Protecting Maine’s Waters

CONTENTS

Vernal Pools Spring to Life  4
Everyone Lives in a Watershed: An Interview with John Banks  10
Take Me to the River  13
SPECIAL SECTION: 2021 Legislative and Advocacy Priorities  15
Conservation

Wanted: Community Scientists
Looking for a way to get outside this spring and summer, while contributing to valuable scientific research? If you would like to wade through water in search of cool insects that are indicators of water quality, join our Stream Explorers partnership. Or perhaps you’d like to join the Annual Loon Count and help track Maine’s iconic loon population. Prefer to keep your feet on dry ground? Adopt a stretch of road and monitor wildlife crossings (wildlife that made it across and those that did not) to help Wildlife Road Watch scientists determine how to reduce road mortality and improve habitat connections. Email Conservation Assistant Hannah Young (hyoung@maineaudubon.org) to learn more about these community science programs. Stream Explorer trainings are slated for May, the Loon Count happens in July, and Wildlife Road Watch will begin when the snow melts!

New Rules and Tools to Protect Wild Trout
Maine is the last true stronghold in the East for wild brook trout and other salmonids, including Arctic charr and Atlantic salmon, but numerous threats could undermine these wild populations if we don’t protect them. That’s why Maine Audubon and others worked with Inland Fisheries and Wildlife to change General Law Regulations in the North Zone—which contains 95% of the designated State Heritage Fish waters and much of the wild brook trout resource in the state—to take proactive steps to prohibit the use of live fish as bait except where designated by special rule, thereby reducing the chance of any new introductions of nonnative baitfish and other fish in the vast majority of flowing waters, deadwaters, and small ponds. In the South Zone—where there are 26 heritage waters, 16 of which have tributaries—no live fish as bait special regulations will be applied to tributaries of the 16 heritage ponds with tributaries via S-Code or special text in the law book.

Thanks to the Maine Outdoor Heritage Fund, you can read more about these rule changes and other conservation steps in Our Precious Wild Trout, soon to be available online or by request at conserve@maineaudubon.org or 207.781.2330 x219.

Trade In Your Lead, Go Loon Safe Instead
As ice fishing winds down, gear up for the spring season with some free tackle, courtesy of the Maine Lead Tackle Buyback Program. Yep, this tackle is on us—and it’s lead free to help address lead poisoning from lost and discarded lead tackle, which remains a leading cause of death for loons and other wildlife. Since early 2020, Maine Audubon has partnered with the Department of Inland Fisheries and Wildlife and three local retailers to offer $10 vouchers toward the purchase of lead-free tackle to anyone who turns in an ounce or more of lead tackle at participating stores: Indian Hill Trading Post in Greenville, Dag’s Bait Shop in Auburn, and BackWoods Bait and Tackle in Chesterville. To join, just bring some lead tackle to a participating store and redeem your voucher for lead-free tackle of your choice.

This project is funded by the Maine Outdoor Heritage Fund, State Wildlife Grants, Maine Birder Bands, The Maine Sportsman, and Will Lund. FMI: fishleadfree.org/me
Native Plants Sales and Details
Another growing season is nearly upon us, and that means another year of programs, plants sales, and resources to help Mainers and their communities restore Maine native plants to their gardens, yards, school grounds, and parks. We’ve got all kinds of new things coming your way: Look for new species on mainenativeplants.org, print materials and technical manuals for consumers and large development projects, and “Bringing Nature Home” signage, programs, and projects in Portland, Lewiston, and several Maine State Parks this summer!

Partnering to Train Teens in Portland
Maine Audubon is partnering with the Portland Parks Conservancy and the Portland Parks & Recreation Department to develop and launch the Portland Youth Corps program this summer. This new summer-long education and training program will introduce Portland teens to practices and careers around habitat conservation, stewardship, and interpretation. This work training program is an exciting example of Maine Audubon’s commitment to make our work and partnerships more inclusive, and for developing better pipelines toward conservation leadership for youth from more diverse backgrounds. Learn more at portlandparksconservancy.org/projects.

Going Mobile with Education Programs
Thanks to funding from the Dorr Foundation and the Edward H. Daveis Benevolent Fund of the Maine Community Foundation, Maine Audubon educators are working with several school districts to pilot a program designed to help teachers and students access environmental education and fieldwork near their own schools. The “mobile habitat lab” project was developed in response to outdoor learning during the pandemic and also as a way to help schools eliminate transportation barriers often associated with venturing offsite. The “lab” will consist of an event tent, taxidermy, and tools for investigating the habitats and phenology nearby. Starting in Portland, we look forward to expanding the program in future.

New Programs and People at Fields Pond
Even with the lingering closures and other effects of the coronavirus pandemic, things have been ramping up at the Fields Pond Audubon Center in Holden. Over the winter, we welcomed Michelle Duffy as our new program assistant to help lead new programs including the River In My Backyard program (see page 14) and outreach activities. Michelle has a Master’s degree in wildlife conservation from the University of Maine. Fields Pond also received grants from the Maine Outdoor Heritage Fund and Burnham Charitable Trust to erect a Motus wildlife tracking tower on the building, and we will be partnering with faculty at the University of Maine to develop curricula and training that will help both undergraduates and Bangor area schoolchildren engage and practice with cutting edge tools for studying birds, bats, and butterflies as they migrate through the Fields Pond property.
In this time of global upheaval, when floods, fires, and yes, even locusts and plague make headlines, people are worn down and having to reach ever deeper into their core to tap into a well of optimism. Fortunately, humans are resilient and gain energy and comfort from things that are predictable and familiar. Spring will follow the winter darkness and tickle all the senses: songs from birds and amphibians turn our heads to the woods; our eyes, accustomed to the white and muted winter landscapes, feast on the colors in spring blooms; spring mists and warm sun tease our winter-weary faces; and wild strawberries and fiddleheads bring spring to our palates. Life continues and the beauty afforded by nature prevails—even in the worst of times.
An “Ode to the Vernal Pool” seems in order to celebrate this return to light. Pools start to melt and burst with amphibian breeding activity even before the phoebes sing and the bluets emerge from the snow. From the melting forest floor emerge Wood Frogs and salamanders, summoned to breeding pools by warm, gentle spring rains washing over their smooth skin, alerting them to begin their breeding migration. This event is a signature wildlife spectacle we call Big Night. If weather conditions are just right, you can witness Wood Frogs and Spotted and Blue-spotted Salamanders moving into their breeding pools by the hundreds. To witness a Big Night, pick one of the first warm and rainy spring evenings and make your way through the woods to your neighborhood vernal pool. It is Maine’s version of the great migration of wildebeest in East Africa—and you don’t even need to leave your neighborhood to participate.

Vernal pools have a magical quality, likely owing to their small size and ephemeral nature: they fill with water from snow melt and spring rains and generally “disappear” by summer’s end. Like ephemeral spring blooms, you have to know where and when to look to witness the spectacle. The mysterious life of the amphibians tied to vernal pools adds to the pools’ overall mystique. How small, delicate, and hairless creatures can weather Maine winters on the forest floor in and of itself seems like a miracle. After a dramatic appearance for the brief migration and breeding period (generally a period of three to five weeks), the adults seem to melt back into the forest, not to be seen again until the following spring. Fairy Shrimp hatch from eggs deposited on the pool floor the previous spring, go through a period of desiccation and freezing (not unlike mushrooms and some spring bulbs), hatch, and start the cycle of adults depositing eggs for the following spring all in the course of six weeks or less. Disappearing acts and fairies—no wonder these pools are easily overlooked.

As in every fairy tale, there are dark forces that need to be subdued before everyone can live happily ever after. Human activity may jeopardize both pools and the animals they support. Pool-breeding amphibians depend on breeding pools, plus the
summer, fall, and winter post-breeding habitats that must all be linked by relatively undisturbed forests. A subset of juvenile amphibians requires intact travel routes to colonize distant vernal pools in order to avoid the effects of inbreeding. It doesn’t take long to realize that conservation of vital populations of these animals is tricky: they need breeding pools plus other wetlands, adjacent intact upland forests, and connections to other pools. In addition, more global phenomenon, such as climate change, threaten weather patterns in New England that pool-breeding amphibians are adapted to. Pool-breeding amphibians are dependent on ample snow cover to insulate them from frigid temperatures and rains to fill and maintain pools long enough for larvae to turn into juveniles, leave the pool, and settle in the nearby forest. As climate patterns change, these animals are more stressed and more susceptible to disease and disturbances.

And again, as in the best fairy tales, there are heroes in shining armor to save the kingdom. In this case, the heroes are a collection of researchers who focus on learning what needs to be conserved—when, where, and how—and the lovely inhabitants of the kingdom who care enough to learn about the special qualities of these critters and habitats and steward them accordingly. When both the local community and caring professionals harness the power of science, the dark forces are transformed into energy for powering creative conservation outcomes.

What have scientists learned about Wood Frogs and salamanders that could be relevant to you, to municipalities, to landowners, stewards, to concerned community members? We know that all vernal pool amphibians need both other wetlands

1. Participate in annual Big Night events (see p. 21) to help track amphibian movement and reduce road mortality. Full details at vernalpools.me/big-night

2. Encourage your town to adopt conservation subdivisions, where development is sited away from vernal pools and adjacent critical terrestrial habitat.

3. Ensure any harvesting that takes place on your land, town land, or land trust land follows forestry habitat management guidelines.

4. Earn a Vernal Pool Stewardship Award for conserving vernal pool wildlife on your property.
and adjacent uplands to meet all their life needs. We know breeding pools must be well-shaded and relatively undisturbed to reduce competition and predation from sun-tolerant amphibians such as Green and Bull Frogs. We know that adult amphibians often travel hundreds of feet from breeding pools to their preferred terrestrial habitats. We know that enemies of these animals are pesticides, cats, lawn mowers, and unnatural changes in hydrology of their breeding pools.

And we have learned that just as in real estate, the value of a property to an amphibian is location, location, location. Wood Frogs in particular will use different post-breeding habitats depending on where they are located. For example, Wood Frogs in central and mid-coast Maine often summer in forested wetlands. Frogs in the mountainous regions of western Maine, on the other hand, will travel up hillsides and summer around the wet edges of large boulders and may depend on ephemeral beaver pools for breeding. In short, local knowledge is necessary and both pools and post-breeding habitat must be stewarded to ensure vital, long-term populations of the forest amphibians. As we accomplish this, we also support other wildlife that use pools including signature Maine species such as moose, bear, deer, and a variety of small mammals and birds. Because vernal pool amphibians require multiple different connected habitats—including other pools and wetlands and upland forests—pool conservation in general leads to landscape-scale conservation of our woods, wildlife, and waters.

What do we know about the people who share living space with amphibians? We know they are also attracted to wildlife, waters, and trees. Many depend on their land for personal inspiration and economic security. We also have learned that most people would prefer to live next to wildlife and see natural landscapes as part of their towns, but need space to build their homes and live their lives as well. So how do we protect both?

Current federal and state regulations for regulating vernal pools are designed to balance the needs of wildlife and people. Yet often smaller wetlands, such as vernal pools, fall through the regulatory net. In addition, we recognize that wetland regulations can be daunting to any given landowner and that the one-size-fits-all approach often feels like no-size-fits-anyone. To ensure peace in the kingdom, social scientists and vernal pool ecologists, together with partners, have developed another option: a local pool conservation mechanism called a vernal pool Special Area Management Plan (see page 9). Tailor-made local approaches like this will likely provide more local pride and positive outcomes than traditional regulations alone can do. Either way, we are confident that pools and people can happily coexist.

Hope springs eternal, spring brings hope, and we begin a new season confident that we will make progress on conserving nature in a way that supports both the natural world and the emotional and economic well-being of its human community.

Aram Calhoun is active in wetland and vernal pool conservation at landscape scales through localist approaches that improve both local economies and the integrity of our forests and wildlife.
The website, “Of Pools and People,” created by Aram Calhoun’s research group at the University of Maine, is designed to answer your questions on vernal pool ecology, management, regulations, and conservation. Partnering with environmental organizations such as Maine Audubon, government agencies at the federal and state levels, Maine municipalities, land trusts, and members of the development community, they have developed and coordinated community science programs for mapping and assessing vernal pools; developed educational materials including videos and digital presentations, manuals, and children’s coloring books; and provided outreach presentations—all of which you can find on this dynamic website.

Research
The University of Maine’s Department of Wildlife, Fisheries, and Conservation Biology has been researching vernal pool amphibian ecology—particularly post-breeding movement patterns in our forests, the effect of forest management practices on pool ecology, and most recently, in collaboration with social scientists, the socio-economic implications of vernal pool management on private lands—for over a quarter of a century. They use their research (as well as that of other colleagues throughout the eastern U.S.) to inform management strategies that will conserve vernal pool functions at the landscape scale while benefiting human communities. Learn more: vernalpools.me/research-2

Special Area Management Plan (SAMP)
The University of Maine partnered with the Army Corps of Engineers and the Maine Department of Environmental Protection to develop a voluntary vernal pool mitigation tool that puts the regulation of vernal pools into the hands of local communities, called the Vernal Pool Special Area Management Plan. The SAMP eliminates the need for a developer in a portion of the town’s growth zone to apply for federal and state permits for impacting a vernal pool. Instead, they pay a fee to a third-party holder (often the local land trust) for every vernal pool impacted in the designated area of the growth zone. The land trust may use these fees to pay a local landowner in the rural zone to conserve vernal pools and adjacent forest through a land purchase or conservation easement. Learn more: vernalpools.me/samp
"Everyone lives in a watershed"

John Banks is truly a conservation icon. Since the 1970s, he has worked across numerous landscapes, communities, and nations to restore and protect habitats and other natural resources upon which wildlife, people, and cultures depend. John has built on ten thousand years of Penobscot knowledge and tradition around reciprocity with our lands and waters, while also becoming renowned for his experience and expertise in Western science and international diplomacy. In what is perhaps the most vivid and broad-reaching example of John’s skills and achievements, he advocated, advised, and played a leading role in the ongoing restoration of the Penobscot River, as featured in the new book, *From the Mountains to the Sea.*

Professionally, John Banks is the Director of the Penobscot Nation Department of Natural Resources, a position he has held since 1980. John is also a member of the Maine Indian Tribal-State Commission, an inter-governmental entity which resulted from the Maine Indian Land Claims Settlement Act. He has served on many other local, regional, and national organization boards including the National Tribal Environmental Council, Native American Fish and Wildlife Society, National Indian Policy Center, and the Tribal Operations Committee with the U.S. Environmental Protection Agency.

Given his incredible impact and legacy, Maine Audubon’s Education Director Eric Topper asked John to reflect on his career, his work on the Penobscot River restoration, and the importance of cultivating new generations of water protectors.
What is your job with the Penobscot Nation?
As the Director of the Penobscot Nation Department of Natural Resources, I have had the honor and responsibility to set up, administer, and oversee the tribe’s Natural Resources programs as we build the tribe’s land base resulting from the Maine Indian Land Claims Settlement Act of 1980. Today we have professionally staffed programs including Forest Management, Fish and Wildlife, Water Resources Management, Air Quality, Brownfields, Fish and Game Law Enforcement, and GIS Services.

How important is the river to the Penobscot Nation?
The Penobscot River is the life source of the tribe. She has provided our tribe with the means and ability to survive without Route I-95, Hannaford’s grocery store, Walmart, or CVS drug stores for thousands of years. The Penobscot River watershed provided the transportation route to get to where we needed to go to harvest foods and medicines, and to carry on commerce with neighboring tribes. Many tribal members feel that we have a reciprocal relationship with the watershed that carries an inherent stewardship responsibility in return for the many gifts she has provided.

How did you get interested in this work as a profession?
Having been brought up in a hunting/fishing/trapping/guiding tradition, I became interested in all things outdoors at a young age. I remember one conversation with a tribal member uncle about a profession called Forestry. He said you could have the best of both worlds: a professional career, and work in the woods. I’m glad I took his advice!

Beyond the basic “woodsman’s” skills, I think a super important aspect to recognize is the interrelationships of things in the natural world. Every plant and animal in our forests has its own job description, and together they form an evolving dynamic forest ecosystem that has served the needs of humans for 10,000 years. I like to use the “stew pot” analogy where each component maintains its individual characteristics while contributing to the betterment of the whole.

Looking back at a long and illustrious career, what are you most proud of?
We have many very dedicated staffers in the Department of Natural Resources that take our inherent stewardship responsibilities seriously. It has been rewarding for me to have worked alongside these committed professionals, and build a tribal natural resources department that has been a model DNR across Indian Country.

Our successes in the protection and restoration of our homeland, The Penobscot River Watershed, also rank high in the list of accomplishments. The removal of dams, the upgrading of classifications of hundreds of miles of rivers and streams, and the successful elimination of a major industrial source of dioxin are some examples.

I think what I am most proud of is the relationships we have built with the NGOs and government agencies, and within the tribe, without which none of these accomplishments would have been possible.

How do traditional ways of knowing enhance Western conservation science?
Ancient tribal stories about various aspects of nature can provide valuable lessons that can have application in current land and natural resources management settings. Likewise, aspects of western science can in many cases support traditional ways of knowing. Bridging these together provides the opportunity to have the best of both worlds.

What have been some of the most challenging aspects of your work?
The northern Maine forests, and forest products industry, have provided the economic foundation of the region for a couple hundred years. Resistance to
the understanding that we can have both a healthy environment and sustained economic development with good jobs is an ongoing factor in some regions.

Lack of enthusiasm within the ranks of government agencies is also an obstacle sometimes. I’ll just leave that one at that!

**How can today’s people and communities be better “water protectors”?**

Understand the sacredness of water. Water is essential to all life on earth. It’s what allows the planet to function. It’s like the glue that holds it all together, while providing for the interconnectedness of all things natural. It’s like the blood in our veins that provides nutrients to our vital organs.

Do not sit on the sidelines! Get involved. Know that each voice is important. Take action to protect your watershed. Everyone lives in a watershed. Find your allies and work together. Learn the current threats to your watershed and the regulations that govern those. Get involved at the state legislature to support bills that strengthen water quality protections. Take a lead in establishing local water protection community action groups.

**What is special about what we now call Maine?**

I believe we are fortunate to live in a region that is not over-developed and has lots of forests, open lands, and some free flowing rivers and streams to enjoy. I think Maine’s uniqueness, geographically and ecologically, has indeed shaped my thinking by helping me to understand how lucky we are in comparison to other areas of the globe. And knowing that constant vigilance is necessary to keep it this way.

**Can youth and our schools play a role?**

The youth are our future, and early education about water, watersheds, water quality, ecosystems, and the importance of protecting waters can help to instill an interest in young minds. I see great potential in today’s youth to make a real difference in how society relates to our natural resources.

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From the Mountains to the Sea

On June 14, 2016, for the first time in two centuries, an Atlantic salmon swam through the town of Howland, Maine, bound for spawning grounds that had been inaccessible for generations. Along the riverbank, hundreds of people cheered as they helped celebrate the event marking the culmination of a remarkable seventeen-year effort by an unlikely and diverse alliance of people and organizations. *From the Mountains to the Sea* by Peter Taylor (publisher: Islandport Press) tells the inside story of the Penobscot River Restoration Project that brought back not only salmon, but 10 other sea-run fish such as herring, alewives, and sturgeon; freshwater mussels; and fish-eating birds and mammals such as kingfishers, osprey, eagles, mink, and otters. The PRRP also benefited local communities along the river with enhanced river recreation, including whitewater paddling, new pocket parks, access, and trails along the river, and the removal of empty buildings and potentially contaminated soils. Maine Audubon was a signatory to the agreement to open up 2,000 river miles by removing two major dams and building a fish bypass around a third dam on the mainstem of the Penobscot River; contributed advice along the winding road to restoration; and assisted with outreach and education about the project.

Join John Banks and guests for an online book talk, April 29, 7 pm (see p. 21).
Take Me to the River

Portland educators teach students to love a river.

By Fiona Hopper and Brooke Teller

On a Friday afternoon in November, a small group of Portland educators gathered on the banks of the Presumpscot River just above Saccarappa Falls. Light reflected off the hundreds of windows lining the Sappi Mill and the swirling waters below as the sun lowered in the sky. Maybe it was because we had all just read about Chief Polin and his activism in the 1700s on behalf of the river “which I belong to,” as he called it, but we all felt the power of place-based learning that afternoon as we watched the river.

Connection to place through a river is the foundation of the third grade unit we were gathered together to plan that afternoon; a unit that will connect Western science to Indigenous Ecological Knowledge, Indigenous history to environmental justice movements, and field work to classroom work. All of this with the objective of preparing students with the skills and knowledge needed to become water protectors.

Two and a half years ago, district leadership made a commitment to tribal leaders from across the state that we would develop and implement a preK-12 Wabanaki Studies curriculum and become the first district in the state to fully institutionalize Wabanaki Studies at all grade levels as per a 2001 law. We have spent the past two years learning from a group of tribal advisors from across the Dawnland in preparation for building a robust curriculum. This year a team of educators has begun the curriculum work in earnest, starting with the Presumpscot.

The development of integrated curriculum—curriculum that links science and social studies together—is critical to creating a meaningful Wabanaki Studies curriculum, or, we’d argue, any curriculum that seeks to engage young learners. Linking science and ecology to the cultural and historical context of the Presumpscot creates learning experiences in which students are fully immersed in the ecosystem, such as growing and releasing salmon in order to restore this critical species to its home.

“You have to get students to the river so they fall in love with it,” Mihku Paul (Maliseet) said while meeting with our team to plan this unit. For students, falling in love with a river means having opportunities to get their hands wet and their shoes muddy. It also means they must learn how the river connects to what has come before and what will come after it.

Despite endless resources constraints, limited access to professional development, and competing demands on educators’ times, we will take ourselves and our students to the river. When we committed to Wabanaki Studies as a district, we committed to learning from and about rivers. We committed to loving them. And, in so doing, we committed to developing the next generation of water protectors.

Fiona Hopper is a Social Studies Teacher Leader and Wabanaki Studies Coordinator, and Brooke Teller is the Science Teacher Leader, STEM Coordinator, and Outdoor Learning Coordinator, for the Portland Public Schools.
Maine Audubon creates, sustains, and nurtures a community of watershed protectors through our conservation and education programs.

**Stream Smart** is a training program and resource for anyone responsible for constructing road–stream crossings. Its goal is to connect fish and wildlife habitat while protecting roads and public safety. We’ve hosted workshops and trainings for more than 1,000 people and reconnected hundreds of miles of stream habitat for both aquatic and terrestrial wildlife. *Stream Smart is a partnership of dozens of NGOs, government agencies, and forestry professionals. Funding has come from private foundations and state and federal grants. FMI: maineaudubon.org/streamsmart*

**Maine Stream Explorers** recruits, trains, and supports volunteers interested in searching streams for large aquatic insects that are indicators of water quality. These community scientists monitor stream water quality and changes over time that may be related to land use practices and a changing climate. *The project is a partnership with Auburn Lake Watershed Protection Commission, Lakes Environmental Association, the Maine Department of Environmental Protection, and the Portland Water District, and is funded by grants from the Maine Outdoor Heritage Fund and the Onion Foundation.*

**Fish Friends** is an educational program in which schools—and Maine Audubon—receive Atlantic Salmon eggs from local hatcheries in January and raise them until they are ready to be released into the wild in late spring. Overseen by the Atlantic Salmon Federation in cooperation with the region’s federal fish hatcheries and agencies, it is designed primarily for classrooms to help students learn about life cycles and to increase awareness of Maine’s Atlantic Salmon.

The **River In My Back Yard** program gives students in Bangor’s 21st Century Community Learning Center programs the opportunity to participate in hands-on community science. Working with local educators and scientists, students in the program will participate in activities and field trips related to the Penobscot River, its watershed, and wildlife. *The project, with partners Maine Discovery Museum and Bangor Schools’ 21st Century Community Learning Center programs, is funded by a Watershed STEM Education Grant from North American Association for Environmental Education.*

Maine Audubon works with partners in five states on a campaign to reduce lead poisoning in loons. The goal of the **Fish Lead Free** initiative is to increase the use of lead-free tackle on lakes and ponds. We help set up lead tackle buy-back programs and exchanges and serve as a resource for anglers looking to transition to lead-free tackle. *Funding for the project has come from the Maine Outdoor Heritage Fund and US Fish and Wildlife Service.*

The **Brook Trout Survey** and **Wild Trout project** enlists volunteers to survey native brook trout populations in coastal streams and remote Maine ponds and to protect wild brook trout waters across their range in Maine. Information from the surveys is used to prioritize a list of waters for a more detailed survey by state biologists, and to inform future fisheries management decisions and protect a unique resource. *The Brook Trout Survey project is a partnership of Maine Audubon, Maine Department of Inland Fisheries and Wildlife, and Trout Unlimited. Funding for the project has come from MDIFW, Maine Outdoor Heritage Fund, Horizon Foundation, Trout Unlimited, Patagonia, and an Anonymous Donor.*
The first session of Maine’s 130th Legislature is going to be like no other. The session is a stand-out not only because of the COVID protocols—remote working for legislators, and no lobbyists or community activists in the State House—but also because it will be the first of many years of significant climate action in Maine, with Maine Audubon leading the charge to confront the impacts of our changing climate on Maine wildlife and habitat.

In late 2020, the Maine Climate Council published a four-year Climate Action Plan, an ambitious document born from the recommendations of a variety of stakeholders, including Maine Audubon staff in prominent advisory roles.

But a plan is just a plan. 2021 is about implementation. Maine Audubon will focus our climate-related efforts on: advocating for sustained funding to conserve natural and working lands; improving land use planning and legal tools to support smart growth and keep vital habitat intact; and guiding thoughtful renewable energy development, among the myriad strategies that will be necessary to stave off the worst impacts of climate change.

Though a major focus, our advocacy work will not be entirely climate-related. We’ll also engage on bills aimed to reduce boat and loon collisions, combat harmful pesticides, reduce the impact of lead ammunition on scavengers like bald eagles, and stop the intentional release of balloons, known to be deadly to marine wildlife. We’ll continue our work promoting bird-safe buildings, understanding how floating offshore wind and wildlife can co-exist, and engaging in a highly specious proposal to develop a mining operation outside of Baxter State Park, all the while working to undo the mess the Trump Administration made of so many of our bedrock federal environmental laws.

Despite the challenges of remote advocacy, we see an opportunity for improved community engagement. Stay in touch with Maine Audubon and we’ll keep you apprised of remote public hearings schedules and other ways to connect with your legislators from home. Please help us make the most of this historic legislative session!

maineaudubon.org/act
What’s Next?

- Increase awareness and education related to climate
- Start a ‘Maine Climate Corps’

Embrace Maine’s Transportation Future
- Accelerate transition to EVs
- Increase fuel efficiency
- Reduce vehicle miles traveled
- Transition to heat pumps
- Accelerate efficiency in existing buildings
- Adopt energy-efficient building codes

Engage with Maine People and Communities
- Increase awareness and education related to climate
- Start a ‘Maine Climate Corps’
- Develop climate-ready design guidance

Invest in Climate-Ready Infrastructure
- Establish a state infrastructure fund

Modernize Maine Buildings
- Transition to heat pumps
- Accelerate efficiency in existing buildings
- Adopt energy-efficient building codes

Maine’s Climate Action Plan

Public Comments
Expert Analysis
Scientific Analysis
Economic Research
Guiding Thoughtful Renewable Energy Siting
In order to meet the state’s ambitious—and necessary—greenhouse gas emission reduction targets, Maine must significantly build out its renewable energy development portfolio. That means more solar and terrestrial and offshore wind, along with the transmission infrastructure necessary to get that clean energy where it needs to go. As with any new development, but particularly development at this scale, the potential for impacting wildlife and habitat is high. We will continue to utilize a variety of strategies to guide renewable energy development to locations that avoid or minimize impacts to the very same vulnerable habitats and species Maine’s Climate Action Plan aims to protect. That includes advocating for including siting considerations in future renewable energy procurements, which will be decided by lawmakers this session, as well as taking part in a working group that will recommend additional policy to guide thoughtful renewable energy development.

Securing Essential Land Conservation Funding
Maine’s forests, saltmarshes, and coastal eelgrasses provide many economic benefits and ecosystem services, but their ability to absorb and store large amounts of carbon at low cost is perhaps reason enough to conserve these areas. Land conservation funding in Maine has been nearly zeroed out, and with newly available federal matching funds, new state funding is needed now. We will advocate for both short-term and long-term funding for the storied Land for Maine’s Future program, including a bond this session to fund land conservation and much-needed state park capital improvements, as well as pursue a dedicated, sustained funding source so that Maine never again finds itself unable to conserve the lands that are elemental for carbon storage, wildlife, and Maine’s character.

Improving Land Use Planning and Smart Growth
Concentrated development in strategic locations reduces transportation emissions, provides amenities such as corner markets and green space within easy access to homes and businesses, and prepares for anticipated growth and economic opportunities as people move to Maine seeking refuge from severe climate impacts affecting other parts of the country. “Smart growth” can also help wildlife by keeping development out of sensitive coastal and riverine areas and away from important habitat corridors and intact habitats wildlife will need to breed, feed, and thrive as they move across the landscape and adapt to a changing climate. Maine Audubon will advocate for robust technical assistance to help communities improve land use planning. We’ll support pilot projects to plan for climate resilience in select, diverse Maine municipalities, as well as legislative action to incorporate sea level rise projections into land use regulations.
Other Areas of Focus

Legislative

Boats, Loons, Other Wildlife
Blunt trauma, most often from collisions with motor boats, is the leading cause of mortality for the adult Common Loon in Maine, according to recent studies. The rising numbers of high horsepower motorboats, new types of watercraft, and the behaviors of motor operators also pose threats to lake water quality and other wildlife. A handful of bills this session seek to address various aspects of this problem.

Pesticides
Several bills this session seek to restrict harmful pesticides, such as chlorpyrifos and neonicotinoids. Maine Audubon will support these bills, sharing the proven negative impacts of these pesticides on wildlife. Neonicotinoids, for example, can cause “sublethal” problems in bees, causing bees to not forage well or find their way home, which can lead to dramatic colony reductions. In addition to harming agriculture, this also reduces available food for insectivorous birds, especially during breeding season when baby birds need to be fed constantly. The European Union has banned the outdoor use of neonicotinoids and we believe that Maine—and eventually the entire nation—would be wise to follow suit.

Lead Ammunition
Lead ammunition can lurk unseen in deer, wild turkey, and other game carcasses often scavenged by Bald Eagles and other species. Less than one gram is enough to kill a Bald Eagle and more and more sick eagles are being brought to wildlife rehabilitators. A bill would ban lead ammunition in Maine. We plan to be a part of this conversation, seeking to understand how we can protect scavenger species while honoring Maine’s strong hunting tradition and culture.

Defending Single-use Plastic Bag Law
In 2019, Maine became the third state in the nation to ban the use of single-use plastic shopping bags statewide. This was a big step toward reducing plastic pollution in our environment. This session, a few bills seek to overturn this ban. Maine Audubon will join businesses and other stakeholders that want to be part of the solution to the plastic pollution problem by opposing these efforts to overturn the ban.
Balloons
Discarded or released balloons can be harmful to wildlife if ingested, yet they are not widely recognized as litter. Bills this session seek to reduce intentional releases of balloons and their passage would be a big win for wildlife.

Advocacy Priorities

BirdSafe Maine
Between 365 million and nearly one billion birds in the U.S. are killed each year after colliding with buildings, more than any other human-caused source except for habitat reduction. Utilization of “bird-safe technology” like bird-safe glass and alternative architectural design can dramatically reduce bird deaths. We’re working to expand awareness and adoption of these practices and technologies in Maine, with an initiative called BirdSafe Maine.

Mining
Wolfden Mt. Chase, LLC has applied for a permit to pursue a metallic mineral mining operation in Penobscot County, just northeast of Baxter State Park and Katahdin Woods and Waters National Monument. Maine Audubon will be following the permitting process closely to ensure the permit, if issued, meets the very strict environmental protection standards passed by the Legislature in 2017 after extensive input from Maine Audubon and other stakeholders.

Federal Issues
The Trump Administration wreaked havoc on our country’s core environmental protections, undermining over 100 environmental laws, rules, or policies. With a new administration comes an opportunity to right many of these wrongs. We’re focusing on reinvigorating the Endangered Species Act, the Migratory Bird Treaty Act, and the Land and Water Conservation Fund, and passing a new law that would annually award millions of dollars to wildlife conservation called the Recovering America’s Wildlife Act.

Offshore Wind
The potential for floating offshore wind in the Gulf of Maine to produce clean energy and play a significant role in meeting our state’s climate goals is huge, but a lot of work needs to be done to determine and understand the impact of offshore wind—particularly on birds and bats. We’re working closely with other stakeholders to advise the State as it pursues a floating offshore wind research array in the Gulf of Maine, in order to avoid potential wildlife impacts and maximize what can be learned from this essential first step toward developing more offshore wind.
Spring Events

SERIES

Future Focus
Tuesdays, 4:30 pm
March 2, April 5, May 4
Youth-led online series highlighting youth climate justice activists and their stories from across the state. FMI: maineaudubon.org/futurefocus

Birding Basics
Thursdays, 7 pm
Online series by Staff Naturalist Doug Hitchcox
March 4: Identifying Birds
March 18: Tools of the Trade
April 1: Bird Behavior
April 15: Birding By Ear

“Bringing Nature Home”
Wednesdays, 4 pm on April 21, April 28, May 5, May 12
Four-part online series exploring the use of native plants to enhance habitat for birds in gardens, yards, and communities.

World Series of Birding
May 8
Support our team: maineaudubon.org/worldseries

Snowy Egret 5K Virtual Race
May 21-June 4
Sign up at snowyegret5k.org

CHAPTER EVENTS

Western Maine Chapter
FMI: western.maineaudubon.org
March 10, 7 pm
A Chewonki educator will present an online program on predators and their role in the balance of nature.

April 14, 7 pm
Steve Kress will give an online talk about the success of Audubon’s Project Puffin, off the coast of Maine.

Penobscot Valley Chapter (PVC)
FMI: pvc.maineaudubon.org

The Revival of American Chestnuts
March 5, 7 pm
An online talk with Al Faust

Pulse Point: Tracking Change in the Birds of the Acadia Region
April 2, 7 pm
An online talk with Seth Benz

Morning Bird Walks in greater Bangor area
May/June, 7-8:30 am
All skill levels welcome. For details contact Gordon Russell at gruss@roadrunner.com

SPECIAL EVENTS

Birding Cuba
March 16, 7 pm
In 2020, Ron and Lee Davis and Nancy Larson traveled much of Cuba with a group of American birders and saw about half of the tropical island’s 350 species. Online talk.

Earth Day Film Festival
with Maine Outdoor Film Festival
April 22, 7 pm
Online

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Online

Full event listings, prices, and registration at maineaudubon.org/events
THEMED WEEKS

Programs, events, activities for all ages, and more, focused around a theme. Look for full details at maineaudubon.org/events. We’ll have family trivia, themed Chickadee Club content, self-guided walks, asynchronous events, and much more!

April 5–9 • Big Night Week

Highlights

*Tuesday, 4 pm*: “Maine Big Night” statewide community science program, online talk with Greg LeClair

*Thursday, 4 pm*: Center for Wildlife online program on reptiles and amphibians

April 26–30 • Watershed Week

Highlights

*Wednesday, 7 pm*: River Voices: Perspective on the Presumpscot online book talk with co-editor Rob Sanford and art editor Michael Shaughnessy

*Thursday, 7 pm*: From the Mountains to the Sea online book talk with John Banks and guests

May 1–15 • Spring Migration Weeks

Highlights Week One

*Saturday, 7 pm*: Warbler ID online talk

*Thursday, 7 pm*: Analyzing the Mysteries of Avian Migration online talk

Highlights Week Two

*Thursday, 4 pm*: Center for Wildlife birds program

May 17–21 • Arbor Week

Highlights

*Tuesday, 7 pm*: The Nature of Oaks online book talk with Doug Tallamy

*Wednesday, 4 pm*: Portland’s Big Tree Tour, webinar (and self-guided tour) with Portland City Arboirist Jeff Tarling

*Thursday, 4 pm*: Restoring Maine’s American Chestnuts with Dr. Tom Klak
Results So Far
Three years into the five year (2018-2022) Maine Bird Atlas, being run by the Maine Department of Inland Fisheries and Wildlife, we are making great progress! Thanks to more than 1,500 volunteers submitting more than 55,500 checklists, this project has confirmed 210 species of birds breeding in Maine, 13 of which are new to Maine since the first atlas (completed in 1983). This project exists to help improve our understanding of the abundance and distribution of Maine’s breeding and wintering birds. Data collected will be invaluable in guiding future species status assessments, priority species’ needs, and identifying and conserving high value wildlife habitats. While results are still preliminary, we are seeing some very positive trends for species like Wild Turkey and Bald Eagles, while others, especially aerial-insectivores like Cliff and Bank Swallows, are declining.

Setting Priorities
For the atlas, the state is broken up into 4080 blocks, 974 of which are considered Priority Blocks. This designation has more to do with systematic distribution than priority habitats, so we have a primary goal of at least getting all of our Priority Blocks complete. We reached our goal of having at least 30% of Priority Blocks completed at the end of 2020, and we’re making good progress on the rest. Completing a block basically takes at least 20 hours of survey effort, gets good coverage of all habitats within that block, and confirms breeding in more than 50% of the species found there. With only two breeding seasons left, we need volunteers who can help us reach our goal by seeking out these Priority Blocks and putting in the final effort to get them complete. From almost anywhere in the state, you can find a Priority Block still needing effort within 10 miles of you.

Learn How to Help
Join me and other Maine Bird Atlas staff and volunteers each Wednesday evening, from 6:30 to 7:30 pm on Zoom! We started these virtual Q&A sessions when COVID-19 kept us from in-person meetings and they’ve proven to be a superior way to connect with more people and we can hold them more regularly. Come learn what the atlas is about, ask specific questions, or just hang out and hear what others are finding. Find the links and learn more about the atlas at maine.gov/birdatlas or facebook.com/mainebirdatlas.
The Naturalist’s
Spring Almanac

MARCH
5  Keep an eye out for the first Groundhogs emerging from their winter hibernation.
15  Waterfowl migration is peaking; watch for bright white Snow Geese among the larger Canada Goose flocks.
20  The Vernal Equinox is today, bringing us 12 hours of daylight.
28  Happy Maine Maple Sunday! Sap is flowing and Yellow-bellied Sapsuckers will be here any day.

APRIL
4  Beware of amphibians on the move! The first warm rain will get frogs and salamanders moving across roads. Learn more at: facebook.com/groups/bignightmaine
14  Bird migration is picking up. Help reduce window collisions by cutting down reflectiveness with UV stickers, or even just shutting lights off at night.
19  As you spend time in the garden, look for Mining Bees (Andrena) recently emerged from the underground nests where they spent the winter.
24  Female Porcupines are giving birth—luckily for the mother, the pup’s quills don’t harden until after the birth.

MAY
8  Today is Global Big Day! In 2020, 139 bird species were found in Maine. Submit your sightings to eBird.org and see if we can beat that record!
16  Branch out this Maine Arbor Week and learn about Maine’s forested landscape.
23  Alewives are spawning in big numbers.
26  You may be able to see birds migrating tonight by watching the full moon. Pro tip: wear sun-glasses for prolonged viewing.
Native Plants SALE

Place orders online for pick-up at Gilsland Farm and Fields Pond:
shop.mainenativeplants.org

Plan to purchase perennials such as milkweeds, asters, bee balms, iris, and goldenrods, as well as shrubs and trees such as oaks, maples, viburnums, and dogwoods. Maine Audubon prioritizes plants that are ecologically critical, but also easy to grow and well-suited for small spaces and properties in town. What will you plant this summer?

Explore our website to find the native plants best suited for specific sites, and that provide the greatest ecological function and benefit to both your landscape and our native wildlife.
mainenativeplants.org

The Native Plants Sale and Native Plant Finder are both part of Maine Audubon’s “Bringing Nature Home” project, made possible by the generous support of Jim and Ann Hancock.