Norton’s Lakes and Ponds

Compiled by Conservation Agent Jennifer Carlino, Photo credits, 2010
Birding, fishing and boating, as well as simply viewing the waterscape are pleasures provided by Norton’s lakes and ponds. Many of Norton’s residents also live directly adjacent to a lake or pond. Living next to a lake or pond certainly has its advantages and disadvantages that may not be obvious. The ecosystems of lakes and ponds are very vulnerable to pollution. Residents can do a few simple things to keep these important natural resources healthy.

Maintain the natural vegetative buffer between the lake or pond and a lawn

- **Plants remove pollutants, reduce erosion and soil compaction.** Research shows that trees take up atmospheric carbon and remove phosphorus and nitrogen. Vegetated buffers also keep sediment from entering the water, preventing a cloudy lake or pond. Rain and snow falling on the land adjacent to a lake or pond makes its way to the lake or pond through groundwater or as surface runoff. Land with trees and shrubs has looser soil that can infiltrate and filter water easier than the compacted soil of a lawn. As with aquifers, infiltration of water into a waterbody, like a lake or pond, helps maintain a regular water level.

- **A vegetated buffer keeps the geese from pooping all over a lawn!** Avoid cleaning the mess left by geese altogether by not making a lawn an attractive buffet. Geese do not like a limited line of sight. Shorelines planted with tall native shrubs or marsh plants interrupt sightlines and discourage geese. Goose droppings contribute to e. coli bacteria and fecal coliform bacteria that is responsible for many beach closings. Keeping the water clean buffer can bring back the beaches and swimming on the Reservoir.

- **A vegetated buffer maintains our wildlife habitat.** There is no need to cut trees and shrubs to see the wildlife if you maintain the plants birds and animals need for food, cover, shelter and nesting. Bats and dragonflies utilizing these buffer areas eat mosquitoes! Trees and logs at the water’s edge provide important roosting and basking habitat for many birds and turtles. The recent sightings of the bald eagle would not have been possible if the large trees didn’t provide great views for it to hunt prey.

- **A vegetated buffer keeps our fish happy.** A vegetated buffer provides shade and cover at the water’s edge, keeping the temperature of the water cooler and providing places to hide.

- **Vegetated buffers also keep the fall foliage and scenic aspects of the lakes and ponds intact.** The view from water onto land is just as important as the view from land on to water.

Minimize or eliminate the use of chemicals

- **Try organic fertilizer or don’t use fertilizer on lawn.** Fertilizer, if used, should be limited to non-phosphorus fertilizers, in order to reduce potential for an excess of nutrients that contributes to aquatic plant growth, particularly of invasive species, and algal blooms (eutrophication). This is particularly important because excess nutrients encourage the explosive growth of exotic, invasive plants like milfoil, fanwort and water chestnut found in the Reservoir, Winnecunnet Pond, Chartley Pond and Barrowsville Pond.
Compost but not in the wetland, floodplain or along the shoreline

- It is true that naturally falling leaves provide food for the aquatic food chain but blowing leaves or dumping large piles of leaves creates more harm than good. The filling of the shoreline impacts the floodplain and where flood waters can go. By filling the floodplain, water is pushed onto someone else’s property and can cause damage to personal property. And if someone upstream is filling the floodplain the damaged personal property could be yours. No one likes angry neighbors. Compost leaves and other lawn debris at least 50 feet from the edge of the water and at least 25 feet from the edge of wetland. Contact the Conservation Office for help determining an appropriate place to stockpile leaves and grass clippings.

Conserve water

- Practice good water conservation techniques. Water withdrawals, particularly during the growing season and summer, can deplete groundwater levels within the drinking water aquifer recharge zones, which can put strains on the water supply, directly impacting the hydrology of adjacent wetlands and water-bodies. Water can be conserved by using drought tolerant grass seed and raising mower blades so grass is kept at 1-1/2 inches tall. Avoid watering the lawn and use rain barrels to water flower and vegetable gardens.

Resources:

- Shoreland Development Density and Impervious Surfaces. State of Wisconsin, Department of Natural Resources.
# Barrowsville Pond

**Location:** Eastern portion of Norton, off Power Street or Barrows Street

**Access:** 4 parking spaces on Power Street at the Power Street Conservation Area

**Size:** 32.86 acres

**Depth:** not available

**Source:** Wading River, outlets as Wading River

**Water Quality:** Section 303(d) list: noxious aquatic plants

**Owner:** Norton Conservation Commission

**Barrowsville Pond Dam:** privately managed, high hazard

**Vegetation:** Red maple, swamp loosestrife, buttonbush, purple loosestrife, pickerelweed. Aquatic plants include watershield, yellow water lily, white water lily, water chestnut, milfoil,

**Fish:** Not available

**Birds:** Tree swallow, warbling vireo, mute swan, Canada goose, red tailed hawk, belted kingfisher, brown headed cowbird

**Amphibians/reptiles:** Snapping turtle, spotted turtle, musk turtle, painted turtle, green frog, bullfrog

**Dragonflies/damselflies/butterflies:** Fragile forktail, eastern amberwing, green darner,

**Other wildlife:** Not available

**History:** This pond is situated within the “Barrowsville” section of Norton and derives its name from the once prominent Barrows family that lived in the area. The pond, which comprises an area of 44 acres, was created to provide power to the several mills that were operated around that area during the industrial revolution in town. The pond is encompassed as part of the Wading River Watershed and though classified as “man made” some perennial water has always been present due to the flow of the Wading River. As part of the creation of Barrowsville Pond the water was dammed to control the outflow from the pond for power regulation and river floodplain management.

**Invasive species, pollution, water quality:** Water chestnut (Trapa natans) has been found in Barrowsville Pond. The Open Space Committee hosts events to manually pull this plant from the pond to prevent the spread of the invasive species throughout town.
# Chartley Pond

**Location:** Western portion of Norton on South Worcester Street

**Access:** Limited access at the dam, one parking space on Union Rd near RR tracks

**Size:** 37 acres, 4320-acre watershed

**Depth:** Not available

**Source:** Chartley Brook, outlets as Chartley Brook (or Stoney Brook)

**Water Quality:** Section 303(d) list: noxious aquatic plants, turbidity

**Owner:** Norton Conservation Commission

**Chartley Dam:** high hazard classification

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**Vegetation:** Red maple, oaks, white pine, willow, fetterbush, highbush blueberry, swamp azalea, surround the pond. Aquatic plants include featherfoil, pickerelweed, white water lily, swamp and purple loosestrife

**Fish:** Large mouth bass, small mouth bass, bluegill, brown bullhead, pickerel

**Birds:** Canada goose, mute swan, double breasted cormorant, mallard ducks, great blue heron, red winged blackbird, red tail hawk, Baltimore oriole, wood duck

**Amphibians/reptiles:** Snapping turtle, painted turtle, eastern spiny softshell turtle (observed once and thought to be a released pet), green frog, bullfrog

**Dragonflies/damselflies/butterflies:** Fawn darner, fragile forktail, lancet clubtail, dot-tailed whiteface, white corporal, slaty skimmer, aurora damselfly, 12-spotted skimmer

**Other wildlife:** Muskrat, chipmunk, deer, red fox, freshwater mussel Pyganodon cataracta, snails

**History:** Located within the area known as “Chartley” this pond was man-made by damming Stoney Brook and by excavations for iron in the 17th & 18th centuries. The name “Chartley” is attributed to the first iron forge, which was established in 1695 by the Leonard Family of Taunton after the area of Staffordshire, England from where the Leonard family originated. The topography of the area, including the present pond, is indicative of the large-scale excavations of the Leonard family.

**Invasive species, pollution, water quality:** noxious aquatic plants, turbidity: Milfoil present. Gallarucella beetles were observed on the purple loosestrife in 2008. Water chestnut was recently discovered.

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Each year the Emergency Action Plan (EAP) is updated and submitted to the Office of Dam Safety (ODS) for the Chartley Dam. The EAP contains information for town officials to act in the event of a failure of the dam.
Norton Reservoir

**Location:** Northern portion of Norton at town boundary with Mansfield

**Access:** Small lot, canoe-top access only available on town property. Mansfield Avenue boat ramp not constructed yet.

**Size:** 580 ± acres, 12,570 acre watershed

**Depth:** 4.5-10 feet

**Source:** Rumford River, Great Brook and Back Bay Brook, outlets from Norton Reservoir Dam as Rumford River

**Water Quality:** Section 303(d) list: nutrients, noxious aquatic plants, turbidity, pesticides, exotic invasive species (non-polluting)

**Owner:** Norton Conservation Commission

**Reservoir Dam:** High hazard classification

**Vegetation:** With over 33,340 feet of shoreline, the Reservoir has a number of plants surrounding it. The shoreline and islands contain red maple, white birch, white pine, sweet pepperbush, buttonbush, red osier dogwood, swamp loosestrife, spikerush, high bush blueberry, cardinal flower, purple loosestrife, narrowleaf cattail, wild grape, willow, swamp rose, smartweed, bittersweet nightshade, swamp milkweed, and bulrush. Aquatic plants include watershield, coontail, waterweed, green algae, duckweed, Eurasian milfoil, bushy pondweed, white water lily, yellow water lily, bladderwort, water celery, watermeal, pickerelweed, pondweed, and arrowhead.

**Fish:** largemouth bass, chain pickerel, yellow perch, bluegill, pumpkinseed, golden shiner, American eel, brown bullhead, black crappie, white sucker, lake chubsucker, bridle shiner, Johnny darter, northern pike, and tiger muskies (1990 data).

**Birds:** black crowned night heron, great blue heron, bald eagle, hooded merganser, double breasted cormorant

**Amphibians/reptiles:** Snapping turtle, painted turtle, green frog, bullfrog

**Dragonflies/damselflies/butterflies:** green darner, lilipad forktail, fragile forktail, eastern forktail, eastern amberwing, black shouldered spinylegs, skimming bluet, slender bluet, blue dasher, eastern pondhawk, eastern amberwing, variable dancer, orange bluet, swamp spreadwing, elegant spreadwing, lilipad forktail, monarch

**Other wildlife:** freshwater mussels Elliptio complanata, Pyganodon cataracta, mink, colonial bryozoan,
Norton Reservoir

History: An early map of Norton in 1871 depicts the Reservoir as “Buttomennumonthe Pond”. Located in Norton (525+ acres) and Mansfield (25 acres) is one of the largest dammed water bodies in southeastern Massachusetts. The damming of the Rumford River for private industrial waterpower and fire protection uses in the late 1860’s created the Reservoir.

For decades organized groups of residents and town officials tried to negotiate with the private owners, the Wading River Reservoir Corp. (formerly Dighton Industries), to sell the Reservoir to the Town of Norton so that the Reservoir could be restored for regional recreational use. In 1986, the residents of the Town of Norton approved the purchase of Norton Reservoir for $2.1 million and in 1990 received a Self-Help Grant of $1 million for partial reimbursement of the purchase from the Division of Conservation Services. At the 1991 annual Town Meeting residents approved the use of $92,210.00 of those funds to be expended on a Diagnostic and Feasibility study for dredging the Reservoir. It was completed in 1994.

For many years, the Conservation Commission pursued the Norton Reservoir Dredging project, obtaining various permits and design plans. But by May of 2007 it became apparent that the project was not economically feasible. A private consultant determined that the sand and gravel that was supposed to fund the hydraulic dredging activities was heavily composed of silt, so much silt that it is not economically feasible to sort the silt from the rest of the material. The difference in the cost to process the sand and gravel and the cost of hydraulic dredging is between $23 million and $30 million. Even factoring in a revised project scope, where the dredging would be confined to a smaller portion of the reservoir with higher quality sand and gravel the project costs would still have a deficit of $19 million. In very simple terms the cost to dredge, as of 2007, would be $10.00/yard and the value of the material, in 2007, was $8.10/yard, at best.

Therefore, the Norton Reservoir Dredging project is indefinitely on hold.

Each year the Emergency Action Plan (EAP) is updated and submitted to the Office of Dam Safety (ODS) for the Norton Reservoir Dam. The EAP contains information for town officials to handle problems in the event of a failure of the dam.

Invasive species, pollution, water quality: Known problems include shallow depth, excessive algal presence, high-suspended solids and phosphorus concentrations, and 18+ point-source and non-point source nutrients from storm water runoff via local roads, Rt. 140, and Rt. 495. Sewage discharges from the old Mansfield sewage treatment plant (1938-1985), and septic discharges from shoreline cottages, degraded the water quality for recreational use. Some improvements have been made though since the Mansfield Waste Water Treatment Plant was construction and in 1991, 765 Norton homes received town sewer.

Events, special announcements: In recent years, the Open Space Committee has led canoe trips on the Reservoir for residents. LL Bean and the Norton Kayak Company have expanded this opportunity and have led many kayak tours. Norton Kayak Company organized the first Reservoir Clean Up Day in 2010.

Some information and maps were taken from the Draft Environmental Impact Report, EO EA 9903, Norton Reservoir Dredging Project, Baystate Environmental Consultants, April 15, 1998.
**Winnecunnet Pond**

**Location:** Northeast corner of Norton, on Bay Rd

**Access:** Division of Fisheries and wildlife has a boat ramp on Bay Rd at the outlet of the Pond on the Snake River.

**Size:** 148 acres, 20,500 ± acre watershed

**Depth:** 2-12 feet

**Source:** Canoe River and Mulberry Meadow Brook, outlets as Snake River

**Water Quality:** Class B, Section 303(d) list: noxious plants

**Owner:** Norton Conservation Commission

**Special designations:** Canoe River Area of Critical Environmental Concern (ACEC), Canoe River Sole Source Aquifer, Great Pond, Rare species habitat

**Vegetation:** Several plant communities are found within Winnecunnet Pond. The forested swamp consists mostly of red maples, black willows, poison ivy, greenbriar, fetterbush, silky dogwood, cinnamon fern and sensitive ferns. The shrub-scrub swamp consists of highbush blueberry, sweet pepperbush, speckled alder, elderberry, broadleaf cattail, tussock sedge, jewelweed, and marsh blue violet. Emergent marsh consists of swamp loosestrife, purple loosestrife, arrowwood, buttonbush, smartweeds, rice cutgrass, swamp rose, and arrow arum. Aquatic vegetation consists of watershield, green algae, water-starwort, waterweed, bayonet rush, duckweed, yellow water lily, white water lily, pickerelweed, ribbonleaf pondweed, fern pondweed, mermaidweed, bladderwort and water celery.

**Fish:** Tessilated darter, yellow perch, small mouth bass, green sunfish, bluegill, and bridle shiner

**Birds:** Chipping sparrow, goldfinch, redwing blackbird, yellow warbler, black-capped chickadee, Canada goose, song sparrow, catbird, mourning dove, tufted titmouse, northern flicker, blue jay, cardinal, tree swallow, mallard duck, wood duck, mute swans, belted kingfisher, double crested cormorant, green heron, great blue heron, and bald eagle.

**Amphibians/reptiles:** American toad, two-lined salamander, painted turtle, snapping turtle, musk turtle, bullfrog, green frog

**Dragonflies/damselflies/butterflies:** Slaty skimmer, blue dasher, meadowhawks, eastern amberwing, eastern pondhawk, widow skimmer, variable dancer, skimming bluet, orange bluet, spreadwings, ebony jewelwing, fragile forktail, 12-spotted skimmer, elegant spreadwing, green darner

**Other wildlife:** Skunk, muskrat, otter, freshwater mussels Elliptio complanata, Pyganodon cataracta, Lampsilis radiata, Ligumia nasuta, Leptodea ochracea, Margaritifera margaritifera
History: Winnecunnet Pond is the only natural pond of greater than 10 acres in Norton, known as a Great Pond. It is suggested that the native name means “beautiful place in the pines” or “land of the black geese” but neither has been confirmed. A diagnostic study commissioned by the Norton Conservation Commission in 1988 recommended installing town sewer around the lake to control sources of nutrients and short-term in-lake weed management to address the excessive density of weeds. The Town purchased an aquatic weed harvester in 1990, to be used where appropriate in Norton’s lakes and ponds. Trained volunteers have selectively harvested aquatic vegetation from Lake Winnecunnet during the summer months since then.

The Lake Winnecunnet Association brought to the attention of the Conservation Commission that the weed harvester is not effective on the fanwort that is currently infesting the pond. As a result the Conservation Commission posted a Request for Qualifications to hire a consultant to prepare a Diagnostic/Feasibility Plan for the lake. The consultant will conduct a biological survey of the lake and investigate the options for controlling the exotic, invasive plants. The master plan would also include maintenance of the lake once the invasive plants are removed and a management plan for recreational activities on the lake. This was completed in 2006 by Environmental Sciences Services (ESS). Funding for the final design and permitting for an invasive plant management plan was requested at the Fall Town Meeting of 2007. However, due to the economic climate, the town did not have the funds to pursue the project any further and the article was voted down.

Invasive species, pollution, water quality: Fanwort (Cabomba caroliniana), Variable water milfoil (Myriophyllum heterophyllum) and purple loosestrife (Lythrum salicaria) are the main exotic invasive plant species covering the pond. A densely populated shoreline has led to alteration of wetland vegetation along the pond edges and floodplain areas as well as water quality from failing septic systems. The majority of the shoreline homes have connected to municipal sewer systems in attempts to reduce nitrogen input to the pond. Five point source discharges release storm water into the pond from King Philip Rd, Bay Rd and Charlotte Ave.

In-lake and storm drain water quality testing in 2006 by ESS Group Inc. showed extremely high levels of phosphorus and elevated nitrogen, likely influencing the rapid growth of invasive plants within the pond. Phosphorus and nitrogen are present in lawn fertilizers. Chemical treatment of the invasive plants is recommended but funding was not approved at Town Meeting for the project. Reduction of sediments and pre-treatment of storm water is recommended for the five point source discharges.

Upstream control of goose/swan populations and Scooping the Poop Campaigns for pet waste as well as utilization of best management practices for agricultural activities is recommended for fecal coliform bacteria control.

Events, special announcements: Ice fishing is very popular on the pond. Canoeing, fishing, boating and sailing are popular summertime activities although the excessive plant growth makes it difficult anytime after July. The Lake Winnecunnet Association has regular meetings.

Some of the information and maps were taken from the Diagnostic and Feasibility Study, Lake Winnecunnet, Norton Massachusetts, ESS Group, Inc. December 7, 2006.