

NATURAL RESOURCE INVENTORY: FREEDOM, NH

(revised June 2024: Paul Elie, Michele Keenan, Freedom Conservation Commission)

Mission Statement

The Mission Statement of the Freedom Conservation Commission Committee (FCC) is to protect, preserve, and enhance the natural beauty and ecological health of our town's lakes, forests, and wildlife habitats. We are dedicated to fostering a deep connection between the community and the environment through education, stewardship, and sustainable practices. By working together, we aim to ensure that these vital natural resources remain vibrant and accessible for generations to come.

Goals and Objectives

The FCC is an advisory board organized for the proper utilization and protection of natural resources within Freedom. The FCC works closely with the Planning Board, Zoning Board of Adjustment, Select Board, Forest Advisory Committee and local lake associations. They also collaborate with local and state conservation organizations in NH.

Section 1: Introduction

This Natural Resource Inventory (NRI) is a document that identifies and describes naturally occurring resources in the town of Freedom, NH per the requirements of the State of NH, Conservation Commission RSA 36 A:2, New Hampshire Planning and Land Use Regulation, 2023-2024. The goal of the NRI is to provide a solid foundation and baseline data for more informed decision making in the future about conservation efforts. According to RSA 36 A:2, this NRI should be reviewed and updated yearly to reflect changes and emerging data.

The town of Freedom is located in central NH and is bordered by Maine to the east, Ossipee River to the south, Ossipee Lake and West Branch River to the west and by Madison, NH and Eaton, NH to the North. It encompasses 34.5 square miles of land area and 3.4 square miles of inland water area. Freedom has significant and diverse areas of wildlife habitat with its lakes, ponds, rivers/streams and its varied topography which include preserved conservation land and undeveloped land in its mountains and hills. Freedom's total acreage is 22080.00. Currently in 2024, total conservation acreage is 5049.99 or 22% of town land. Total wetland acreage is 1689.00 or 8% of town land. Combined total conservation and wetland acreage is 6737.99 or 31% of town land.

The population of Freedom includes approximately 1,500 year-round residents and that number increases during peak summer months to approximately 10,000 people with second homeowners, RV park residents as it is situated in the popular Lakes Region of NH.

On March 5, 1973, the Town of Freedom established the Freedom Conservation Commission (FCC) with the goal of protecting its natural resources. Since 1973, many local lake associations/committees have emerged and are active in helping in the towns' conservation efforts.

In 2014, the results of a Community Survey indicated that over 90% of the respondents said they wanted future zoning ordinances to continue to protect Freedom's natural resources.

(Land Use/Land Cover Map link)

Section II: Water Resources

Freedom has 2,185 acres of surface water that includes lakes, ponds, rivers, streams and vernal pools. (see NRI-Waters inventory chart.) According to the NH Department of the Interior, 9.3 square or 26 percent sits over the Ossipee Aquifer which is New Hampshire's largest stratified drift aquifer. The aquifer stretches across most of the western side of town and is a primary source of well water for the town. According to the Ossipee Watershed Coalitions' geologist Dr. Robert Newton, the town of Freedom is considered to be the primary recharge zone for the aquifer.

In early 2002, Freedom and the Green Mountain Conservation Group (GMCG) developed and implemented a Water Management Plan to help protect water resources after GMCG found increases in phosphorous levels in the testing of Ossipee Lake. In 2011, the town voted to adopt a ground water protection ordinance that regulates commercial practices in the groundwater protection district. In 2023, GMCG Water Quality Report recommended to 1) enforce septic regulations 2) address Best Practice Management 3) implementation of an aquifer protection committee and 4) continue ongoing monitoring.

The Selectman, Zoning Board, Planning Board and the Freedom Conservation Commission strive to uphold the ordinances and regulations of the State of NH Shoreline Protection Act. GMCG continues to monitor the waters in Freedom and offers educational brochures and classes on best practice management practices for healthy waters for commercial businesses and residents. Freedom also has local lake associations that support and contribute to conservation efforts.

The FCC, which now includes the Freedom Aquatic Invasive Species Committee (FAISC) and local lake associations monitor variable milfoil in town waters. It has been a threat since the early 2000's. Currently, milfoil locations are in Danforth upper, middle and lower ponds, in Broad Bay near the Ossipee Lake Marina and in the northern tip of Berry Bay. As of 2022, growth has been limited. Herbicides have not been needed. Since 2013, the Ossipee Lake Alliance and more recently the FAISC have sponsored the NHLakes Lake Host Program which help educate boaters on the prevention and introduction of milfoil in Ossipee Lake and bays. The lake hosts are located at the busiest boat launches on the lake system. They also provide boat inspections. The State of NH reimburses the town for 25-50% of the cost depending on the year.

The lakes/rivers/streams and wetlands provide diverse natural wildlife habitats for a variety of birds, animals and fish common to the State of NH. Examples are a variety of small birds, hawks, eagles, osprey, seagulls, the Great Blue Heron, common loons, a variety of ducks to name a few. Fish include a variety of trout, crappie, perch, bass, salmon, horned pout, eels and more. Protection of their natural habitat is the mission of local conservation efforts. (See Wildlife Habitat map)

Wetlands

Freedom has 1,689 acres of wetlands that are delineated as poorly or very poorly drained soils that include swamps, marches, fens and bogs. Freedom has several FEMA Zone A flood plain areas which have 1 percent annual flooding. Freedom has a flood plain ordinance that conforms with FEMA

requirements. The town participates in the National Flood Insurance Program (NFIP) that limits development in 100 year flood plains to transient or well anchored structures. Freedom's 100 year flood level is 414 feet above sea level. The town has several vernal pools but they are currently not mapped, counted or monitored.

(map link)

Concerns

In 2022/2023 the State of NH EPA identified Danforth Ponds as an "inferior pond" with low oxygen levels. GMCG and the Friends of Danforth Ponds received a \$100,000 grant that will fund a 2 year initiative, under guidance of NH Department of Environmental Services (NHDES), to fund erosion control on Ossipee Lake Road and Danforth Bay Campground, provide 65 homeowners with best practice management to curb storm run-off, encourage proper septic system testing and maintenance.

Variable milfoil is an ongoing threat.

Bladderwort is currently being monitored in Ossipee Lake and has been identified in the Pine River which flows into the south end of the lake.

Cyanobacteria is being monitored and education to lake front homeowners is available through GMCG.

In 2019, GMCG testing found microplastic in Ossipee Lake and in all connected bays. In 2022/2023, GMCG received grant money to continue monitoring for microplastics in the Ossipee Watershed.

Section III: Land Resources

Freedom contains 43.5 square miles of land area. 5,048.99 acres or 22.87% is protected by town owned conservation land and private organization conservation easement. 84 % of the conservation land in Freedom is comprised of the Freedom Town Forest. The town forest was established in June 2005 by the efforts of town residents, The Trust for Public Lands, Friends of Trout Pond, GMCG and funds from the Forest Legacy program. A conservation easement allows sustainable logging while protecting local watershed, wildlife habitat and recreation. Access location include Ossipee Lake Road, Shawtown Road and Route 153. The Freedom Town Forest encompasses 2,661 acres of land which also includes 1,280 acres of the Ossipee Pine Barrens. The Ossipee Pine Barrens is protected by The Nature Conservancy and subject to the NH Forest Legacy Easement. It is a globally rare forest type containing pitch pine, scrub oak and other rare plants such as the slender leaf goldenrod, golden heather, blunt leaved milkweed, black huckleberry, sweet fern and woodland sedge. It is home to approximately two dozen threatened and endangered moths and butterflies with some not found in any other area of the state. The pine barrens also recharge and safeguard the Ossipee Aquifer, the largest stratified drift aquifer in the state. The Town Forest also is home to uncommon wildlife and threatened and endangered species such as the whip-or-whil, the common nighthawk, the eastern towhee and the saw whet owl. It is also home to many NH animals such as moose, deer, bear, bobcats, raccoons, beavers, porcupines, snow shoe rabbits, skunks, fox, coyotes, turkeys, grouse, partridge and more. Trout Pond and its connected streams/rivers provide spawning grounds for a variety of fish, turtles and smaller reptiles. (See Wildlife Habitat map)

The Town of Freedom, the Freedom Conservation Commission/ Forest Advisory Committee adopted a Forest Stewardship Plan to manage the forest which is updated every 10 years. B.H. Keith Associates is the contracted forester that helps manage this property along with the NH Fish and Game, UNH Cooperative Extension, Scrub Oak Scramblers Snowmobile Club and others. They provide yearly assessments on road, trail and kiosk maintenance, timber harvesting and sale of timber, management of wildlife habitats, etc. In 2023/2024, the FCC/FAC are working towards the implementation of a Town Forest Burn Plan to further manage this land.

Topography and Soils

The Eastern part of Freedom is characterized as hilly with steep slopes with elevations greater than 1,000 feet which include Blazo Mountain, Prospect Mountain, Cragged Mountain and Durgin Hill. Smaller hills include Mary's Mountain and Scarboro Ridge Trail. The land area around the lakes and ponds are mostly residential, flat and comprised of sandy soils. According to the NH Department of Agriculture, 57 percent of the land in Freedom is considered farmland with half if it considered of local importance for food, feed and forage, limited livestock such as chickens and pigs, It is home to small farms and is not considered prime farmland.

Concerns

Recently, Japanese Knotweed, an invasive species has been found in Freedom. Education on Best Practice Management and treatment options is ongoing.

Bittersweet, an invasive plant has been here for some time. Currently, there is no active management or treatment of this plant.

(Natural Resources Map link)

(Wildlife Habitat Priority Map link)

link)

Supporting Conservation Committees/Organizations

Department of Natural and Cultural Resources (formerly DRED)

NH Department of Environmental Services

Freedom Conservation Commission/Forest Advisory Committee (includes Freedom Aquatic Invasive Species Committee)

Green Mountain Conservation Group

Ossipee Lake Alliance

Lakes Region Planning Commission

NH Lakes

Friends of Danforth Ponds

Berry Bay Association

Loon Lake Association

Broad-Leavitt Bay Association

Resources-

Green Mountain Conservation Group, www.gmcg.org/watershed

Friends of Danforth Bay, friendsofdanforthponds@gmail.com

Ossipee Lake Alliance. www.ossipeelake.org

Town of Freedom Master Plan 2020, Paul Elie, Freedom Conservation Commission, Chapter 3

Town of Freedom Annual Report 2020, Conservation Commission Report

NH Fish and Game www.lake-link.com

UNH Cooperative Extension, [Amanda Stone@unh.edu](mailto:Amanda.Stone@unh.edu)