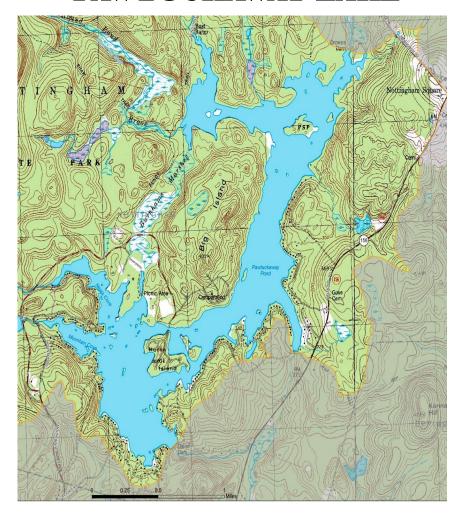
Welcome To

PAWTUCKAWAY LAKE



Pawtuckaway Lake Improvement Association Nottingham, New Hampshire www.pawtuckawaylake.com

PRESIDENT'S MESSAGE

By Tom Duffy, PLIA President

The Pawtuckaway Lake Improvement Association welcomes you to Pawtuckaway Lake and State Park. We are a nonprofit charitable organization that promotes excellence in lake stewardship through education and action.

Our members volunteer for many jobs so that we continue to improve the quality of life for living and playing on the lake. We invite

you to volunteer with us to take action in those areas of conservation and education that appeal to you.

Please respect the natural beauty and resources of our lake. By following a few simple guidelines in this booklet, residents and visitors alike will continue to enjoy this little piece of paradise.



We hope you find this guide interesting and informative, and that you will be inspired to become a member of the PLIA. Membership information can be found at www.pawtuckawaylake.com.



You are also invited to join us at our Annual Meeting, which generally takes place the second Saturday in June. Please visit our website for details, as well as much more information and history about our organization and its activities. See you on the lake!

IMPORTANT CONTACT INFORMATION

EMERGENCY 911

PLIA: http://www.pawtuckawaylake.com

Nottingham Police Department: 679-1506

Nottingham Fire and Rescue: 679-5666

Town of Nottingham: 679-5022 http://www.nottingham-nh.gov/

Nottingham Recycling Center: 942-5171

NH Dept. Environmental Services (NHDES): 271-3503

http://des.nh.gov/

NHDES Shoreland Program: 271-2147

http://des.nh.gov/organization/divisions/water/wetlands/cspa/

http://des.nh.gov/organization/commissioner/pip/factsheets/sp/

Loon Preservation Committee: 476-5666 http://www.loon.org/

NH Lakes Association: 226-0299 http://nhlakes.org/

Pawtuckaway State Park: 895-3031

http://www.nhstateparks.org/explore/state-parks/pawtuckaway-state-

<u>park.aspx</u>

NH Fish and Game: 1-877-450-4994

https://www.nhfishandgame.com/

Marine Patrol: 293-2037

http://www.nh.gov/safety/divisions/nhsp/fob/marine-patrol/

State Police: <u>Troop A</u> 679-3333 **Poison Control:** 1-800-222-1222

http://www.nhec.coop



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PAWTUCKAWAY LAKE IMPROVEMENT

ASSOCIATION

Begun in 1958, the Pawtuckaway Lake Improvement Association (PLIA to its friends) is a nonprofit organization created to conserve,

TAKE A LOOK AT THE PLIA MISSION AND BYLAWS AT: http:// pawtuckawaylake.com/files/ bylaws.pdf protect, and enhance the natural resources of the water and wildlife of Pawtuckaway Lake to benefit and educate the public, including those who visit the State Park, boat launch, or Town beach.

Matters involving water quality, natural shoreline, wildlife habitat, recreational resources, safety, and natural resources are the substance of concern and activities of the Association. Through its Board of

Directors and its committees, the PLIA monitors and acts upon environmental and safety issues that affect the lake; educates the public on the conservation, protection, and improvement of the welfare and interests of Pawtuckaway Lake; and collaborates with conservation commissions, planning boards, state and federal entities, land trusts, and other conservation organizations working to protect natural resources that have an impact on Pawtuckaway Lake.

WATER TESTING

The Association has been testing the quality of lake water since 1988, in order to monitor its clarity and health. Its Water Testing



Committee operates five months a year, under the guidance of the NH Department of Environmental Services (NHDES), through its Volunteer Lake Assessment Program (VLAP). This Program enables the PLIA to assess water quality by measuring clarity, phosphorus, oxygen, chlorophyll,

and other biological indicators. This data is useful to monitor the health of the lake and develop programs to improve it. Graphs of these VLAP measurements over the years are very informative. Visit the PLIA's website at: http://www.pawtuckawaylake.com/ and see for yourself!

Excessive phosphorus in a freshwater system increases nuisance levels of aquatic plant and algal growth, and its proliferation in our lake water over the years has been a growing cause for concern. In 1993, the PLIA was able to obtain a State-funded diagnostic study of the ecological health of our lake water. It also funded a program of amelioration at several off-lake sites where significant amounts of phosphorus were leaching and draining into streams that feed the lake. A follow-up grant in 2008 further enhanced water quality. To read the report generated from this study, go to: http://des.nh.gov/organization/divisions/water/wmb/was/documents/wbp_pawtuckaway_lake.pdf

WEED WATCHERS

The Weed Watcher Program trains and organizes volunteers to inspect the lake shore and adjacent waters for weeds that by their presence threaten to disrupt the balance of biodiversity in plant life around Pawtuckaway. These "Weed Warriors" are equipped to eradicate such invasive growth wherever they find it in and about our lake.



LAKE HOSTS

The PLIA's Lake Host Program protects the lake from aquatic invasive

THE NH LAKES ASSOCIATION IS VERY ACTIVE. LEARN MORE, AND BECOME A MEMBER, AT: http://nhlakes.org/

species by examining vessels and equipment entering the lake to locate and remove any suspected foreign "hitchhikers". Administered by the NH Lakes Association and consistently supported by grants from the Town of Nottingham as well as the NH Lakes Association, not to mention PLIA funds, Program volunteers comprise the bulk of its actual workforce. They inspect boats and trailers at various boat ramps on the lake and educate boaters about the



dangers of invasive aquatic species. Fortunately for Pawtuckaway, many "finds" have resulted in rescues that have kept our lake safe from invasion.

YOU CAN LEARN MORE
ABOUT INVASIVE AQUATIC
SPECIES BY VISITING THIS
WEBSITE: http://des.nh.gov/
organization/divisions/water/wmb/
exoticspecies/

BEST PRACTICES PROMOTED BY THE PLIA TO REDUCE THE PRESENCE OF PHOSPHORUS BY PREVENTING RUNOFF OF POLLUTANTS INTO THE LAKE:

- 1. Maintain a proper septic system and pump it out every three to five years;
- Do not bathe or shampoo pets, wash boats or cars, or otherwise use phosphorus-containing soaps in the lake, near the lake, or in your home;
- 3. Do not use fertilizer near the lake shore;
- 4. Maintain a buffer of natural vegetation along the shore or create a rain garden to contain erosion;
- 5. Do not burn leaves, brush, or grass clippings near the lake, and dump nothing into the lake;
- 6. Do not feed ducks, geese, or other aquatic animals;
- 7. Do not urinate or defecate into the lake and do not allow pets to do so either;
- 8. Do not use powerful outboard motors in shallow areas, because the nutrient-laden bottom sediments can be churned and mixed into the overlying water.

TAKE A LOOK AT THE PLAN
THAT ADDRESSES WATER
LEVELS AND NHDES INVOLVEMENT, AT: http://
des.nh.gov/organization/
divisions/water/wmb/rivers/
instream/lamprey/

documents/20130829lr-wmp.pdf

NHDES PARTNERSHIP

Several years ago, the NHDES embarked on a legislatively mandated study known as the Lamprey River Water Management Project. The resulting Plan proposed significant changes to the annual drawdown of Pawtuckaway Lake and through the PLIA, NHDES was alerted to the interest of its members in this Plan. In October of 2013, the PLIA signed a Partnership Participation Agreement (PPA) with NHDES to work collaboratively to enhance the lake's water quality, which has been improving in recent years! We are the first lake association in NH to have this close cooperation, and increased testing and management as a result. The text of this historic agreement is at:



TOM BURACK, NHDES COMMISSIONER, LEFT, AND TOM DUFFY, PLIA PRESIDENT, RIGHT, WITH SIGNED PPA

http://des.nh.gov/organization/divisions/

water/wmb/rivers/instream/documents/20130925des-plia-pa.pdf

THERE IS A FOLKSY HISTORY WRITTEN BY A PLIA OLD-TIMER AT:

http://www.pawtuckawaylake.com/images/stories/History/ mr._cromptons_historical_commentary.pdf

INTERESTING FACTS ABOUT PAWTUCKAWAY LAKE

What Does Pawtuckaway Mean?

Depending on the source, there are a number of competing answers. One says Pawtuckaway came from the Algonquin word



"Pawtuckaway" which meant "Place of the Big Buck". Another notes that the Native Americans called the area of Pawtuckaway "land of sticks and stones", which nicely applies to the region of the lake, as it was not considered fit for farming. Finally, a third possibility is that Pawtuckaway is derived from the Native America term for "the falls in the river".

Local Native Americans

Small groups of Native Americans belonging to the Penacook Confederacy inhabited the area around Pawtuckaway. They were part



PASSACONNAWAY

of the larger Algonquin Division which covered northeastern America. Reportedly, they were mild-mannered people, influenced by the colonization of the French as well as the English. Their leader, Passaconnaway, was said to be a peaceful man.

Geology of the Region

355 million years ago - this area was under a huge inland sea that deposited 20,000 feet of sand and mud. This was destined to become sedimentary rocks.

300 million years ago - the land rose; the sedimentary rocks folded; and magma (igneous rocks) intruded changing the whole area into metamorphic rocks.

290 million years ago - the sea receded.



275 million years ago - tectonic pressure caused circular fractures in the area and another major magma intrusion was forced up, creating what is called a ring dike, the outline of which formed the circle of what are now known as the Pawtuckaway Mountains.

175 million years ago -dikes (igneous rock) intruded.

2 million years ago - the Great Ice Age – glaciers of ice up to one mile thick covered the area. Imagine a huge wall of ice moving from the extreme north through present day Canada and extending as far south

as New England. As they inched forward, the glaciers made scratches and grooves in underlying rock formations, plucking the bedrock beneath them and covering the area with soil and rocks.

30,000 years ago - the last of the glaciers began to retreat. As they moved north they deposited the soil and their rock loads. Many of these stones were of gigantic proportions. You can see these huge rocks in our State Park's Boulder Field and Devil's Den. as well as scattered in and about Pawtuckaway Lake.



How Did the Lake Form?

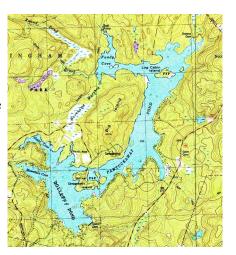
Geography is destiny. Long before settlers moved into the region, now called the Pawtuckaway Basin, waters moving from higher areas flowed to the lower sections via a series of streams and brooks. Ultimately, on the north end the waters flowed into what we now call the North River. On the south end, water from Mountain Brook and other minor tributaries flowed into small pools. These pools then drained into what is now called the Pawtuckaway River, also known as the Stingy River. Ultimately, the North River and Pawtuckaway River join the Lamprey River which flows into Great Bay and the Atlantic Ocean.

The construction of two colonial sawmills changed the area and marked the beginning of two ponds. On the north end, in 1729 settlers built a sawmill creating what would become Pawtuckaway Pond. On the south end, in 1732 another sawmill was built that created Dolloff Pond

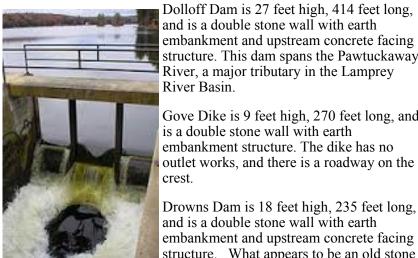
In 1836, to supply water power to the factories of New Market, two dams were constructed. The dams changed the features and character of the two ponds: Dolloff Pond and Pawtuckaway Pond. Eventually, steam power supplanted water power, and there was gradually less drainage of lake water to generate power. As water levels rose over time, these two ponds merged.

When it fell on hard times in the early 1920's the Newmarket Manufacturing Company moved south. As a result, its interests in the lake eventually passed into the hands of the New Hampshire Electric Company. Ultimately, the production of electricity became

unprofitable and in 1956 New Hampshire Electric deeded the lake and its islands, its adjacent land, two dams, a dike, and the water rights to the State of New Hampshire. In 1958 and 1959 the names Dolloff Pond and Pawtuckaway Pond were changed to Pawtuckaway Lake. Today the lake is 900 acres and has two operational dams. The deepest part of the lake is about 53 feet.



What About the Dams?



structure. This dam spans the Pawtuckaway River, a major tributary in the Lamprey River Basin. Gove Dike is 9 feet high, 270 feet long, and

is a double stone wall with earth embankment structure. The dike has no outlet works, and there is a roadway on the crest.

Drowns Dam is 18 feet high, 235 feet long, and is a double stone wall with earth embankment and upstream concrete facing structure. What appears to be an old stone coffer dam exists in front of Drowns Dam that has the effect of limiting outflow from

DOLLOFF DAM

this dam once the water is drawn down to a level of 5.4 feet below full lake.

READ ENTERTAINING STORIES TOLD BY PEOPLE WHO BUILT CAMPS AND SPENT SUMMERS ON PAWTUCKAWAY IN THE "EARLY DAYS" AT:

http://www.pawtuckawaylake.com/index.php/history

Pawtuckaway State Park

In 1958 the State of New Hampshire initiated a project to create a state park at Pawtuckaway. It was to serve the recreational needs of the area as it was within driving range of a significant



population of the state. After much deliberation followed by land acquisition and construction, the Park officially opened in 1966.

TO READ MORE ABOUT THE STATE PARK, FIND TRAIL MAPS, AND GET HIKING INFORMATION, GO TO:

http://www.nhstateparks.org/explore/state-parks/pawtuckaway-state-park.aspx

Fernald Conservation Project

In 2015, the Society for the Protection of New Hampshire Forests announced the acquisition of a 95 acre parcel of land on Pawtuckaway Lake for conservation and public access. This land abuts the State Park, resulting in a contiguous block of conserved wildlife habitats totaling 6,235 acres. The Nottingham Conservation Commission will be able to create trails, an educational kiosk, and a small parking area free to the public

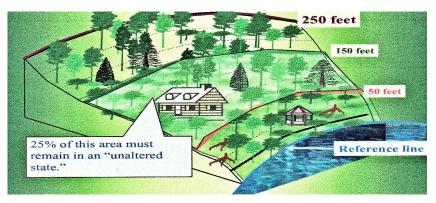
DETAILS ABOUT THIS EXCITING PROJECT, AND AN OPPORTUNITY TO CONTRIBUTE, CAN BE FOUND AT:

http://develop.forests.dev.echoditto.com/project/pawtuckaway-lake-project-nottingham

PAWTUCKAWAY AND THE SHORELAND PROTECTION ACT:

Brief Summary: The first 250 feet of shorefront land from the high water mark back is protected. No fertilizer or pesticides can be used within the first 25 feet. The first 50 feet is a no developing buffer zone. Tree cutting is regulated within the first 150 feet. For example, limbing and trimming is OK, but removal is strictly regulated.

Purpose: Vegetation maintenance is a key component in preserving the integrity of public waters and is also a critical element of wildlife habitat. Further, it can more naturally manage harmful storm runoff.



THE 150 FEET WIDE PROTECTED VEGETATED BUFFER IS DIVIDED INTO TWO REGIONS. THE FIRST 50 FEET IS CALLED THE WATERFRONT BUFFER ZONE AND THE REGION BETWEEN 50 FEET AND 150 FEET IS THE NATURAL WOODLAND BUFFER ZONE.

Beaches and Sand:

This is pertinent to all waterfront property: a wetlands permit is required before any sand can be dumped or work started. This also includes replenishing beach sand. Work completed without a permit may result in a removal and restoration order, and possibly fines.

Docks:

Contact NHDES Wetlands Bureau to determine if a docking permit is required for:

Repairing an existing dock
Installing a new, single seasonal dock
Installing or modifying a permanent dock
Constructing new, seasonal docks or modifying the footprint(s) of existing, seasonal docks
Installing a single boat lift or no more than 2 jet-ski lifts
Adding a seasonal canopy to a dock

YOU CAN MORE FULLY UNDERSTAND THE REQUIREMENTS OF THE SHORELAND WATER QUALITY PROTECTION ACT AT THIS WEBSITE:

http://des.nh.gov/organization/divisions/water/wetlands/cspa/

Campfires and Burning Brush

Contact the Nottingham Fire and Rescue Department regarding information about seasonal burning permits and burning brush. *Note:* prior inspection of fire pits and permits are <u>required!</u>

Lake Drawdown

The practice of fall drawdown is implemented for multiple purposes. It is an economic means of plant control and may also aid in phosphorus reduction. The drawdown allows property owners to clean their frontage and perform repairs to docks, walls, and beaches. The drawdown on Pawtuckaway usually begins in mid-October.

NHDES MAINTAINS A GAUGE AT DOLLOFF DAM THAT MEASURES THEWATER LEVEL

http://www2.des.state.nh.us/RTi_Home/station_information_display.asp?

ID-PAWNH&NAME-Pawtuckaway+Lake&FU LLPOND-Full+Lake+-+25+ft.+Local+-+250.4+f

t.+above+sea+level



BOATING: EQUIPMENT AND OPERATING

New Hampshire has strict laws that are aggressively enforced prohibiting the operation of a boat while under the influence of alcohol or other intoxicating substances. Don't take any chances!

Other laws enforced by the Marine Patrol on our lake:

- 1. You must register your boat and display decals on the hull if it is motorized or a sailboat 12 feet or longer;
- 2. On a jet ski, the operator must wear a Personal Flotation Device (PFD);
- 3. Children age 12 and under must wear a PFD at all times on *any* vessel, unless it is completely enclosed by 3 foot high railings;

- 4. All boats must carry one PFD per passenger, a fire extinguisher, and a whistle;
- 5. Every boat must be equipped with navigation lights for use at night or in obstructed visibility: red (port) and green (starboard) bow lights



and a white stern light (excepting canoes, kayaks, and rowboats, which only need an all-around white light); jet skis are not allowed to operate between sunset and sunrise;

- 6. No person age 16 or older may operate a motorized vessel powered by more than 25 horsepower without first obtaining a Certificate of Boating Safety Education, which must be carried aboard. Operators under 16 must be accompanied by a passenger age 18 or older with a Certificate;
- 7. Water skiers or others being towed behind a motorized vessel must wear a PFD, must at all times remain at least 150 feet from shore, navigational marker, or other obstacle, and may only be towed during daylight hours;
- 8. Any motorized vessel towing a person must have one passenger (age 13 or older) per towed person in addition to the boat's operator, to monitor the towed person and alert the operator of any problems;
- 9. All boats and jet skis must be slowed to headway speed within 150 feet of the shoreline, other vessels, swimmers, docks, and rafts; under a bridge; or in a "No Wake" zone; headway speed means the slowest speed at which it is possible to maintain steering, or 6 miles per hour.
- 10. Spar buoys and markers in the water require that you operate your boat as follows:

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Go between solid **RED** and **BLACK** markers;



Go South and West of RED TOP markers Go North And East of BLACK TOP markers



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OUR LOONS

Pawtuckaway Lake is lucky to have two nesting pairs of loons that

return to their customary

territory every summer. These birds are large and striking, with their black and white checkered plumage and red eyes. They have solid rather than hollow bones and their legs are positioned far back on their bodies, adapting them perfectly for diving and swimming underwater. Their distinctive calls are haunting and evocative,



and they are fiercely territorial. Their nesting activities are closely monitored by interested lake residents and once they have laid their eggs, the loons take turns on the nest.



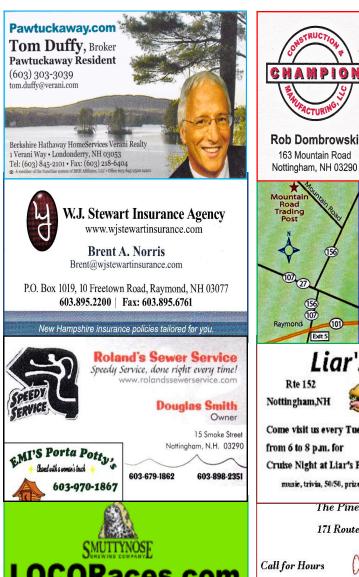
The loons' nesting sites are protected by avid 'loon' atics who live or vacation on the lake and who take a close interest in the well-being of these unique summer visitors. Everyone is alerted when the chicks hatch, and their activities throughout the summer delight the entire community.

LEARN MORE ABOUT THESE FASCINATING AND ENGAGING BIRDS, AT: http://www.loon.org/

FISHING ON THE LAKE

The loons do not compete with Pawtuckaway fishermen, since their prey is generally too small to interest the angler. Although it is known for its bass fishing, Pawtuckaway offers many varieties of fish: largemouth bass, smallmouth bass, pickerel, crappie, horned pout, perch, and sunfish. Most residents, visitors, and tournament participants practice catch-and-release fishing. A fishing license is required for age 16 and older and can be obtained at many local stores or online, at: https://www.nhfishandgame.com/

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