



2023-2024 RESEARCH + MANAGEMENT REPORT

HABITAT & LAND CONSERVATION



2023-24 RESEARCH & MANAGEMENT REPORT

Maine Department of Inland Fisheries and Wildlife protects and manages Maine’s fish and wildlife and their habitats, promotes Maine’s outdoor heritage, and safely connects people with nature through responsible recreation, sport, and science.

Habitat & Land Conservation

Introduction	2
Environmental Review	4
Beginning with Habitat	5
Data Administration	8
Land Acquisition Program	10
Water Access Program	12

Download additional sections at
mefishwildlife.com/wildlifereport

- » Game Species Conservation & Management
- » Non-Game Species Conservation & Management
- » Regional Wildlife Management

Maine Department of Inland Fisheries & Wildlife

353 Water Street
41 State House Station
Augusta, ME 04333-0041
207-446-2964

Project Funding

The studies included in this report are financed in part through Federal Aid in Wildlife Restoration Funds under Projects 88D and 87R and through State Wildlife Grants.

The Department of Inland Fisheries and Wildlife receives Federal funds from the U.S. Department of the Interior.

Accordingly, all Department programs and activities must be operated free from discrimination in regard to race, color, national origin, age or handicap. Any person who believes that he or she has been discriminated against should write to The Office of Equal Opportunity, U.S.



HABITAT & LAND CONSERVATION

Working together to increase habitat conservation and water access in Maine

The Habitat Conservation Section conserves, restores, and enhances Maine’s diverse fish and wildlife habitats. Established in 2023 through a Wildlife Division reorganization, the Section brings together four longstanding programs — Data Administration, Beginning with Habitat, Environmental Review, and Land Acquisition — to increase the pace, quality, and breadth of the Department’s conservation efforts.

The Section’s various activities include:

- Compiling, managing, and distributing plant, fish, and wildlife data
- Delivering science-based recommendations for habitat protection and management
- Providing technical assistance for conservation planning and land management activities
- Completing land protection and restoration projects
- Securing state and federal funding for conservation
- Facilitating climate adaptation and resilience planning

The Section works across MDIFW’s Wildlife and Fisheries Divisions as well as with sister agencies, partner organizations, and private landowners to achieve the conservation actions outlined in Maine’s State Wildlife Action Plan.

In its first two years, the Section conserved thousands of acres, secured major funding for conservation and restoration projects, completed more than 2,000 environmental reviews, supported dozens of municipal planning efforts, and provided land management assistance to hundreds of private landowners. Read on to learn more about recent highlights.

Closely aligned with the mission and scope of the Habitat Conservation Section, the Water Access Program, now housed within the Engineering Division, manages 184 MDIFW-owned water access sites. These range from hand-carry facilities and shore fishing access to walk-in access points and trailered boat launches, ensuring the public can enjoy Maine’s “Blue Parks” for angling, boating, and paddling.



Salt marsh habitat in Phippsburg, Maine



Bicknell's thrush, a Threatened species

THE TEAM

Bethany Atkins
*Habitat Conservation Section
Supervisor*

ENVIRONMENTAL REVIEW

John Perry
*Environmental Review Program
Manager*

Andy Wood
*Environmental Review
Program Coordinator*

Ciara Wentworth
Resource Biologist

Emily Robinson
Resource Biologist

BEGINNING WITH HABITAT

Justin Schlawin
*Beginning with Habitat
Program Coordinator*

Amy Dowley
GIS Coordinator

Corinne Michaud Leblanc
Climate Coordinator

Joseph Roy
Private Lands Biologist

Greg LeClair
Municipal Planning Biologist

Lilit Mathieu
Geospatial Intern

DATA ADMINISTRATION

Don Katnik
Data Administration Program Manager

Jason Czapiga
Senior Programmer Analyst

LAND ACQUISITION PROGRAM

Flora Drury
Land Acquisition Biologist

Alison Truesdale
Land Acquisition Assistant

Jessalyn Benson
Land Acquisition/Real Property Assistant

WATER ACCESS PROGRAM

Diano Circo
Chief Planner

ENVIRONMENTAL REVIEW

Delivering science-based recommendations for habitat protection and management

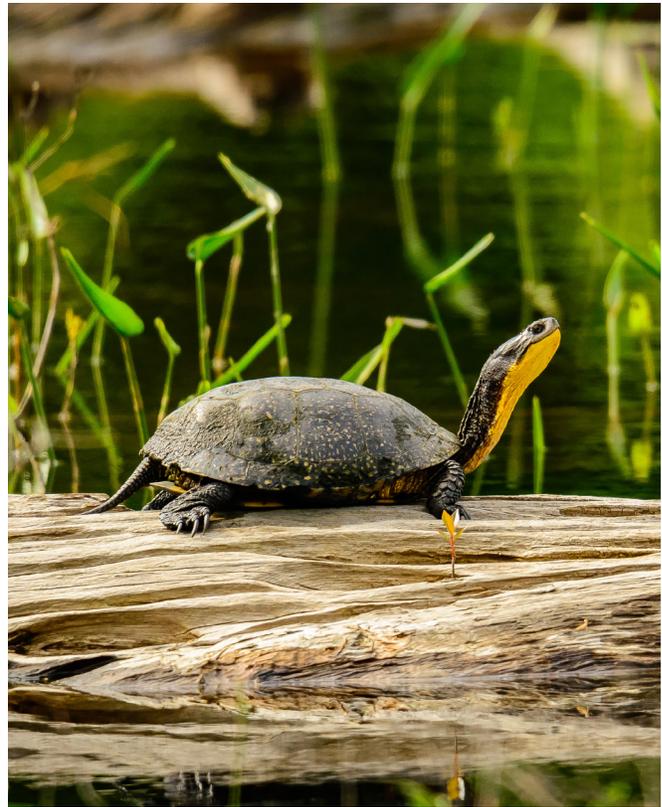
Development and economic growth will, and must, occur. MDIFW's Environmental Review Program works to support growth that is also environmentally sound, helping to keep 'Maine as Maine' for the benefit and enjoyment of our citizens and wildlife alike.

The Program works with developers and the regulatory communities to guide project development, recommending ways to avoid and minimize impacts to jurisdictional wildlife, fisheries, and habitats in accordance with state, federal, and local regulations. The Program's centralized permit review process gives developers predictability by ensuring that MDIFW resource-protective recommendations are consistent throughout the state.

Review Process

The Environmental Review Process can generally be divided into two stages:

- **Project permit pre-application stage:** Environmental Review biologists inform applicants of any mapped or anticipated MDIFW resources of concern in the project area, making recommendations to avoid and minimize resource impacts early in their design phase.
- **Regulatory permit application review stage:** Biologists make recommendations to the regulatory entity based on anticipated project impacts to MDIFW resources of concern. During this process, MDIFW biologists work with other agency programs and directly apply the Department's species and habitat knowledge, known resource data, and management objectives to affect preservation, protection, and enhancement of the resources. We consider all aspects of proposed developments including siting, facility design/layout, construction and operational practices, and direct and indirect impacts to species and habitats - all important considerations in avoiding or minimizing significant adverse impacts.



Blanding's turtle, an Endangered species

Annual Activity and Outcomes

Each year, our biologists respond to approximately 1,200 requests for environmental reviews, State application reviews, and general information. These span a wide range of project types including residential and commercial development, transportation infrastructure, aquaculture, shoreline stabilization after coastal storms, hydropower facilities, electrical transmission, solar energy, wind energy, and more.

By identifying and showing applicants how to mitigate project impacts, the Program has provided for acquisition, conservation, and management of thousands of acres. These measures benefit Rare, Threatened, and Endangered species, critical deer wintering areas, and important stopover habitat for migrating songbirds, while offsetting the impacts of habitat fragmentation. Our work has also led to upgraded stream crossings for fish and other aquatic life, as well as conservation of Significant Wildlife Habitats and riparian areas important to aquatic, wetland, and terrestrial species.

BEGINNING WITH HABITAT

Providing technical assistance for conservation planning and land management activities



Beginning with Habitat equips Maine communities, landowners, and conservation partners with information and tools to protect, restore, and connect important habitats and ecosystems in a changing climate. Beginning with Habitat staff work with external partners including private landowners, conservation organizations, municipalities, and other state and federal agencies to achieve the conservation actions outlined in Maine's State Wildlife Action Plan.



Replacement of a road stream crossing structure to allow for wildlife passage



Private Lands Wildlife Biologist Joe Roy talking with private landowners about habitat management actions they can take on their property to meet their unique wildlife management goals

Beginning with Habitat's Conservation Impact (2023-2024)

Climate Coordination and Habitat Resilience:

Beginning with Habitat actively participated and partnered in state-level and agency-specific fundraising efforts, securing significant funds for conservation projects:

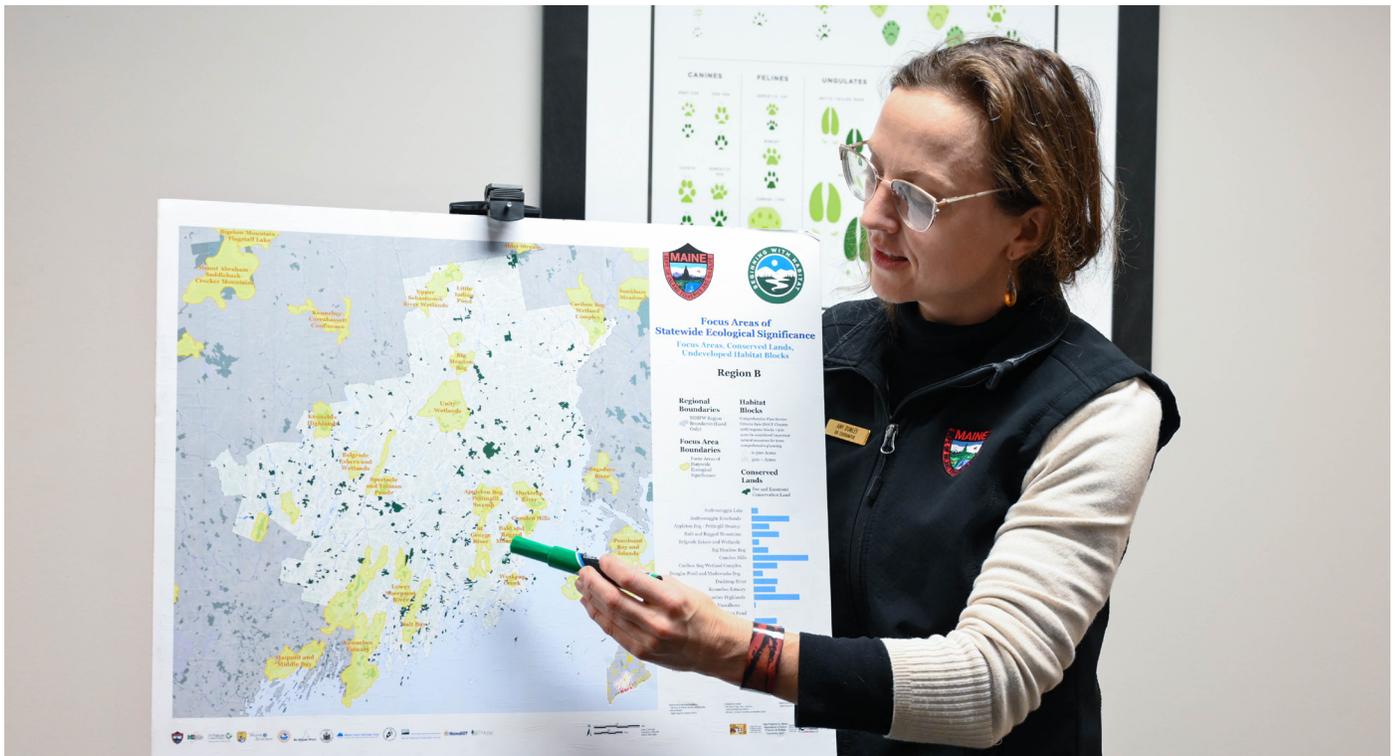
- **\$1.5 Million Secured:** Inflation Reduction Act funds were secured for interagency fish connectivity projects, including culvert replacements at Frye Mountain Wildlife Management Area and a natural fishway bypass at Meddybemps Dam (Department of Marine Resources lead).
- **Partnership on \$69 Million Resilient Maine NOAA CRRC Grant:** Led by the Governor's Office of Policy, Innovation and the Future, with Beginning with Habitat's work focusing on increasing habitat resilience.
- **Partnership on \$9.3 Million Wildlife Crossing Pilot Program Grant:** Led by the Maine Department of Transportation, this grant supports two culvert replacements in an area of Caribou with high wildlife-vehicle collisions.

Municipal Outreach & Planning

- **1/3 of Maine Municipalities Assisted:** The program provided habitat conservation planning assistance to over one-third of all municipalities in Maine.
- **Planning for Growth:** This assistance included helping municipalities plan for growth by identifying areas to avoid new development, assessing the impact of roads on wildlife movement, and locating areas where development would have less impact on habitats.
- **Technical Support:** The program offered various forms of technical assistance, such as mapping assistance, comprehensive plan review, and presentations.

Private Land & Stewardship

- **230 Private Landowners:** The private land team provided direct technical assistance to 230 private landowners. This was done through in-person field visits and events.
- **Managing for Wildlife:** The goal of this assistance was to help landowners manage their property to meet their wildlife goals and improve habitat quality for Maine's Species of Greatest Conservation Need.
- **1,075 Forest Management Plans:** Beginning with Habitat coordinated interagency best management recommendations for at-risk habitats for over 1,000 Forest Management Plans.



GIS Coordinator Amy Dowley presents a map highlighting focus areas of statewide ecological significance

Mapping Focus Areas of Statewide Ecological Significance

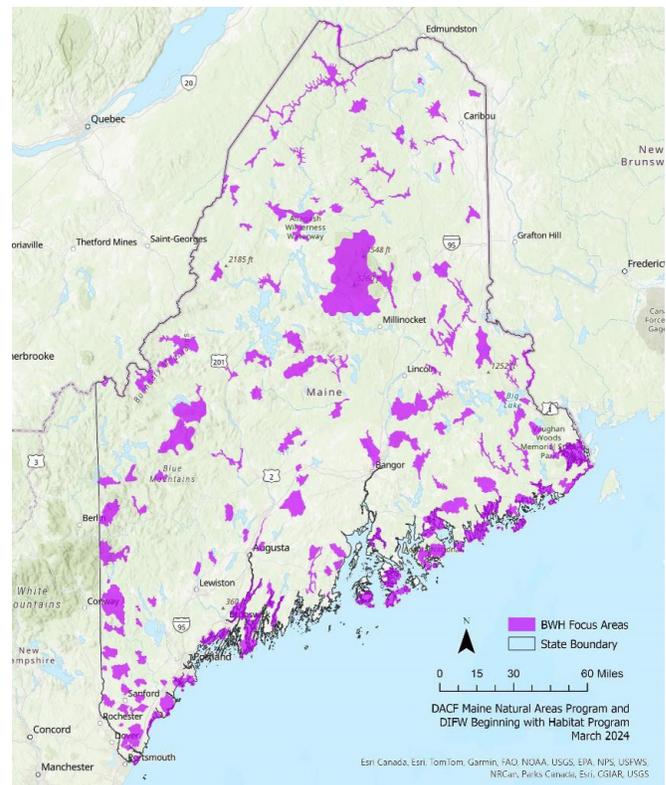
Beginning with Habitat worked with partners including the Maine Natural Areas Program (a division of Maine Department of Agriculture, Conservation, and Forestry), Maine Coast Heritage Trust, and The Nature Conservancy to update the mapping for Beginning with Habitat Focus Areas of Statewide Ecological Significance (Focus Areas). Focus Areas are places to prioritize collaborative, non-regulatory conservation actions that benefit biodiversity in Maine.

Focus Areas are mapped to highlight areas with high biodiversity value and concentrations of at-risk species and habitats. Though they only cover about 11.5% of Maine’s land area, these places contain examples of more than 85% of Maine’s rare, threatened, and endangered plant and animal species and high-quality examples of all natural community types tracked by the Maine Natural Areas Program.

Conservation actions within Focus Areas may include purchasing land or conservation easements, restoring wetlands, improving aquatic or terrestrial road crossings, helping with municipal planning, providing public outreach and education, managing invasive species, or giving private landowners technical assistance and financial incentives.

Focus Areas have been included in scoring criteria for many of Maine’s conservation funding programs.

FOCUS AREAS OF STATEWIDE ECOLOGICAL SIGNIFICANCE



DATA ADMINISTRATION GROUP

Compiling, managing, and distributing wildlife and habitat data

The Data Administration Group supports the Department of Inland Fisheries and Wildlife by creating, maintaining, and distributing a wide range of wildlife and habitat databases. Department staff, other state and federal agencies, and members of the public use these databases for landscape planning and environmental reviews to protect and conserve species and habitats. A key component of data management is ensuring that records are both accurate and current enough for their intended uses.



Habitat areas mapped for Endangered, Threatened, & Special Concern species

Data management tools continue to evolve, moving from desktop-based software like Microsoft Access to more sophisticated, web-based platforms like SQL Server and ArcGIS Online. The Data Administration Group also develops some of its own tools. To streamline the process of collecting and distributing data, we have been replacing paper forms with digital surveys hosted in ESRI's Survey123 and FieldMaps. These upgrades have saved staff time and encouraged more public participation in Community Science efforts by appealing to people who already use digital collection services like eBird. The move from static distribution (e.g., CDs) to self-serve online map viewers and live data streaming services has saved staff time and given the public quicker access to more current data.

While some of our work involves planned upgrades to databases and tools, much of our time is spent responding to data needs for new Department initiatives and programs. Keeping everything compatible with new software upgrades and evolving IT policies is an ongoing effort.



One of the several community science projects utilizing Survey 123 is the wild brook trout and landlocked salmon tracking project in Mooslookmeguntic Lake, which uses radio telemetry and anchor T-bar tags to track seasonal movements, spawning habitat, growth, and survival. Anglers report tagged fish when caught to MDIFW using the online form.





Atlantic puffin, a Threatened species

2023-2024 Data Administration Group highlights include:

- **GIS migration:** The group modified a wide range of tools and processes following the migration of Maine's Geographic Information System (GIS) data from a local server managed by the Maine Office of GIS to a cloud-based server. This required an update to every tool or process that uses GIS data, both to update data locations and to account for changes in how long it takes to access the data.
- **SWAP revision:** As part of the 2025 State Wildlife Action Plan (SWAP) update, the group updated some elements of the Microsoft Access SWAP database. Launched in 2015, this database has made it easier to carry information forward for each SWAP update rather than creating new documents each time.
- **Environmental Review (ER) database migration:** The group migrated the Environmental Review database from Microsoft Access to a GIS-based platform. This upgrade simplified the workflow involved in processing ER project applications and enabled ER Team staff to access the database when working remotely.
- **ER and Forest Management Plan (FMP) Alignment:** We aligned the ER and Forest Management Plan (FMP) review databases and processes which, while similar in many ways, evolved separately, with different processes that had to be managed individually. By aligning them more closely, their management is now simpler and more efficient.



LAND ACQUISITION PROGRAM

Protecting places for wildlife and people

Acquiring and managing land is one important way that MDIFW delivers on its mission to protect and manage Maine’s fish and wildlife and their habitats. The goal of the Land Acquisition Program is to provide a statewide, ecologically based system of land holdings for the protection and enhancement of important fish and wildlife habitats, while also providing opportunities for public access and recreation.

When MDIFW acquires land, we work to restore or improve its habitat and public access, incorporate it into MDIFW’s Wildlife Management Area (WMA) system, and keep it open to the public in perpetuity.

In 2023-2024, the Land Acquisition Program completed 20 projects covering nearly 11,250 acres, 10,996 of which became state-owned, MDIFW-managed lands. Other conservation organizations acquired the remaining 250 acres

using grants that MDIFW secured. MDIFW also served as the sponsoring state agency on ten Land for Maine’s Future projects, covering nearly 8,000 acres.

Alonzo H. Garcelon WMA Expansion— Little and Lower Togus Ponds

Through a partnership with Wetlands America Trust and Ducks Unlimited, using funds from the U.S. Fish & Wildlife Service’s Pittman-Robertson Wildlife Restoration program and from Duck Stamp sales proceeds, MDIFW purchased a 589-acre parcel known for its excellent duck habitat.

Just five miles from downtown Augusta on the south side of South Belfast Avenue, the land encompasses 481 upland acres, 93 acres of submerged lands, and three small islands in Togus Stream. It has 327 feet of frontage on Little Togus Pond and over 1.5 miles of frontage on Togus Stream.

This acquisition will provide opportunities for duck habitat conservation, upland hunting and trapping, fishing, and passive recreation. It will be managed as part of the Alonzo H. Garcelon Wildlife Management Area.



Aerial view of a parcel of the Alonzo H. Garcelon Wildlife Management Area in Augusta, Maine

Deer Habitat Conservation

Enacted by the 130th Legislature, Public Law 409, An Act to Preserve Deer Habitat, significantly enhanced the Department's ability to protect deer wintering areas.

In 2023 and 2024, MDIFW acquired nearly 10,000 acres with white-tailed deer habitat as their highest management priority. On these newly acquired lands, we established four new WMAs: Caribou Stream WMA (Woodland and Washburn), Macwahoc Stream WMA (Upper Molunkus Twp and North Yarmouth Academy Grant), Rangeley WMA (Rangeley), and Lexington WMA (Lexington Twp).

In addition to providing critical habitat for wintering deer, these new WMAs provide habitat for numerous other fish and wildlife species, and are open to public recreation.



View from Macwahoc Stream Wildlife Management Area

National Coastal Wetlands Conservation Grant—Trenton, Maine

The Land Acquisition team also supports our partners' land acquisition and habitat restoration work. In 2023, MDIFW was awarded \$1 million dollars from the National Coastal Wetlands Conservation Program, which we passed through to Frenchman Bay Conservancy (FBC). FBC used the funds to purchase 216 acres of wetlands and surrounding uplands along the Jordan River shoreline in Trenton, formerly the Bar Harbor Golf Course. This acquisition will ensure the long-term availability of high-quality coastal wetlands habitats for fish and wildlife. With the land secured, numerous habitat restoration projects are now underway to further improve this coastal wetland ecosystem.



Jordan River in Trenton, Maine. Photo by Mike Perlman



WATER ACCESS PROGRAM

Maine has an extensive and diverse water resource: nearly a million acres of lakes and ponds and thousands of miles of river brooks, streams, and coastline. MDIFW’s Water Access Program works to ensure legal, appropriate, adequate, and equitable means of public access to waters where recreational opportunities exist. All 184 MDIFW-owned water access sites provide a wide range of opportunities from trailered boat launches to hand-carry facilities, shore fishing, and walk-in access.



Population demographics and associated attitudes regarding public use are changing, and waterfront real estate costs are increasing as supply decreases. Continuing to make investments that secure public access is an urgent priority to ensure future generations have adequate fishing and boating access to public waters throughout the state.

In 1995, a Strategic Plan for Providing Public Access to Maine Waters for Boating and Fishing outlined priorities for acquiring and developing water access in Maine. These included preventing the loss of access sites, dispersing demand among priority waters, maintaining serviceability of existing sites, and expanding public access in areas where it is inadequate.

Federal Funding

U.S. Fish and Wildlife Service’s Sport Fish Restoration Program:

This program was created through the Pittman-Robertson Wildlife Restoration Act, which instituted federal excise taxes on sporting equipment used by hunters, anglers, boaters, archers, and recreational shooters. Revenues from these taxes are to be used for conservation, education, and public access. Federal taxes on motorboat and small engine fuels are also a source of funding. 15% of all Sport Fish Program funds received by Maine are required to be used by the Department for boating access.

State Funding

- **Boat Launch Facilities Fund (Maine Sportsman License Plate):** Each initial plate purchased provides \$14 to the Boat Launch Facilities Fund, which is managed by the MDIFW Water Access Program. Subsequent renewals provide 15% of the renewal fee (\$3) to the fund. Since its inception, the sportsman plate has generated an average of \$175,000 per year for the Water Access Program.
- **Boating Facilities Fund (Maine Gas Tax):** Through a cooperative agreement, the Maine Department of Agriculture, Conservation, and Forestry allots a portion of state gas tax revenues attributable to motorboats to MDIFW’s Boating Facilities Fund, up to \$150,000 each fiscal year.

When funds are available, the Water Access Program also utilizes competitive state funding programs to assist with land acquisition and site development. These programs include:

- a) Land for Maine’s Future
- b) Maine Outdoor Heritage Fund
- c) Shore and Harbor Management Fund

Some of the actions we are taking to help improve public water access include:

- Identifying and updating priorities for boating, shore fishing, and walk-in remote pond access, and developing and implementing corresponding strategies to retain or secure access
- Creating a range of ADA-accessible water access opportunities and improvements
- Developing a broad-based maintenance and improvement regime at Department-owned access sites
- Implementing strategies to ensure public access sites are visible and easy to locate
- Engaging and supporting private landowners who provide traditional access to ensure their land remains open to the public
- Refining engineering designs to create low-maintenance access with long-term site durability

2023 + 2024 Project Highlights

Pettingill Pond Acquisition, Windham

In the fall of 2023, MDIFW completed the acquisition of a half-acre property on Pettingill Pond, reopening the 42-acre water to the public after a long-standing traditional access site was permanently closed in 2020 following a change in ownership. The new property is about a half-mile from the former site, provides improved parking, allows the Department’s fish stocking program to continue, and ensures public access for boating and fishing in perpetuity.

Big Indian Pond Access Reconstruction Project, St. Albans

In the fall of 2024, MDIFW completed the full reconstruction of the Big Indian Pond water access facility. The site was updated to expand and improve parking and traffic flow, improve winter hardiness, and increase ADA-accessibility with paved walkways and a modern dock system.



Pettingill Pond Water Access Site



Big Indian Pond Water Access Site

