



2021-2022

RESEARCH + MANAGEMENT REPORT

Beginning with Habitat



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## 2021-22 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.

### Beginning with Habitat

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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.



## Meet the Beginning with Habitat Group

### **Steve Walker**

#### **Beginning with Habitat Coordinator**

Steve supervises the Beginning with Habitat program, and facilitates the work of Beginning with Habitat's Steering Committee which is made up of more than a dozen sister agencies and natural resource organizations from across the state all with the shared goal of promoting local conservation action.



### **Amy Dowley**

#### **Resource Biologist**

Amy creates and maintains paper and digital map packages for towns, land trusts, and landowners. Harnessing the power of GIS tools and spatial data, Amy helps inform and enhance conservation communication and decision-making at the state and local level. Amy also maintains and provides current data to online mapping services and assists staff and the Department with GIS-related needs.



### **Corinne Michaud-LeBlanc, Climate Coordinator**

Corinne coordinates MDIFW's efforts to plan for and adapt to the impacts of climate change on Maine's fisheries, wildlife, and their habitats. She provides technical assistance to fellow state agencies, local governments, and conservation partners, with the goal of integrating climate resiliency and species vulnerabilities into strategic conservation plans for fisheries and wildlife habitat. Corinne also represents the agency on technical, scientific, and stakeholder groups to support the goal of incorporating fisheries and wildlife considerations into policy-level discussions regarding renewable energy siting, carbon sequestration, habitat restoration, land use policy, and acquisition of conservation lands.



### **Joseph Roy**

#### **Private Lands Wildlife Biologist**

Joe assists private landowners across the state with their wildlife habitat management goals. Additionally, he works with local, state, and federal partners to increase the funding opportunities and technical assistance available for private landowners working on wildlife habitat management.

# BEGINNING WITH HABITAT



## Program Overview

If you are taking the time to read an MDIFW Research & Management Report, chances are you're an avid angler and/or hunter, an outdoor enthusiast, or in some other way awakened to the preciousness of Maine's unique natural heritage, which is our real "quality of place." You may have also heard that scientists have declared a global biodiversity crisis which, coupled with and inextricably linked to a global climate crisis, is extraordinarily troubling. So, what is your fish and wildlife agency doing, and how can you help?

It helps to start with a historical perspective. Going back forty years to the mid-1980s, then-Governor Brennan recognized the cumulative effects of a recent increase in land conversion to development as "the most pressing

resource issue in Maine." This initiated the former State Planning Office's Cumulative Impact Project in 1985, which identified a growing concern among Mainers that "rapid and unmanaged growth are permanently and adversely changing Maine's special character and quality of life" (Arbuckle, J., and M. Lee. 1987. *The cumulative impacts of development in Maine: A study of habitat changes in five coastal towns*. Augusta: Maine State Planning Office). Up until that time, state officials had paid little attention to the cumulative effects of development. As stated in the initial report, "these effects on our landscape and resources take place individually and incrementally over time as an area develops; their sum produces impacts which far surpass the direct effects of any single project."





As an example, the report described how an individual house built on one piece of land may directly take space, possibly contribute to the tax base (assuming low costs to provide town services and few children that require public education) and increase the local permitting load; this single house might destroy a small amount of wildlife habitat or add an “insignificant” amount to septic pollution or runoff in the area. However, the report further describes how “fifteen similar houses built in the same area over a period of years, may permanently remove precious prime topsoil or destroy a large deer wintering area, cut off recharge to groundwater, contaminate local water supplies, or overload traffic routes and water supplies.” This cause-and-effect dynamic was common knowledge 40 years ago.

Around this same time, in the early to mid-1980s, MDIFW began collaborating with other state resource agencies on a “baseline” of important resources — region by region, bay by bay — focused initially on Maine’s rapidly developing coastal communities. One of the first of these efforts was the 1981 Casco Bay Coastal Resources Inventory, which at the time made Casco Bay the only substantial section of the entire Atlantic Coast to have a complete, seasonal inventory cataloging its wildlife populations and habitats. Similar efforts were subsequently completed for Sheepscot and Muscongus Bays, followed by Penobscot Bay and the entire

southwestern coastline. Although the inventories were initially undertaken to prepare for the unthinkable — a significant coastal oil spill — they soon became valuable resources for land trusts planning strategic conservation and marked the beginnings of centralized data to inform municipal natural resource planning. 1988’s Identification and Management of Significant Fish and Wildlife Resources in Southern Coastal Maine laid out a simple four-step process that local planners could use to prioritize and protect open space. Accessible tools were now available to better equip local decisionmakers to make informed growth decisions.

The rapid increase in data resulting from resource inventories, and new legislative mandates that required municipal action, prompted The Nature Conservancy in collaboration with the then Natural Heritage Program (now Maine natural Areas Program), State Planning Office, DECD, MDIFW, and DEP to launch the Maine Natural Heritage Data System in 1989. Its stated goal was to enable all these agencies, as well as the Conservancy, to cooperate more effectively in their efforts to protect significant wildlife habitats in Maine while also establishing a data clearinghouse accessible to local entities. The stage had now been set to provide comprehensive natural resource data information in an accessible format to municipalities and land trusts to best inform local land use decisions.

Concurrently, in 1988, the Maine Legislature passed three foundational laws which continue to this day to influence local protections for Maine’s plant and animal habitats: the addition of an Essential Habitat designation under the Maine Endangered Species Act; the Natural Resources Protection Act; and the Comprehensive Planning and Land Use Regulation Act. Each of these laws helps to address cumulative loss of habitats and their functions, and each one to some extent was crafted to inform municipal planning. Under the Natural Resources Protection Act and Maine Endangered Species Act, direct state-level wildlife habitat protection is focused on specific sites: isolated patches of habitat considered of statewide significance and legally defined as significant wildlife habitat and essential wildlife habitat. Under the Comprehensive Planning and Land Use Regulation Act, municipalities are encouraged, but not required, to implement a more general approach to habitat conservation that gets at landscape functions, habitat connectivity, and development performance standards that would keep common species locally common as the town grows.



By the early 1990s, MDIFW began mapping important habitats town by town. The Department considered these efforts critical because “most local governments do not have the information necessary to delineate areas important for fish and wildlife populations in their towns” (MDIFW 1989) and the recently adopted comprehensive planning rules required towns to address natural resource issues in future growth plans. By 1997, MDIFW had initiated a strategic planning effort to modernize Department operations, functions, and communications. Within that plan, a key vision for the Wildlife Division was to “develop a strong approach to address long-term wildlife habitat management with landowners and towns” (Strategic Plan 1997).

Enter Beginning with Habitat — a program based on a simple model developed through the University of Maine’s Cooperative Fish and Wildlife Research Unit in 2000. This model, still utilized 20+ years later, depends on strong riparian (upland areas along streams, wetlands, etc.) protections at the local level coupled with local protection of Significant Habitats and known rare, threatened, and endangered plant and animal habitats embedded within and linked to a network of spacious, unfragmented natural lands. Beginning with Habitat translated this model into a series of maps scaled to the town level highlighting each of the model’s resource categories and accompanied the maps with guidance for typical municipal permitting and planning decision points where protection of key resources could be addressed through zoning, incentives, and other approaches. None of it is mandatory, but rather is intended to take the guesswork out of habitat protection initiatives that a town wants to voluntarily take on.

## So, after actively promoting this program to towns and land trusts for 20+ years, how are we doing?

Beginning with Habitat has become a core resource for most, if not all, Maine land trusts, helping staff and board members decide which properties to pursue for acquisition and how best to steward them. We send maps and data to every organized town undertaking comprehensive planning, together with model ordinance language, planning suggestions, and examples of successes from other communities. Beginning with Habitat staff is available to meet with local boards and committees to help them with their local resource planning efforts. Outreach efforts include meeting with landowners to discuss specific land management options and sending staff to conduct presentations and deliver data packages to town offices. The information is out there, and it is as accessible as we can make it.

Still, many challenges remain. Our State Wildlife Action Plan's designated Species of Greatest Conservation Need increased from 213 in 2005 to 378 in 2015, and the candidate list for Maine Endangered Species Act review (forthcoming in 2023) includes 8 additional species. Access for hunting, angling, shellfish harvesting, and other outdoor pursuits continues to disappear, and forest blocks have been getting incrementally smaller and more disconnected from other habitats with each new road and subdivision.



Brook trout have become harder and harder to find as local watersheds have become increasingly paved and less forested. MDIFW can certainly weigh in and help to guide development in ways that avoid and minimize wildlife impacts, but only if our input is triggered through the MDEP permit review process, or if we are made aware of a potential Maine Endangered Species Act nexus. The vast

majority of development projects fall to local review and jurisdiction, leaving the frontline defense of Maine's fish and wildlife heritage to local Code Enforcement Officers and Planning Boards. The need to balance growth and permanent protection for a sustainable landscape grows with every change in land use, but also grows more difficult.

It can be a real conundrum for an agency charged with preserving, protecting, and enhancing the inland fisheries and wildlife resources of the state to effectively influence local growth and development decisions when municipal home rule authority does not guarantee us a seat at the table. Fortunately, local champions, citizens who have an understanding and appreciation for Maine's fish and wildlife heritage, have stepped up over the years and have been able to make a lasting difference for traditional outdoor recreation and biodiversity protection in their communities.

Perhaps the 1997 Response to Sprawl document by the Maine Environmental Priorities Project puts it best: "The biggest challenge to planning is to find the public support and political will to actually implement the plans. Land trust members, hunters, foresters and others can find common cause in protecting areas that provide multiple benefits. These same individuals can provide volunteer assistance in the planning process and beyond. This is particularly important because planning by itself does not save wildlife habitat: following through with planning recommendations does."

The urgency of today's dual challenges of climate change and biodiversity loss demands that each of us get involved at the local level to address global issues. The impacts of development sprawl on plant and animal habitats stem from decisions people make; but they're not intentionally setting out to alter Maine as we know it. The real problem lies in unconsidered consequences, questions rarely asked, incrementally rising costs for taxpayers, and costs untabulated to wildlife. Sprawl is about a Maine we value even as the growing love for Maine challenges the very qualities that draw people here to begin with.

"The most effective way to protect wildlife habitat in your town is to get involved in the local planning process" (Integrating Wildlife Habitat into Local Planning: A Handbook for Maine Communities, May 1991). This has never been more true or more urgent. What is the best way to help address seemingly insurmountable global environmental issues? Be a champion in your town. We are here to support you and help you get started. Your grandchildren will thank you.

# Private Lands Wildlife Biologist

Joseph Roy, AWB\*

A key tenet of the Maine Department of Inland Fisheries and Wildlife’s mission is to “protect and manage Maine’s fish and wildlife and their habitats.” Since Maine is over 94% privately owned, it’s essential that we partner with private landowners statewide to manage our wildlife species. The job of the Private Lands Wildlife Biologist is to assist private landowners as they work to achieve their stewardship goals.

The Private Lands Wildlife Biologist creates and strengthens partnerships with Maine landowners and land-owning organizations, serving as their point of contact and providing them with technical assistance on their lands. This may be in the form of guidance documents that help landowners achieve their goals, site visits to answer questions and provide advice, or workshops on specific management topics. An example might be providing landowners with materials on managing for biodiversity on their property.

Additionally, the Private Lands Wildlife Biologist maintains partnerships with other conservation organizations that provide Maine landowners with technical and financial assistance. Examples of this include connecting landowners with staff at the Maine Forest Service who can provide financial assistance for forest management plans, or helping landowners get funding for habitat improvements through the Natural Resource Conservation Service.

In 2021, the Private Lands Wildlife Biologist directly assisted 63 landowners representing over 35,000 acres statewide, participated in 14 workshops/events, and collaborated with over 100 staff from federal, state, and local agencies as well as private organizations.

If you are interested in learning more about how to manage for your wildlife goals and objectives, please reach out the Joseph Roy, AWB\*, Private Lands Wildlife Biologist, at 207-592-3344 or joseph.roy@maine.gov.

## 2021 PRIVATE LANDS BIOLOGIST PROGRAM HIGHLIGHTS



Directly engaged with 63 landowners representing over 35,500 acres. Landowners varied in size from 5 to 16,000 acres. 81% owned 500 acres or less, 55% owned 100 acres or less.



Expanded the website to collate 50+ resources and guidance documents.



Participated in 14 events.



Worked statewide with over 100 staff from federal, state, and local agencies to advocate for increased funding and technical assistance opportunities for private landowners and managers.



Engaged with 500+ private landowners.