

City of Biddeford
Conservation Commission
April 24, 2024 5:30 PM City Hall
Council Chambers & Zoom
<https://biddeford.zoom.us/j/92636503583?pwd=YVl5T24xMmVyUDB4ZjR3Qit6MjFEZz09>
Webinar ID #926 3650 3583, Passcode 023144

**Status: Conservation Commission, Wednesday, April 24, 2024, 5:30 PM City Council
Chambers & Zoom**

- 1. Adjustments to the Agenda**
- 2. Secretary Report**
- 3. Presentations/Discussions: UNE Capstone Projects**
 - 3.1. Thatcher Brook Watershed-A political/enviro history
 - 3.2. Unfragmented Forest Blocks in Biddeford-History, Ecology, & Importance
- 4. New Business**
 - 4.1. Clifford Park Proposal-Draft-Citizen Submitted
[Clifford Park Proposal-1.pdf](#)
 - 4.2. Climate Cluster Segment
 - 4.3. HOBO
 - 4.4. Maine Association of Conservation Commissions Newsletter
[Conservation Commission Spring Newsletter.pdf](#)
- 5. Other Business**
- 6. Adjourn-Next Meeting May 22, 2024**

Clifford Park Assessment and Management Plan Proposal



Biddeford, Maine

Prepared by: Jason Saucier

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Introduction

The purpose of this proposal is to provide a comprehensive assessment and management plan for the enhancement of Clifford Park. The park is comprised of woodland area that is within close walking distance from Main Street and the downtown district. As indicated and shown by the online City of Biddeford Interactive GIS map approved zoning layers, Clifford Park is surrounded by single family residential, multifamily residential and suburban housing. Clifford Park holds historical significance as it once served as an industrial mining site for granite in the past. Since the abandonment of granite mining in the early part of the twentieth century, the area has reverted to a forested landscape that provides significant wildlife habitat as well as many recreational opportunities.

The adjacent Granite Street is a reminder of the area's rich history, reflecting the importance of granite quarries that thrived in its proximity. In 1896, the Clifford family came into ownership of land and later became known as Clifford Park after being donated to the city. The family made a philanthropic contribution to the City of Biddeford by donating a substantial portion of the land that now constitutes Clifford Park. More recently, the park expanded its size with a fifty-four-acre parcel that was owned by the Boutin family. Through collaborative efforts and the foresight of city leaders, conservation groups, and members from the community of Biddeford, the Boutin parcel was acquired by the city and secured to form one contiguous forest landscape of which should be placed into a conservation easement.

The three interconnected parcels present a unique opportunity to preserve an intact forest landscape that not only honors the city's heritage but also offers myriad possibilities for community engagement, recreation, and enjoyment. This proposal aims to build upon this foundation by outlining possibilities that start with a resource assessment. The development of a management plan would enhance environmental conservation, reduce, or eliminate invasive species, and foster a community-oriented vision with clear initiatives that secure the natural beauty and resources in Clifford Park for present and future generations to recreate and enjoy.

Purpose

This proposal aims to obtain direction and approval from the Biddeford Conservation Commission and Recreational Department to contract with a licensed forester and other professionals to draft a well-developed management plan. The plan would initially collect baseline information, perform an inventory, and assess the natural resource conditions within the Clifford Park. A licensed forester would inventory and develop a forest management plan that determines stand types, tree volumes per species, identify tree diseases (i.e. hemlock woolly adelgid, emerald ash borer, gypsy moths, white pine blister rust, browntail moth), locate water resources, trail systems, access points and boundaries. These features would be mapped along with modern and ancient cultural artifacts that could include foundations, footings, quarries, wells, stone walls, and other culturally significant resources.

Forest management plans usually cite management goals and are updated every ten years to assess management goals or make changes to the management plan.

A detailed forest management plan would be a beneficial tool for the management of Clifford Park by providing detailed information that states clear goals. The goals would outline short and long-term management objectives with recommended timelines for specified improvement to occur and as determined by the natural conditions, growth rates, workforce, and funding. The report would provide baseline information that would serve as a reference point and provide the means to monitor changes over time. Additionally, a management plan would provide a starting point that identifies key resources and features within the park—all of which helps the City of Biddeford make more informed decisions.

Forest resources would benefit from maintenance as prescribed in the plan by using Best Management Practices (BMPs) that focus on enhancing the natural beauty and health of each stand type across the landscape. Monitoring the health of “legacy trees” and applying treatment, when necessary, would ensure that these majestic giants are healthy well into the future. Identifying sensitive areas and species of interests would provide a layer of protective measures that preserve the resources.

Once information is gathered, BMPs can be applied through silvicultural methods to make recommendations that are directed toward specified goals. The forester could provide greater detail in planning within focused areas by developing strategies for forest stand improvements that aim to improve aesthetics, provide better habitat for a range of wildlife, and plan an initiative to remove invasive species. A licensed arborist could be contracted to perform work on legacy trees that have been identified and needing special care to improve both tree health and form.

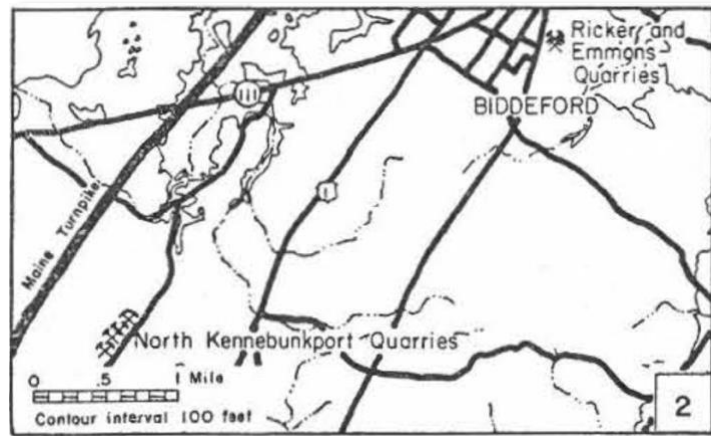
Clifford Park is a valuable natural area that provides one of the most unique recreational areas near the city center of Biddeford. The park is among one of the best examples of a forested area of relatively large size and proximity when compared to other cities in the state of Maine. Three large parcels that total 135.34 acres (as cited on tax maps) is a significant natural area that is only a ten-minute walk from the downtown city center and its relative proximity to the urban area. With the addition of the newly acquired lands (roughly 100 acres) east of the current park, it is of vital importance to develop a plan for these areas based on ecological science.

The park provides a range of outdoor activities and outdoor opportunities that is utilized over a wide range of user groups. On any given day, park visitors use the network of trails for hiking, walking their dogs, mountain biking, bird watching, technical climbing, fishing, snow shoeing, cross-country ski and more. A five-minute walk on any one of the interior trails will provide an experience where there is no city noise or traffic sounds and where one can truly commune with nature.

Historical

Following settlement, Biddeford first incorporated as the Town of Saco in 1653. The area that is now Clifford Park was not usable for farming or homesteading due to the thin soils, granite outcroppings, ledge, and wetlands. There does not appear to be any evidence of

any homesteading in the park as usually evidenced by the former agricultural practices of stone walls and cellar holes, as can be observed in other forested areas in Biddeford. These conditions would have inhibited farming throughout most of the areas that are now within the park boundaries. In later centuries, granite was mined in several quarries and surface ledge in of Clifford Park (Figure 1) to provide building material and for monuments by the Emmons (Gowan) Quarry and Ricker Quarry (Rand, 1958). The granite was used to build the Brooklyn Bridge in New York City, the Lincoln Memorial in Springfield, Illinois and supplied material for other projects in the area.



(Figure 1.) Ricker and Emmons Quarries present day
Clifford Park

Remnants of these operations can be seen throughout the park, though the natural flora and fauna have returned. Many small pits and quarries are seen in many areas. The cement foundation for the granite scale can still be seen on the black trail before it branches off with the red trail on the approaching trail starting on Pool Road and on the way to the waterfall. Near that intersection, cement peers are still present were buildings and rock crushers were located. After weighing, granite slabs were typically moved to the docks located on Decary Road for transport by ships.

After many years of heavy industrial use in the nineteenth and earliest part of the twentieth centuries, much of the land that now encompass the park was largely bare of trees and vegetation in areas around the quarries. The land was mined for granite and was significantly altered and abandoned after granite operations ended. Over the course of time, vegetation and trees returned to the landscape to what is now a mature forest in many areas within the park. The tree stands located in some areas are stunted or small in areas where there are rock outcroppings and thin soil. These areas are sensitive to disturbance and can take many decades to recover when disturbed.

Ecology

Clifford Park is a unique habitat close to our urban center. There are numerous significant vernal pools and upland areas that provide habitat to a wide range of species. Whitetail deer, songbird, amphibians, and reptiles can be observed in the forested area that consists primarily of white pine, red oak, and red maple with examples of shagbark hickory and

white oak being present. Oak and hickory provide important mast for many species of wildlife. Various turtle species, including Blanding's Turtles (listed as threatened at the state level) have been observed in and around Clifford Park.

Some very large and majestic white pine exist throughout the park most prominently along the park entrance on Pool Road following along the black trail and the western boundary with examples in other areas of the park. Many of the larger pine and oak trees have trunk diameters greater than thirty-six inches in diameter and are approaching one-hundred feet in height. The bandstand as shown in the photo below was located on the hill, up granite steps and into the woods from the Raymond Gaudette memorial granite bench. The pine trees are likely at least thirty years old in this photo Circa 1920s, which would place most trees in this area more than one-hundred and thirty years old (Figure 2).



(Figure 2.) Bandstand off Pool Road in Clifford Park—the location where Painchaud's Band played regularly before WWII as told by Ray Gaudette

Under ideal conditions, white pine can live for hundreds of years. Many of these majestic trees are healthy and growing well while others have died or are showing signs of decline. An example a large pine tree that is spiked with an affix sign to the tree is in decline. This tree located in the pine stand on Pool Road and near the kiosk at start of the trail on right. It should be noted that many trees have been spiked for the purpose of attaching signs and trail identification tags to trees. This practice could be negatively affecting tree health and providing pests and disease an opportunity to enter the tree through the bark and cambium interface, where disease and pests can access other tissues through the xylem and phloem. This also has a negative affect on the natural beauty of the trees affected and, in a sense, defaces and spoils the natural condition of the forest.

Special consideration should be given regarding stewardship of trees and especially the majestic legacy trees. It would be beneficial for both tree health and aesthetics to adopt a policy to discontinue this practice. Trees that are larger than thirty inches in diameter should be identified as legacy trees. A more robust level of management of these trees

would be very beneficial for the health, vigor, and longevity of these trees. The removal of spikes and nails from trees throughout the park would be beneficial and allow trees to callus over and close off the wounded areas to eliminate internal access to pathogens.

Forest Management Plan

A detailed forest management plan that identifies, maps, and quantifies key features within the park to include forest types, vernal pools, wetland areas, environmentally sensitive areas, trails, and historically significant artifacts. The management plan would specify silvicultural treatments that include the removal of “hazard” trees along trails. An arborist could be contracted to remove hazardous limbs along major trails to improve trail safety by lessening wind hazards. Removal of dead or poorly formed limbs would improve tree health and aesthetic appearance as shown in the comparison (Figures 3 and 4).

The contracted forester should oversee all aspects within their area of expertise to implement the plan and supervise subcontractors as related to forestry, trail improvement, habitat enhancement or invasives removal. Trails that have exposed tree roots resulting from years of foot and bike traffic would benefit from a generous layer of woodchips to protect tree roots from wear and erosion. A clean source of wood chips should be carefully source to avoid unwanted introduction of invasive species that would be harmful to the ecology of the forest. The best source of wood chips would come from on-site wood chips as generated from processing branches and other woody material that is picked up along trails.



Figure 3. Clifford Park taken near Pool Road, Biddeford, Maine



Figure 4. Bowdoin Pines at Bowdoin College, Brunswick, Maine

Erosion

West Brook is an environmentally sensitive are and is prone to erosion during high water level when the water overrun its banks. The stabilization of the trail that follows West Brook

would benefit by closing the trail to mountain biking and to allow vegetation to naturally return and address any smaller areas that require stabilization. Areas along the brook have become muddy, destabilized, and eroded.

Trails within the park that cross small water seeps or wet area could use various soil stabilization strategies that include using riprap to “harden” the traveled surfaces; by using boardwalks, bridges, and boards to mitigate soil erosion. Use of natural river stone having natural edges would blend into the landscape better than crush stone or riprap (Figure 5). A mixture of aggregate sizes would hold together better on slopes and provide maximum wear stability such as what is known commonly and referred to in contractor nomenclature as three-inch-minus. The photo in Figure 6 is an example of a section of trail in Clifford Park that would benefit from a four-inch layer of “clean” woodchips.

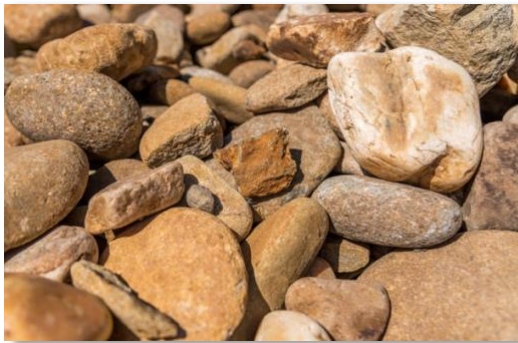


Figure 5. Natural river stone used for riprap.



Figure 6. Trail in Clifford Park

Early Successional Forest

A relatively young forest stand is located in the general vicinity of West Brook beyond the waterfall between the red and black trails. A small area several acres in size could be managed as early successional forest to provide the necessary habitat for a variety wildlife species. This would mimic the condition of only a few decades ago when deer and rabbit where more commonly sighted in the park. Historically, it was not uncommon to see deer, rabbits, and other animal mammals and their tracks in Clifford Park when there were thickets. These are the desired habitats for rabbits and provide deer vegetation for browsing.

A defined area that consists of several acres in size and divided into two equal sections could provide adequate habitat requirements to fulfill these habitat niches. Scheduled maintenance of each section would benefit from bush-hogging on a four-year cycle and alternating to the opposite section in the following four years. This would provide a stand age between 0 and 8 years that is essential in providing cover and brows that is required for many species. The management of primary successional forest through the spectrum of mature stands that already exist would increase viewing opportunity of species such as deer, rabbits and birds by people visiting the park.

Trails

Trails in Clifford Park are well marked having blazes, tree tags and a map located at the Pool Street kiosk. Most trails such as the black trail are old dirt roads that offered vehicle

access in the past. Other interior trails are indicated with blazed paint on trees that correspond with trail maps. Most of these trails are well worn and are multiuse trails that primarily include walking, hiking, mountain biking and occasional winter use with snowshoes and cross-country skiing.

To maximize the natural beauty within the park, a system of trail marking like what is used by the Kennebunkport Conservation Trust could be phased in and the old system phased out (KCT) (Figure 7). At each trailhead managed by the KCT, details that include a color-coded trail map, name of land preserve, legend, emergency marker points on map, along with trail rules are posted on a pole. The trails are not blazed to preserve the natural aesthetics of the preserves. Instead, trails are well worn, brushed out and deliberate paths have been scoured to the mineral soil or amended with gravel or wood chips. Signposts are located at the junction of each trailhead or trail intersection on posts that include the trail name and allowed activity for each trail, and the location of the sign is identified on posted map along with distances to the next trailhead or trail intersection. Reflective markers as shown in Figure 8 identify the trail by color on the map. Additional signage throughout the park could also serve to educate park users about vernal pools, trees, and more—ensuring the needs of wildlife and plants are understood by all.

Examples of this May Include:

- Vernal pool markings with notes to keep dogs out of the water.
- Temporary trail closure signs for erosion control or other habitat needs.
- Educational signage about amphibians, birds, and more.



Figure 7. Example of Trailhead KCT



Figure 8. Example of Trail Intersection KCT

Goals and Objectives

The purpose of this proposal is to highlight and identify some of the exceptional resources that exist in Clifford Park. This proposal begins the process of developing a long-term management plan that outline and suggest objectives that better protect, enhance, and diversify the natural resources within the Clifford Park for a variety of user activities. The contents within this proposal are not exhaustive but serve as a starting point. Consulting with a licensed forester, environmental firm along with local and state experts would outline clear and measurable goals that would be phased in, implemented, and verified through periodic inspections.

- Contract with a licensed forester to develop a forest management plan with detailed information about the resources with the park
- Contract with a licensed ecologist to update documentation surrounding Clifford Park's vernal pools and create a plan for rerouting trails as needed to create the desired buffer between human activity and wildlife habitat
- Recommended treatments are follow-up with BMP prescriptions as defined in a forest management plan and updated periodically every ten years to adjust the plan and to audit the progress of the outlined goals and objectives
- Identify "legacy" trees as determined by a licensed forester as exceptional in diameter, height, form, and in good general health
- Contract with a licensed arborist to prune dead limbs or poorly formed branches on all identified legacy trees to improve tree health, longevity, aesthetics and used—with these branches being used to build rabbit dens or mulch
- Carefully remove all signs and trail marker fasteners from trees using caution not to cause damage to trees when removing fasteners
- Discontinue tree blazing to enhance a more natural setting as blazes fade over time and phase in the installation of trail signs on posts sparingly and only at trail heads and intersections of trails
- Use woodchips to harden trails—ideally sourced from material on-site or by carefully sourcing from a licensed forester who has reasonably verified the material as a "clean" source that is free of invasive plants, seeds, and Asian jumping worms (*Amyntas*)
- Enhance natural diversity by clearing several small areas from 2 to 0.25-acres in size within Clifford Park to establish an area or areas that is managed to maintain early successional forest through period maintenance to encourage young early successional vegetation and *only* developed in young forest stand areas and in lowest use areas
- The removal of all large health trees should be prohibited and only considered on a case-by-case bases when a tree poses a significant encumbrance
- Maintain an intensively managed forest buffer along the primary the trail corridor that improves safety, and asthenic appearance by pruning dead branches and balancing the crown to enhance tree form
- Removal of invasive plants, including Japanese Knotweed, climbing vines, and others identified by a forester
- Removal of excessive brush and poison ivy on either side of the primary trail on a scheduled cycle and periodically for minor trails as needed

- Identify potential conflicts of interest among people, governing bodies or other outside entities that could jeopardize the implementation of the Clifford Park Management Plan; the financial resources and budget to implement the plan, or the disruption of the continuity and progress of the goals and objectives on the recommended timeline as outlined in the plan
- Eliminate downed woody debris along trails and removal of trash annually each spring

References

Maine Granite Quarries and Prospects, Maine Geological Survey, Mineral Resource No. 2, John R. Rand, Department of Economic Development, Augusta, Maine, 1958

The "Other business" item may be in overload-mode this month, as I tried (apparently in vain) to keep the agenda short because of the recurring tech issues.

<image001.png>

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Spring 2024 Newsletter

Conservation Commission Outreach and Education

Educate the public about the environment

As an advisory body, a commission must rely on research, education, community engagement, and various methods of persuasion to accomplish its goals. Public education is a primary ingredient and may involve explaining environmental issues and concerns directly to citizens. Building a strong network of volunteers and local officials who can promote ecological awareness in their communities is an important step in protecting our natural resources.

Adults and children enjoy learning about nature and commissions can offer many interesting topics to promote environmental awareness. Get kids outside for a visit to a vernal pool in spring or a hike in the town forest. Sponsor a presentation by an inspiring speaker at the library. Start promoting the event early in different media outlets and you may be surprised how many people attend!

Communicate with the public

How the public, particularly town residents, views a conservation commission will affect what that commission can accomplish. While the public image might not be the only reason for undertaking an activity, it should be considered.

There are several ways you can help educate the public. Your commission can contribute to your local town newsletter or update your website with helpful information. Whether you provide a printed or electronic account, it's great to let people know what your commission is up to!

Have you considered providing maps or other informational displays at your town meeting or town offices? Share pictures of your commission's events in the local news and post on social media!

Do you have a working relationship with your school, library, or another community group? Schools are often very appreciative of environmental education programs. See the next article “Engaging Youth in Conservation Commission Activities” after the “Some Environmental News” section.

The most important thing is to get people outside to enjoy the environment. Coordinate hikes, birding adventures and other recreational activities as a way to educate the public and get them engaged in your mission to protect natural resources.

Some Environmental News

Signs of Seasons citizens science project training workshops KENNEBEC JOURNAL 4/9/24. University of Maine Cooperative Extension and Maine Sea Grant are hosting a series of workshops for individuals interested in participating in the Signs of the Seasons citizen science project. Workshops will be held throughout April and May in Falmouth, Wells, Augusta, Camden and Boothbay. For a full schedule, visit extension.umaine.edu/signs-of-the-seasons. A three-part webinar series is also available for those unable to attend. Participants can expect to learn how to make scientific observations of phenology (the study of cyclic and seasonal changes of plants and animals), practice making observations, and leave with the tools and knowledge needed to set up their own site to observe and record changes in phenology. Signs of the Seasons is a statewide effort to recruit volunteers to identify and record changes in more than 20 different indicator species like rockweed, milkweed, loons, butterflies and lilacs, that are important for understanding Maine’s changing climate. Data from this network of volunteers helps build a rich, detailed record of the region’s seasonal turns, which is made available to collaborating scientists and resource managers. The workshops are free, but registration on the program website is required. For more information or to request a reasonable accommodation, contact Keri Kaczor at keri.kaczor@maine.edu or 207.974.9502, or Beth Bisson at beth.bisson@maine.edu. Source: <https://www.centralmaine.com/2024/03/28/umaine-extension-sea-grant-to-host-citizen-science-trainings-in-april-may/>

New bills give Maine towns and agencies more power to enforce environmental regulations MAINE MONITOR 4/6/24. One bill would give municipalities more immediate power in enforcing the state’s shoreland zoning ordinance, and the other bill would empower state agencies to issue stop-work orders when violations are identified. Source: <https://themainemonitor.org/environmental-regulations-bill/>

Local trust, watershed to take part in Maine Big Night KENNEBEC JOURNAL 3/30/24. Kennebec Land Trust and Friends of the Cobbossee Watershed plan to participate in the statewide community science project Maine Big Night. With help from volunteers, members will collect data on migrating frogs and salamanders as they cross roadways during the spring. KLT and Friends of the Cobbossee have adopted two 1,000-foot-long roadway sites to monitor near KLT’s Gott Pasture Preserve in Wayne. Anyone who can operate safely on a roadway is invited to join. Volunteers will collect data on amphibians present and help them safely cross the road. Safety vests and headlamps are required to participate. KLT and Friends will have them available, but people should bring their own if they have them. Families are encouraged to participate, but children must be old enough to be aware of road safety. When the conditions are

right between now and May 15, they will contact participants. To sign up, or for more information, contact Ring at 207-377-2848 or mring@tklt.org, or Cami Wilbert with Friends of the Cobbossee Watershed at 207-395-5239 or cam@watershedfriends.com. All volunteers are required to sign a waiver available at tklt.org.
Source: <https://www.centralmaine.com/2024/03/30/local-trust-watershed-to-take-part-in-maine-big-night/>

Maine Big Night to mark amphibian migrations KENNEBEC JOURNAL

3/24/24. Each spring as the ground thaws and the nighttime air temperatures climb to the forties, the patter of rain lures Maine's amphibians from their winter quarters. On a given night, legions hop and crawl over great distances to congregate in their watery breeding grounds. Frogs and salamanders suffer high mortality rates when their routes intersect with where cars travel. Some roads are so impassable that a population on one side of a highway may be genetically different from one on the other side of the highway. University of Maine researchers are encouraging people to get outside and help document one of nature's great migrations this spring. Maine Big Night, a community science nonprofit, calls on Mainers to find frogs and salamanders that are on the move, and where they are most vulnerable to human infrastructure. Since 2018, the community science project has recorded more than 21,000 amphibians at 349 locations that span Maine from Kittery to Fort Kent, according to a news release from the university. Collecting additional data during Maine Big Night supports future research into species distribution trends, disease monitoring and predictors of road mortality hotspots. Joining Maine Big Night is free; volunteers can sign up at mainebignight.org. Those who wish to adopt a monitoring site must complete an online training and pass a certification quiz. Volunteers may join a certified person's monitoring site without additional training.

Source: <https://www.centralmaine.com/2024/03/24/maine-big-night-to-mark-amphibian-migrations/>

Column: Investing against the tide of global warming KENNEBEC JOURNAL

3/21/24. Since late January, we've had nothing but rain and lots of coastal flooding. It's hard not to think the Maine long-range climate forecast of "warmer and wetter" has arrived. The mean temperature for the entire state is nearly 8 degrees above normal, with ice-out a month early. Starting with the dawn of modern state government — the Curtis administration, from 1967-75 — Maine's been using general fund bond issues to invest in its future. Gov. Paul LePage shut it down. Bond issues are an important way to involve voters directly in making choices about the state's future. Looking at the magnitude of climate change, it's dismaying we're not already addressing the enormous capital commitments it will require. Looking at transportation, relying entirely on roads and private vehicles can't work. **We should be investing in urban pedestrian paths and rural trails, making use of the idle state-owned rail network for trains, trolleys or whatever makes sense. Such off-road transportation networks could dramatically reinforce denser, anti-sprawl residential and commercial development that may be our only hope of permanently reducing energy consumption and making housing affordable again.** ~ Douglas Rooks

Source: <https://www.centralmaine.com/2024/03/21/douglas-rooks-investing-against-the>

Increasingly early ice-outs on Maine waters open up new problems, experts say PORTLAND PRESS HERALD 3/15/24.

As one of Maine's [warmest recorded winters](#) comes to an end, many waterways across the state are seeing ice form later and melt earlier than ever, which experts say is causing increasingly severe environmental impacts. While ice-outs historically begin in mid-April, ice has already disappeared [on many Maine lakes this year](#). At Lake Auburn, ice-out this year was declared on Tuesday, March 12, earlier than ever recorded. At China Lake, it was Monday, March 11, another record. At Cobbossee Lake, it was March 13 a month earlier than last year. Earlier ice-outs have severe impacts on everything from algae

blooms and trout populations to moose calves and snowmobilers.

Source: <https://www.pressherald.com/2024/03/15/increasingly-early-ice-outs-affecting>

Mills, Congress members praise decision to protect vital lobstering territory from wind development MAINE MORNING STAR 3/15/24. Gov. Janet Mills and state congressional leaders on Friday praised a decision by a federal agency to exclude an important lobster fishing ground from the area in the Gulf of Maine that will be leased for offshore wind development. The Bureau of Ocean Energy Management (BOEM) on Friday released its final designated Wind Energy Area for the Gulf of Maine, which the agency said could ultimately support the generation of 32 gigawatts of clean energy. The area excludes the entirety of Lobster Management Area 1, which is a crucial fishing ground for Maine's lobster industry.

Source: <https://mainemorningstar.com/briefs/mills-congress-members-praise-decision>

30 M from bond could help storm-damaged trails. BANGOR DAILY NEWS 3/15/24 A \$30 million bond request meant to bolster existing and develop new trails could be used to repair damage that multiple storms inflicted on the state's trail system, according to a Maine Trails Coalition spokesperson on Thursday. The bond is part of an effort to take a statewide approach to designing, developing and maintaining trails that draw people into Maine's more than \$3 billion recreation economy. One goal is to build trails that stand up to the effects of climate change. "We need a more dedicated stream of funding and we need to have more climate resilience," said Silvia Cassano of the Maine Trails Coalition. Source: <https://www.bangordailynews.com/2024/03/15/outdoors/recreation/storm>

Surviving fishing gear entanglement isn't enough for right whales – females don't breed afterward PORTLAND PRESS HERALD 3/13/24 Scientists estimate that before commercial whaling scaled up in the 18th and 19th centuries, there may have been as many as 10,000 North Atlantic right whales. Today, fewer than 360 individuals remain. Almost 90% of them have been entangled at least once. When whales become entangled, they use extra energy dragging the fishing gear. They may struggle to feed and slowly starve. Ropes wrapped around whales' bodies can cause infections, chronic emaciation and damage to whales' blubber, muscle, bone and baleen. Even when entanglement does not kill a whale, it can affect individuals' ability to reproduce, which is critically important for a species with such low numbers. On Feb. 14, NOAA announced that a female North Atlantic right whale that died had rope deeply embedded in the whale's tail likely from lobster fishing gear in Maine. Source: <https://www.pressherald.com/2024/03/13/surviving-fishing-gear-entanglement>

Using fire to manage forests MAINE MONITOR 3/10/24 While overall a fairly wet state, Maine has seen an increasing number of wildfires in recent years, as droughts intensify, development increases and more and more people venture into the woods. (Almost all wildfires in Maine — 92% — are started by humans. Make sure those campfires are out!) The wildfire risk in Maine is projected to increase "significantly" in coming years, according to the Maine Forest Service, as temperatures rise, droughts increase, and summer soil moisture drops. One of the ways to reduce this risk is by fighting fire with fire. While insurance challenges remain, Logan Johnson, executive director of Maine TREE, said he expects fire to become a bigger part of the forestry management in Maine. Source: <https://themaine-monitor.org/using-fire-to-manage-forests/>

Coastal Maine towns, businesses question whether to rebuild or retreat after January storms MAINE MONITOR 3/9/24 After back-to-back January storms caused millions in damages, ripping shacks from their pilings and tossing piers into the sea, coastal Maine communities are suddenly having to decide how and where to rebuild – if they do at all. Historic structures and attractions up and down the coast were devastated by the storms. A nearly 150-year-old walking path in Bar Harbor that runs along the shore and sees thousands of summer visitors sustained an estimated \$900,000 in damages and has been closed since it was hit. Areas of nearby Acadia National Park also sustained heavy damage, including popular hiking paths and large sections of the Schoodic Loop Road, which was undermined in spots. Amanda Pollock, the Acadia National Park public affairs officer, estimated there were roughly 700 downed trees at Seawall Campground and Seawall picnic area, both popular destinations. Source: <https://themaineonitor.org/coastal-rebuild-or-retreat-2024/>

Maine coastal dunes experienced 15 – 30 feet of erosion during January storms MAINE PUBLIC 3/8/24 Coastal communities are looking for ways to restore their beaches and make them more resilient after two January storms eroded shorelines and demolished seawalls and piers. Dunes up and down Maine's coast experienced anywhere from 15-to-30 feet of erosion, Peter Slovinsky, a marine geologist for the state's Geological Survey said Friday. Coastal municipalities should consider helping private property owners with dune restoration projects, he added. "Fifteen, 20 homeowners need to get together and restore their dune. Dune is what is going to be protecting those properties." Source: <https://www.mainepublic.org/environment-and-outdoors/2024-03-08/maine-coastal>

Where did winter go? Spring starts early as U.S. winter was warmest on record ASSOCIATED PRESS 3/8/24 Across much of America and especially in the normally chilly north, the country went through the winter months without, well, winter. In parka stronghold Portland, Maine, the thermometer never plunged below zero. On Friday, the National Oceanic and Atmospheric Administration confirmed that [the winter of 2023-2024 was the warmest](https://thehill.com/homenews/ap/ap-science/ap-much-of-america-asks-where-did-winter-go-spring-starts-early-as-us-winter-was-warmest-on-record/) in nearly 130 years of record-keeping for the United States. This is just the latest in a drumbeat of broken temperature records, national and global, that scientists say is mostly from human-caused climate change from the burning of coal, oil and gas. It was the warmest U.S. winter by a wide margin. Source: <https://thehill.com/homenews/ap/ap-science/ap-much-of-america-asks-where-did-winter-go-spring-starts-early-as-us-winter-was-warmest-on-record/>

Our Sustainable City – Wild Seed Project: Returning native plants to the Maine landscape SOUTH PORTLAND SENTRY 3/6/24. This past year, South Portland launched its 100 Resilient Yards program in an effort to promote organic land care and biodiverse landscapes. There was astounding interest in the program, with over 430 applications. After choosing 100 sites, we provided technical expertise and resources to help residents begin to transform their properties into resilient, organic landscapes founded on healthy soils. By the end of the program, with the help of eight partner organizations and 25 amazing volunteers, we had established 30 new vegetable gardens, planted nearly 250 native plants, and helped connect community members. It was a resounding success, and yes, please stay tuned – we are in the process of putting together a follow-up program for 2024. Source: <https://www.pressherald.com/2024/03/06/our-sustainable-city-wild-seed>

North Yarmouth joins Cumberland, Falmouth, Yarmouth in planning for climate change

FORECASTER 3/5/24 North Yarmouth held its first Climate Action Plan forum last month, joining neighboring towns of Cumberland, Yarmouth and Falmouth in preparing for climate change. The year-long planning process is led by the Greater Portland Council of Government and a Climate Action Planning subcommittee. The purpose of the plan is to develop strategies that will reduce town-wide emissions, build resilience, and prepare for a changing climate. Source: <https://www.pressherald.com/2024/03/05/north-yarmouth-joins-cumberland>

New Rumford Community Forest blends outdoor recreation and natural assets TRUST FOR PUBLIC LAND 3/4/24 A new 446-acre Community Forest within five minutes of downtown Rumford has been permanently protected by Trust for Public Land, the Town of Rumford, Inland Woods + Trails, and the Northern Forest Center, with funding from the State of Maine's Land for Maine's Future and the U.S. Forest Service Community Forest and Open Space Program. The Rumford Community Forest includes 437 acres of hardwood and mixed-wood forest and 22 acres of wetlands and streams. This supports a broad array of wildlife, maintains the water quality of nearby public wells, and absorbs floodwater to help minimize local flooding. The land was formerly permitted for 257 residential and condominium lots, which would have significantly impacted the adjoining Black Mountain viewshed, local water supplies, wildlife habitat, and would have intensified future flood events in Rumford and Mexico. Source: <https://www.tpl.org/media-room/new-rumford-community-forest-blends>

Hampden gravel pit transformed into community solar farm BANGOR DAILY NEWS 3/1/24 An abandoned gravel pit in Hampden has been repurposed as a 14,000-panel community solar farm. Investor and owner Wishcamper Cos. on Thursday cut the ribbon on the project which will generate an estimated 8.6 million kilowatt hours of electricity. The electricity from the solar farm will power the Bangor Water District, the College of the Atlantic and other local institutions. Source: <https://www.bangordailynews.com/2024/03/01/bangor/bangor-business>

Maine Forest Service offers 1 million in grants to expand urban tree canopy PORTLAND PRESS HERALD 2/18/24 The Maine Forest Service is offering \$1 million in grants for projects that will help establish sustainable urban woodlands, increase awareness of the benefits of trees and enhance community health and livability. Funded through the federal Inflation Reduction Act, the service is offering \$250,000 in Project Canopy grants and \$750,000 in federal Urban and Community Forestry Program grants, according to the Maine Department of Agriculture, Conservation and Forestry. Application deadline is May 15, 11:59 p.m. Source: <https://www.pressherald.com/2024/02/18/maine-forest-service-offers>

Expand the No-Cut Buffers along the Allagash MAINE SPORTSMAN 3/24 A recent biological study of waters in the Allagash Wilderness Waterway found that the Allagash River has become too hot for trout in summer. Trout must rely on finding cooler water in the tributaries. One member of the AWW Advisory Council asked whether a more extensive protection area around the tributaries would help. The response was unequivocal: **"As buffer strips increase, temperatures decrease."** It's time for the Bureau of Parks and Lands to expand the 400-800 foot "Protected Zone" over which the state has absolute jurisdiction, and to prohibit cutting and development within that zone.

Storms, flooding, heighten concerns about Maine's stormwater pollution PORTLAND PRESS HERALD 2/11/24 Last year's heavy rains flushed

nearly 374 million gallons of raw storm and sewer water into Casco Bay, including from [the devastating Dec. 18 storm](#) that flooded western Maine communities at the upper edge of the watershed. It was the highest annual overflow into the 200-square-mile bay in five years – and that total does not even include [the back-to-back January storms](#) that inundated coastal communities with heavy rains, storm surge and damaging waves. Runoff and wastewater already contain high amounts of phosphorous, nitrogen, soot, pesticides and heat – not to mention sewage – that can harm water quality, aquatic life and the local economy. Heavy rains drive up the volume of the overflow, as well as the volume of pollutants. Source: <https://www.pressherald.com/2024/02/12/storms-flooding-heighten-concerns>

The Science of Storms BOOTHBAY REGISTER 2/8/24 In the aftermath of the two January storms that caused widespread damage across the Maine coast, many wonder if this is the new normal. To help provide answers, Island Institute in Rockland gathered experts from around Maine for a Jan. 30 public webinar on storm science. According to Hannah Baranes, a postdoctoral researcher at Gulf of Maine Research Institute, snow would be on top of frozen ground in historically normal winters, but warmer temperatures exacerbated the storms' effects. Snow melt and ground thaw can increase soil moisture and decrease soil stability, overall increasing the potential for flood damage. In addition, Arnold said the state is getting wetter with more common flooding and heavy precipitation, not unusually accompanied by windstorms gusting over 58mph. Speakers also noted, the two consecutive January storms took place after [disastrous weather and flooding](#) in Maine's interior weeks earlier.

Also according to Baranes, the coastal storms' severity was significantly impacted by sea level rise. She said there have been about seven and a half inches of sea level rise in the past 100 years, and Maine is currently at the highest point in that period. In addition, it is likely that one or both storms resulted in the highest recorded sea level in any given area on the Maine coast, she said. Baranes said sea level rise will increase because oceans have not yet seen the effect from the anticipated melting of the polar ice caps due to global warming. In addition, she said sea levels have been buffered by an [18.6-year cycle of the moon](#) that makes tidal ranges rise and fall by 5 to 7.5 inches; the effect is almost at its minimum and, in about a year, it will draw the ocean upwards.

To see some of the science on the potential impact of climate change in your area, explore these tools presented in the talk:

- [National Weather Service coastal flood forecast](#): A forecast for flooding with [implications](#) on inundation.
- [The Nature Conservancy Coastal Resilience Explorer](#): Explore how rising sea levels will affect roads, where routes will be inaccessible to emergency responders and social vulnerability of the communities.
- [The Maine Geological Survey Sea Level Rise/Storm Surge Scenarios map](#): View the potential impact of sea level rise or storm surges along the Maine coastline.

Source: <https://www.boothbayregister.com/article/science-storms/182816>

Town of Poland to honor late forester Fred Huntress SUN JOURNAL

2/7/24 The town will pay tribute to the late Fred Huntress with a memorial bench to be placed in the center of the village. The Select Board committed \$5,500 to the endeavor at Tuesday night's meeting. In addition, Selectperson Stephen Robinson said the **town's Conservation Commission** plans to add a bronze plaque and plant a white oak honoring Huntress, an acclaimed Maine forester who served in that capacity for the town from 1964 until his passing in November 2023.

Source: <https://www.sunjournal.com/2024/02/07/poland-to-honor-forester>

Plans in the works to expand Augusta's Howard Hill to universal

access KENNEBEC JOURNAL 2/7/24. After years of discussions, officials in Hallowell, Augusta and the [Kennebec Land Trust](#) are working to make the conservation and recreation area just west of the state capital complex more widely accessible to people with disabilities. Spanning 164 acres, [Howard Hill offers forested open space](#) with a stream and a ridgeline with cliffs, bordered by developed areas in Augusta and Hallowell. Residents often walk the network of old carriage roads through the hill to experience the scenic view of the Kennebec River or the State House building nestled amid an expansive shade of green. Enock Glidden, who lives in Bethel, is one of the many who is keeping an eye on the development. Glidden, now 45, was 4 when he got his first wheelchair. He has taken up wheelchair racing, skiing and rock climbing. Source: <https://www.centralmaine.com/2024/02/07/plans-in-the-works-to-expand>

Opinion: We must be smart in our push for new housing PORTLAND PRESS

HERALD 2/2/24 The Maine Legislature is in a race to address the state's housing shortage. While it's clear Maine must build to provide affordable homes for a growing population, we also must be considerate in our approach. Heedless development can lead to sprawl: disjointed housing scattered over an unnecessarily large area. Sprawl makes for disorganized neighborhoods and degraded wildlife habitat. **The answer is "smart growth,"** a planning strategy that prioritizes efficient land use, community connectivity and environmental stewardship. At the heart of smart growth is the deployment of compact, mixed-use development. Unlike conventional urban sprawl that devours vast expanses of land, **smart growth results in tighter, walkable neighborhoods where residential, commercial, and recreational spaces coexist. This approach limits the unnecessary encroachment on natural habitats on the outskirts of towns and results in better-planned neighborhoods in which to live and work.** The tenets of smart growth are straightforward. According to GrowSmart Maine, the 10 principles of smart growth are: mix land uses; create a range of housing opportunities and choices; preserve open space, farmland, natural beauty, and critical environmental areas; strengthen and direct development towards existing communities and infrastructure; make development decisions predictable, fair, and cost-effective; encourage community and stakeholder collaboration in development decisions; and more. To many these seem like obvious goals, but they require municipalities to plan ahead for the future they want. Legislation can help. We're supporting L.D.

1976 https://legislature.maine.gov/bills/display_ps.asp?snum=131&paper=HP1267&PID=1456, which aims to update and modernize Maine's vital Growth Management Law and, which directs the land use management and comprehensive planning processes used by municipalities across the state. Sally Stockwell, Maine Audubon

Source: <https://www.pressherald.com/2024/02/02/opinion-we-must-be-smart-in-our-push-for-new-housing-2/>

Trash talk: towns' garbage in Maine's landfills is up nearly 50

percent MAINE MONITOR 1/14/24 Between 2018 and 2022, the amount of municipal solid waste landfilled in Maine shot up 47 percent, from 388,629 to 569,911 tons, according to a report by the Maine Department of Environmental Protection. The total amount of waste going to Maine landfills (including sludge, construction demolition debris, bulky waste and municipal solid waste) increased by 34 percent. There are more disposable products, fewer opportunities for recycling and more people in Maine than ever, and all are contributing to the increase. So are the sludge and sludge-derived products now being sent to landfills after laws banning spreading it on land went into effect. Debris from more intense storms will also add to the pile. The amount of trash generated in the state is growing at a faster rate than the population. Vanessa Berry, sustainable outreach coordinator with the Natural Resources Council of Maine, said, "It's

very much like an overflowing bathtub. We really need to focus on turning off the tap.”
Source: <https://themainemonitor.org/municipal-solid-waste-buried-in-landfills-up-nearly>

Engaging Youth in Conservation Commission Activities

Seven keys to successful youth connections:

1. Be open minded and flexible; projects can be simple or complex
2. Create excitement ; engagement opportunities should provide something to look forward to.
3. Establish mutual benefits; The process and final outcome should benefit all involved parties in meaningful ways.
4. Gather supplies; Donated items, grants and more.
5. Recruit volunteers ; Have enough relevant talented volunteers to make your project a success.
6. Get the word out; use the press and social media.
7. Reflect and celebrate; Make events fun for all ages host a picnic or gathering to celebrate a completed project.

Projects can be simple or complex depending on what group you are working with.

- Some projects other towns have done with students and youth groups in community:
- Make plant ID stakes and bird houses for conservation land
- Plant trees for Arbor Day
- Clean up trails and trail maintenance
- Make maps of trails
- Remove invasive species

- Create educational brochures and kiosks
- Photo contests
- Collect samples and analyze water resources

Work to find willing and relevant adult volunteers to assist youth

- o Volunteers should:
 - feel comfortable working with youth
 - be willing to take direction from leaders
 - be able to provide some direction to youth
 - if possible, have some experience with the topic or such a project
- o Volunteers can be from various sources:
 - conservation commission, garden club, recreation dept. , schools, land or water protection groups, civic organizations, businesses, etc.
- o Allow youth to step back and review their work
- o Follow up discussions between group leaders and conservation commission

For the Birds

The Bird Economy BOOTHBAY REGISTER 2/29/24 Many people have heard the statistic about how there are nearly three billion fewer breeding birds in the U.S. and Canada as compared to 1970. We're not economists but perhaps that stat is the equivalent of a nation's Gross Domestic Product (GDP). A drop that large in the total number of birds in the U.S. and Canada is just as alarming as would be a massive drop in a country's GDP. Thankfully, not all populations of all bird species are in decline. In fact, analyses of the results of Breeding Bird Surveys—the best methodology that's been available to assess trends in breeding birds—show that there were at least 27 species that showed a statistically significant increase in numbers since 1966. This includes pine warbler,

mourning dove, mallard, osprey, and eastern bluebird—birds we all love to see. Unfortunately, the flip side is that more than twice as many species (62) have shown a significant decrease in numbers over that same time period. Even birds that we continue to take for granted, like barn swallow, great black-backed gull, and herring gull, have shown major declines in numbers. Just as financial analysts look at different stock market indicators—S & P 500, Dow Jones, Nasdaq—we can group bird species by different characteristics to try to better understand the trends in the bird economy. **Birds that breed in grasslands and scrublands are among the groups in which the highest proportion of species are declining. Eastern meadowlarks, bobolinks, brown thrashers, and field sparrows are getting harder and harder to find. Bird species that catch insects in the air (formally known as aerial insectivores and include swallows, flycatchers, nightjars, and chimney swifts), are also one of the groups with the most declining species.** And while more than 50% of forest-inhabiting birds in Maine are also declining, that percentage is much lower than in grassland and scrubland bird species and the aerial insectivores. So how are the birds doing? As we've skimmed over a few ways to assess the "bird economy," you can see that there are many intricacies to answering the question. The overall trend, though, is that more bird populations are declining than increasing. That's not a positive indicator for the birds and the environment that we all depend on for our lives. Maybe it's time to take into consideration the state of the bird economy as we evaluate our options for our elected leaders. A healthy economy is important, and so is a strong "bird economy" if we want a healthy environment, healthy communities, and healthy people. **Editor's Note: Solar farms sited on rural grasslands can displace declining grassland bird species.** Source: <https://www.boothbayregister.com/article/bird-economy/183520>

Column: Why the blue jays never left BANGOR DAILY NEWS 3/15/24 Blue jays have a trick up their sleeves, or they would if they had sleeves. They are excellent mimics. They do a red-shouldered hawk imitation that is better than most real hawks I've heard. Their broad-winged hawk impression is almost as good. Vocal versatility is perhaps the blue jays' true superpower. They make many different noises, indicating a complex language that supports their highly social communities. Most blue jays stay local year-round, though they may move around somewhat to adjust to winter conditions. Last year, they almost completely vacated the North Maine Woods, moving closer to suburbia where food was more plentiful. This year, mild weather and abundant natural food kept more of them back in the woods. ~ Bob Duchesne
Source: <https://www.bangordailynews.com/2024/03/15/outdoors/outdoors-contributors/why-blue-jays-never-left-joam40zk0w/>

Maine Calling: Spring Birding MAINE PUBLIC RADIO 3/8/24 The month of March brings a flurry of bird activity in Maine. Learn what birds are migrating this season, how and where to spot them--and which unexpected species have been sighted recently. Panelists: Derek Lovitch, birding guide and editor of the second edition of "[Birdwatching in Maine: The Complete Site Guide](#)," Adrienne Leppold, project director, [Maine Bird Atlas](#). VIP Callers: Andy Kapinos, [Maine Audubon](#); Pete Colman, birding guide, [Spring](#)

Birding Festival. Source: <https://www.mainepublic.org/show/maine-calling/2024-03-08/spring-birding>

Study finds endangered golden eagles in parts of Maine for the first time in years WMTW-TV 8 3/5/24. The Maine Department of Inland Fisheries and Wildlife is studying golden eagles in Maine, and they are asking for help. The department launched a study of the eagles, which are endangered in Maine, in January. Officials say information has been reported about golden eagle observations at seven new locations, six of which are in towns where golden eagles have not been documented in the last 10 years. Golden eagles are a species of concern throughout their eastern range due to the small population, vulnerability to human-related threats, and considerable gaps in knowledge about habitat use and movement. The last known pair of breeding golden eagles disappeared from the state in 1997. **Editors Note:** IFW's web page on the Maine Golden Eagle Study has a very useful link with many photos on how to separate golden eagles from bald eagles.

Source: <https://www.wmtw.com/article/study-finds-endangered-golden-eagles>

Column: How to improve your bird identification skills BANGOR DAILY NEWS 2/22/24. When it comes to building bird identification skills, there are five levels of proficiency. Level one, identification by sight. Tip: Don't rely on color. Rely on field marks. Level two is identification-by-sound. Tip: 20 percent of the birds make 80 percent of the noise. Learn to recognize the bird songs you hear most often. Level three, understand bird ranges. Tip: Wherever you're going, get familiar with what birds to expect there. Level four understand habitats. Tip: Recognize habitats. Level five rewards recognition of bird behaviors. Tip: Observe behavior. Duh. The trick to better bird identification is to sort them into smaller and smaller piles by size, color, field marks, noise, ranges, habitats and behavior. Until there's only one left. ~ Bob Duchesne

Source: <https://www.bangordailynews.com/2024/02/22/outdoors/outdoors-contributors>

Editor's Note: We would appreciate CCs submitting two or three paragraphs about a project or projects you're working on or especially proud of to include in future newsletters. Or send us your CC annual report and we can derive an article from that.

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