leaving foam in several water gullies along the way. Evidence of erosion can be seen at the waterside, but attempts to stop this deterioration have already taken place. Bags of sand were laid down to prevent erosion, and intentional rock piles act as a buffer zone. When looking out from the beach onto the pond, about 4 houses along its edge are very close to the shore, and may be increasing phosphorus levels due to pet waste and fertilizer. However, most of the surrounding area consists of trees and shrubs, which act as good vegetation buffers. Some trash, such as a lighter and a plastic ball, were left behind. The water appears clean and healthy.

B) Houses off of Warren Avenue are generally situated far enough away from the pond that they are not threats, but several residences are located on a slope that leads directly into the pond. Such homes should be advised against using lawn fertilizer (which some appear to use), and should keep pets from swimming in the pond. **C)** Some driveways on slopes off of Warren may allow the passage of motor oils into the pond, although vegetative buffer zones are usually abundant.

FIELD SHEETS – NEAR-SHORE

LAKE and POND WATERSHED SURVEY FORM – NEAR SHORE AREA

Lake and Watershed: Bare Hill Pond Survey Date: November 22, 2005
 Surveyors Names: Brittany Flaherty & Hannah Neill Area Name & Number: Co-Thurston's Beach/Ward Ave.
 Weather Today: clear & cool Weather (past 2-5 days): Scattered snow showers
 Landowners Contacted During Survey: yes ☒ no and rain

A. General Categories of Land Uses Around and Upstream of Your Survey Section *(Identify the land use category on the site. May be more than one land use.)*

☐ % Construction ☐ % Agricultural land
☒ 35 % Residential ☐ % Commercial, Industrial and Urban Areas
☒ 10 % Roads ☐ % Logging/forestry
☐ % Other *(please specify, e.g., rural, open, or recreational)* 55% rural (forests)

A.1. Specific Land Use on the Your Survey Section *(Estimate % of site in each use. May be more than one land use.)*

| | | |
|-------------------------------------|---|---|
| <input type="checkbox"/> commercial | <input checked="" type="checkbox"/> 8 dirt road | <input type="checkbox"/> protected open space |
| <input type="checkbox"/> industrial | <input checked="" type="checkbox"/> 20 local road | <input checked="" type="checkbox"/> 65 undeveloped land |
| <input type="checkbox"/> junk yard | <input checked="" type="checkbox"/> 2 parking lot | <input type="checkbox"/> meadow |
| <input type="checkbox"/> railroad | <input type="checkbox"/> golf course | <input checked="" type="checkbox"/> 65 forest |
| <input type="checkbox"/> bridge | <input type="checkbox"/> grazing/pasture | <input type="checkbox"/> wetland |
| <input type="checkbox"/> highway | <input checked="" type="checkbox"/> 2 park or beach | <input type="checkbox"/> other <i>(specify)</i> _____ |

A.2. If Residential *(Estimate % of site that is...)*

☐ Multifamily ☒ 10 year round
☒ <1/4 acre lots ☒ 2 seasonal
☒ 1/2-1 acre lots
☒ >1 acre (400 x 100 feet)

B. Site characteristics

1. Dominant shoreline material is...

☒ gravel ☒ sand ☐ silt ☐ clay ☐ dark organic muck & peat ☐ other

2. Slope of site is... ☐ flat ☒ moderate ☐ steep

3. The shoreline or riverbank is... *(Check a or b, if there is a stream, ditch, shoreline, or steep bank on site.)*

a) ☒ vegetated with...
☒ exposed roots
☒ shrubs and native grasses (< 20 feet)
☒ trees taller than 20 feet
 b) ☒ unstable and...
☐ undercut
☒ eroded
 is both

4. Vegetated Cover:

a) How much of the near-shore water is shaded by trees and shrubs? *(estimate shading from 10 AM - 2 PM)*
☐ 0-25% ☐ 25-50% ☐ 50-75% ☒ 75-100%
 b) The % of the bank area that is covered by each of these vegetation types is...
☒ 5 % grasses ☒ 66 % shrubs ☒ 32 % trees (>20 feet) ☒ 3 % little or none
 c) How far back from the shoreline does the band of trees, shrubs, or grasses extend?
☐ 0-5 feet ☐ 5-50 feet ☒ 50-100 feet ☐ greater than 100 feet

C. Site drainage

1. Site runoff is directly to...

☒ lake ☒ stream ☐ ditch ☒ catch basin ☒ vegetated buffer ☐ wetland ☐ other *(describe)* _____

Over

FIELD SHEETS – NEAR SHORE

LAKE and POND WATERSHED SURVEY FORM – NEAR SHORE AREA

C. Site drainage, continued

2. Site runoff is from...

- Construction: ☐ disturbed areas <1 acre) ☐ disturbed areas >1 acre ☐ exposed soil
☐ altered drainage pathways ☐ absence/failure of erosion controls
- Residential: ☒ driveways ☒ lawns (40) <1 acre (20) >1 acre
☒ lush lawns ☒ exposed soil ☒ evidence of erosion
☒ pet waste ☐ pipe drains
- Roads: ☐ pavement to catch basin ☐ bridge ☒ shoulders/country drainage
☒ drainage to waterbody ☒ evidence of erosion ☒ sand build up in road
☐ sediment in ditches/culverts/drains
- Agricultural: ☐ field ☐ animal grazing area ☐ manure storage area
☐ exposed soil ☐ animals in waterbody ☐ storage areas uncovered
- Commercial, ☐ parking lot ☐ vehicle maintenance yard ☐ industrial area
Industrial ☐ waste storage area ☐ drain pipes to waterbody ☐ sediment in ditches/culverts
& Urban: ☒ paved areas ☐ trash/waste storage near waterbodies
- Logging/ ☐ logging yard ☒ roads/trails ☐ stream crossings
Forestry: ☐ forested areas ☐ exposed soil ☐ poor roads
☐ brush/slash near waterbodies
- Other: (specify)

D. Land disturbances that affect water quality

1. Do you see evidence of excess nutrients? (Check all that apply)

- ☒ Soil erosion: ☐ silt ☒ sand ☒ soil ☐ stockpiled soil
☒ Evidence of runoff: ☐ rills ☒ gullies ☒ channel ☐ sedimentation
☒ Evidence of nutrients: ☒ pet waste/manure ☐ fertilizer use ☒ green lawns other (specify) _____

2. Do you see any of the following? If there are tributaries, catch basins drain pipes, and/or culverts on the site, explain your observation.

- ☒ Tributaries bringing in siltation: Small streams bringing in fertilizers
Pipes/culverts (describe conditions): _____
 - Describe what is going into the pipe (Add color and odor): _____
 - Describe any discharge from the pipe (Add color and odor): _____
Full catch basins: full with (circle): trash sand pet waste oil other _____
*Note problem catch basins on your map.

E. Water quality concerns (Check all that apply, describe the location and cause, and indicate site on map)

- ☐ Oily sheen or smell: _____
☐ Sewage: (odor, milky color, toilet paper) _____
☐ Foam or scum: (does a stick break it up? If it does, foam is probably natural.) _____
☐ Fishy odor or fish kill: _____
☐ Algae or aquatic weeds (excessive growth): _____
☐ Floating trash: _____
☒ Obvious sedimentation: (e.g., sand) Around Thurston's Beach - erosion

F. Habitat and wildlife (Evidence of...)

- ☒ Fish: (fish, fish nests, anglers) Identify species if known _____
☒ Other aquatic life: ☒ insects, ☒ turtles, ☐ frogs, ☐ snails, ☐ mussels, ☐ clams, other: _____
Identify species if known: _____
☒ Waterfowl: ☐ herons, ☒ ducks, ☒ geese, ☐ loons, other _____
☒ Areas of good habitat with wildlife: Describe lots of trees and shelter forest

End of Near Shore Area Field Sheets: Skip the next page, go to Pipe, Narrative, Priority & Map Pages

Lake Watershed Survey

Area Summary Sheet 2: Priorities for Action

Surveyor's Names: Brittany Flaherty & Hannah Neffler
 Section Name & Number: 10

Look back at your data sheets and include your observations. The information from this sheet will be used to develop the Watershed Survey Report and Action Plan.

| PROBLEMS: Problems found in your area, such as pipes or culverts discharging in dry weather, erosion, runoff, trash, dense algae, water quality problems (odor, color, oil, foam, sewage), and degraded wetlands (phragmites, loosestrife) (Describe and give location). | ASSETS: Assets found in your area, such as good habitat, wildlife species, businesses, or landowners using the river (in a friendly way), recreational access (canoe, trails, parks), potential recreational access, and potential park/conservation land, scenic views (Describe and give location). | PRIORITIES FOR ACTION: List items from problems/assets columns that you feel need more work. |
|---|--|--|
| <p>1. 1/10/06</p> <p>2. erosion</p> <p>3. runoff from lawn</p> <p>fertilizer goes into stream leading</p> <p>driving to pond (stop)</p> <p>erosion</p> <p>5. large amount of sand - rocks from erosion</p> <p>6. PETS!</p> | <p>1. wild life thrives - forest/woods</p> <p>2. dirt roads → no airport pollution in close proximity</p> <p>3. lots of canoe usage</p> <p>4. Brom. Rowing</p> <p>5. good swimming area</p> <p>6. nice view</p> <p>7. overall clean</p> <p>8. NO industrial areas</p> | <p>1. ppl need to be conscientious about where fertilizers are used</p> <p>• more better - buying EXTRA sand/rocks</p> <p>> EROSION</p> |

Farland - near by stream

6. along bridge - paved road → run off from asphalt bad → erosion