



# The Obligate

Maine  
Association of  
Wetland  
Scientists  
www.maws.me

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## President's Message *Bryan Emerson*

Hello MAWS Members, and happy 30<sup>th</sup> anniversary of MAWS! First off, I'd like to take a moment to thank the founding members of MAWS, who 30 years ago decided that an organization was needed to "promote the profession and understanding of wetland science in Maine." They were right, and a lot has changed in 30 years, but at our core, I believe we are still meeting the purpose of the organization as it was laid out in the beginning. Secondly, I'd like to thank my fellow Executive Committee (EC) members for helping me through my first year as president. We have a talented and dedicated group on the EC, and it's been a pleasure to work with you all.

Looking back on this past year, we've made some decent progress toward some of my goals. When it comes to membership, the EC and I made a concerted effort to expand our outreach to Maine colleges and universities with a goal of increasing student membership and also increasing our visibility to professors and educators in the state. We developed an introductory letter and distributed it to the biology, soil, and wildlife departments (and whatever other departments we could find) at schools across the state. And as a further incentive for students to learn about MAWS, we started a trial run of offering free memberships to students! Now, before people get too riled up, I was made aware that I can't just go changing membership rules on my own. My executive privileges only extend so far. As a result, at the business meeting, we will be voting on whether we want to officially make it MAWS policy to offer free membership to students. I think it's a good idea, but it is up to the membership to decide. I think it could be a great way to get students involved early and hopefully hook them into the joys of wetland science.

Speaking of last year's goals, another one of mine was to increase collaboration with other like-minded organizations. To that end, Matt Kennedy helped organize an ethics workshop in coordination with The Wildlife Society of Maine. While attendance wasn't quite what we had hoped for, this was a good example of organizations with similar needs/interests coming together for what I thought was a very good workshop. Of course, the Maine Association of Professional Soil Scientists (MAPSS) and Dave Rocque (with a little help from MAWS) put on another successful soils and natural resource workshop at Reid State Park. Dave insists this was his last workshop, but he's said that before... And finally, MAWS has been invited to participate in a panel discussion at the New England Natural History Conference, taking place this year in Stamford, CT. Our own Kevin Ryan has graciously volunteered to represent MAWS. He'll be sitting on a panel with members of the Connecticut Association of Wetland Scientists, Association of Massachusetts Wetland Scientists, and potentially the Society of Soil Scientists of Southern New England and others. Kevin will be providing some background information on our organization, our goals and challenges, and generally spreading the good cheer about MAWS. Big thanks to Kevin for representing MAWS at this event!

A couple other highlights from the past year:

- With help of Mr. Rich Jordan, we submitted comments on behalf of MAWS on the proposed changes to the Waters of the United States (WOTUS) rule. While we are all aware of how the new rule ended up (and we'll hear more about it at the annual meeting), it's important for MAWS to stay engaged both locally and nationally on wetland-related issues.
- Rich Jordan delivered testimony in front of the Committee on Environment and Natural Resources (ENR) in January 2020 in support of LD 1777, which



proposed to add “rivers, streams, and brooks” to Maine’s In Lieu Fee program. With MAWS and other’s support, this bill appears headed for approval.

And I guess the President’s Message wouldn’t be complete without a little talk of goals for this coming year. Hopefully we can continue our push to raise student awareness about MAWS and increase our student memberships. We’ve got a few great ideas for workshops in the coming year, which will be great opportunities for people to get together and talk and learn about wetlands and other related topics. There has also been some chatter in recent weeks about a combined MAWS/MAPSS annual meeting for 2021. I’d like to give this a shot, as there is obviously a lot of overlap between our two great organizations, and I think there could be some efficiencies gained by a joint meeting. I know that idea has been discussed in the past, so we’ll see if it goes anywhere this time.

2020 is bound to be an interesting year, but I’m looking forward to more fun times with MAWS. Thanks for reading and enjoy the rest of the great articles below. I hope to see everyone at the annual meeting.

--Bryan

If anyone would like to be part of the MAWS executive or other committees please contact Bryan Emerson ([bryan.emerson@tnc.org](mailto:bryan.emerson@tnc.org) or (207) 607-4821) or any member of the EC.

**Report of the Webmaster – Communications Subcommittee** *Dave Brenneman*

Part of the mission of this subcommittee continues to be finding ways to utilize the web, social media, and email, to communicate between the Executive Committee and the members. Tools available for the membership include:

- The MAWS webpage, <http://www.maws.me>;
- Google Groups email list, <https://groups.google.com/forum/#!forum/maws-members>; and
- The “Maine Wetlands” Facebook Group, <https://www.facebook.com/groups/mainewetlands/>

Commonly sought portions of the webpage include the jobs board and upcoming seminars and conferences listings. A few years back, the ability to pay annual dues and register for MAWS-sponsored events was added. For many consulting scientists this streamlines the reimbursement process which is something we all look to simplify so we can get back to doing actual work for our clients. In early 2019, a listing of “environmental professionals” was added to the site. Interested members can add their name to the list when they pay their dues, and the list is updated annually. Development of this list is in response to requests from state agencies, non-profit organizations, land trusts, and other interested groups who need the services of an environmental consultant, but don’t know where to find one.

The Facebook Group, Maine Wetlands, continues to be used by the membership and is a great way to connect with fellow scientists when you have questions or valuable information to share. Posts are infrequent, but great when someone shares. Please make a point to post when you have them! Feel free to show off your successes, I’m sure folks would love to see them!

Lastly, the EC connects with the membership through the Google Group email list; we send out program announcements, job listings or other information related to the organization. Keeping everyone’s contact information up to date so you don’t miss emails can be challenging, especially in today’s job market where folks are moving from company to company frequently. Please let me know of changes so I can update the database and ensure you don’t miss an email!

As always, requests to post or update information, or any other needs related to the website or email list can be sent to [maws.webmaster@gmail.com](mailto:maws.webmaster@gmail.com). Requests are typically addressed within a day or two.



**Table of Executive and Standing Committee Members**

Bryan Emerson	President (2021)	<a href="mailto:bryan.emerson@tnc.org">bryan.emerson@tnc.org</a>
Aleita (Lee) Burman	President Elect (2021)	<a href="mailto:blburman@gmail.com">blburman@gmail.com</a>
Roger St. Amand	Treasurer (2021)	<a href="mailto:roger.stamand@gmail.com">roger.stamand@gmail.com</a>
Audie Arbo	Secretary (2020)	<a href="mailto:audie.arbo@maine.gov">audie.arbo@maine.gov</a>
Matt Kennedy	Program Chair (2020)	<a href="mailto:mkennedy@boyleassociates.net">mkennedy@boyleassociates.net</a>
Rich Jordan	Legislative Chair (2021)	<a href="mailto:rich@flycatcherllc.com">rich@flycatcherllc.com</a>
Dave Brenneman	Membership Chair (2020)	<a href="mailto:dave@flycatcherllc.com">dave@flycatcherllc.com</a>
Kevin Ryan	Ethics Chair (2021)	<a href="mailto:kevinr@fbenvironmental.com">kevinr@fbenvironmental.com</a>
Dave Brenneman	Webmaster – Communications Subcommittee	<a href="mailto:dave@flycatcherllc.com">dave@flycatcherllc.com</a>
Lauren Leclerc	Obligate	<a href="mailto:lleclerc@trcsolutions.com">lleclerc@trcsolutions.com</a>
Roger St. Amand	Vernal Pool Technical Committee (year term expires)	<a href="mailto:roger.stamand@gmail.com">roger.stamand@gmail.com</a>

**MAWS Technical and Legislative Committees Joint Update** *Rich Jordan*

2019 was a relatively slow-ish year for talk of wetlands and waterbodies in the hallowed halls of the Maine State House. Several funding bills were proposed and passed, while other bills and bond initiatives were kicked along to the 2020 session. Many of the water-related bills speak to resiliency and sustainability of the coastline in the face of impending sea level rise. Other bills sought to address clean water concerns, shoreland zone regulations and simplification of the permit process for small dams. Additionally, in January 2020, MAWS testified on LD 1777. LD 1777 would allow the Maine Department of Environmental Protection (MDEP) to formulate rule changes adding “rivers, streams and brooks” to the list of protected natural resources for which in lieu fee can be used as mitigation. LD 1777 was discussed voted “ought to pass” by the Legislature’s Environment and Natural Resources Committee. The MDEP will implement these changes after passage in the full Legislature, and expects changes to take effect in 2020.

In 2019/early 2020 the MDEP also released revised review timelines for permit processing ([here](#)), and a revised fee schedule for state permit reviews ([here](#)). Changes in these schedules include extended review timelines for Site Location of Development Act permits (*i.e.*, if the state receives a certain number of Site Law-level solar projects) and an increase in the permit-by-rule fee to \$250. The MDEP is also currently working on a new fee schedule for the in-lieu-fee mitigation program. The MDEP is

currently advising applicants to use the fee schedule that expired 12/31/2019 until a new schedule is released (rumored to be coming by early summer 2020). A listing of MAWS-relevant bills enacted or carried over to 2020 is included below.

At the federal level, there were several major efforts initiated to modify the Clean Water Act (CWA), including revising the definition of “waters of the U.S.”. Additionally, the Trump Administration has proposed or enacted changes to the National Environmental Policy Act (NEPA) and the Endangered Species Act (ESA), and is seeking to revamp parts of the CWA Section 401 (Water Quality Certification). As is the custom of our times, no regulatory change passes quietly. Most of the federal rule changes listed below are facing legislative and legal challenges.

**MAINE**

***(Relevant Legislation Enacted in 2019):***

**LD 216, An Act to Protect Water Quality by Standardizing the Law Concerning Septic Inspection in the Shoreland Zone.** This bill extends to inland shoreland areas the requirement that subsurface wastewater disposal systems on property located within a shoreland area be inspected prior to a sale of the property.

**LD 199, An Act to Create the Water Resources Planning Committee.** This bill establishes the Water Resources Planning Committee within the Department of Agriculture, Conservation and Forestry.



**LD 562, An Act to Improve Shoreland Zoning Rules and Enforcement to Support Municipalities.** This bill amends the laws relating to the State's regulation of the shoreland zone as follows: 1. It increases the maximum per day civil penalty for a specific violation of a municipal land use law or ordinance from \$2,500 to \$5,000 and increases the maximum per day civil penalty for a specific violation of a municipal shoreland zoning ordinance occurring within an area zoned for resource protection from \$5,000 to \$10,000; and, 2. It provides that a municipal shoreland zoning ordinance must require an applicant for a permit for development within the shoreland zone to provide to the municipal permitting authority preconstruction and postconstruction photographs of the shoreline vegetation and development site.

**LD 563, An Act to Help Municipalities Prepare for Sea Level Rise.** This bill amends the State's growth planning and land use laws to reflect that addressing the effects of sea level rise is a state planning and regulatory goal. The bill amends the laws regarding the State's coastal management policies to direct state, local and certain federal agencies responsible for regulating, planning, developing or managing coastal resources to conduct their activities affecting the coastal area consistent with the policy of encouraging the assessment of and planning for the effects of the rise in sea level.

**LD 817, An Act to Advance the Restoration of the Penobscot River.** This bill extends north to Milford Dam between Milford and Old Town on the Penobscot River, with the exception of the Stillwater Branch, the protections under the Maine Revised Statutes, Title 38, section 418-A currently provided to the lower Penobscot River. It requires the Department of Marine Resources, the Department of Inland Fisheries and Wildlife and the Department of Environmental Protection, in consultation with the Penobscot Indian Nation and interested federal agencies, to conduct a comprehensive assessment of fish passage barriers, water quality and habitat conditions affecting the full restoration of fisheries within the Penobscot River watershed and the feasibility and costs of mitigating problems and report to the Joint Standing Committee on Marine Resources, the Joint Standing Committee on Inland Fisheries and Wildlife and the Joint Standing Committee on Environment and Natural

Resources. It authorizes the joint standing committees to report out legislation to the Second Regular Session of the 129th Legislature.

**LD 983, An Act To Exempt from Natural Resources Protection Act Permit Requirements Certain Maintenance and Repairs of Nonhydropower Dams.** This bill exempts low-head dams from the permitting requirements for repair under the Natural Resources Protection Act.

**LD 1320, An Act to Require the Department of Environmental Protection to Provide Natural Resources Protection Act Permits to Affected Municipalities.** This bill requires that when the Department of Environmental Protection issues a permit under the Natural Resources Protection Act the department must provide a copy of the entire permit to each municipality in which the proposed activity is to occur.

**LD 1742, An Act to Reclassify Certain Waters of the State.** This bill updates classifications for certain waters based on water quality data.

***(Relevant Legislation Carried Over to 2020 Short Session)***

**LD 16, An Act to Authorize a General Fund Bond Issue to Invest in Infrastructure To Address Sea Level Rise.** The funds provided by this bond issue, in the amount of \$50,000,000, will be used to improve waterfront and coastal infrastructure in municipalities to address sea level rise.

**LD 327, An Act to Revise Maine's Environmental Laws.** This bill is a concept draft pursuant to Joint Rule 208. This bill proposes to revise laws governing environmental protection. I have not seen any wording on this.

**LD 774, An Act to Protect Maine's Beaches and Shoreline.** This bill amends the State's coastal management policies laws to ensure that those policies address the effects of coastal erosion on the State's beaches and shoreline and ensure the health of the State's beaches and shoreline for habitat protection for coastal wildlife species and for protection against storms.

**LD 923, An Act to Authorize a General Fund Bond Issue to Upgrade Municipal Culverts at Stream Crossings.**



**LD 1777**, *An Act to Add Rivers, Streams and Brooks to the Department of Environmental Protection's Compensation Fee Program*. This bill adds rivers, streams and brooks to the list of protected natural resources for which the Department of Environmental Protection may develop a compensation fee program. (MAWS provided in-person testimony on this and it was unanimously voted “out to pass” by ENR January 9, 2020).

**LD 1224**, *An Act to Authorize General Fund Bond Issues to Address Changes in Sea Level, Geospatial Data Acquisition by Communities and the Increase in Ocean Acidity*. This bill authorizes the issuance of bonds. 1. Part A of this bill authorizes the issuance of bonds, in the amount of \$5,000,000, to be used to support improvements to sea level prediction models by providing more detailed mapping of coastal zones and monitoring sea level changes in order to mitigate the impact of and help prepare for rising sea levels. 2. Part B of this bill authorizes the issuance of bonds, in the amount of \$6,000,000, to be used to provide partnership funds and matching grants for geospatial data acquisition to communities that are creating or improving digital parcel maps to accurately identify existing boundaries and land use, identify potential community development areas and protect environmental resources. 3. Part C of this bill authorizes the issuance of bonds, in the amount of \$3,000,000, to be used to collect data, monitor waterways and perform tests related to the known increasing ocean acidity along the Maine coast and its impact on natural wildlife and commercially important species in Maine waters, such as lobsters and clams.

**LD 1836**, *An Act to Authorize a General Fund Bond Issue for Infrastructure, Economic Development, Workforce Development and Energy and Environment Investment*. This bill authorizes the issuance of bonds. Includes: Funds in the amount of \$4,000,000 will be used for a competitive grant program that matches local funding for the upgrade of municipal culverts at stream crossings in order to improve fish and wildlife habitats and to allow communities to better prepare for extreme storms and floods. Funds in the amount of \$1,000,000 will be used to complete the renovation of a wharf and bulkhead at the Gulf of Maine Research Institute in Portland to bring the wharf back into operation for a fishing vessel berthing resource to support marine research at sea, for commercial fishing access and

for continued long-term marine job development. The funds provided by this bond issue, in the amount of \$65,000,000, will be used to protect Maine's environment by investing in land conservation, water access, wildlife habitat, outdoor recreation opportunities, including hunting and fishing, farmland and working waterfronts and by supporting environmental clean-up efforts and promotion of renewable energy projects.

**LD 1942**, *An Act to Protect Water Quality by Prohibiting Consumer Fireworks in the Shoreland Zone*. This bill bans the use of consumer fireworks in the shoreland zone except during the calendar week that includes July 4<sup>th</sup> and on New Year's Eve, Labor Day and Memorial Day.

### ***Federal***

**Clean Water Act: “Waters of the U.S.”** – On Jan. 23, 2020, the Environmental Protection Agency (EPA) and the U.S. Army Corps of Engineers (USACE) finalized the Navigable Waters Protection Rule (NWPR). Implementation of the NWPR was a two-step process:

1. On October 22, 2019, the EPA and USACE published a final rule to repeal the 2015 Rule and recodify the regulation that was in place prior to issuance of the 2015 Rule. This final rule became effective on December 23, 2019. [Read the final “recodification” rule here.](#)
2. On January 23, 2020 the agencies finalized the NWPR to define “waters of the United States.” [Read about the NWPR here.](#)

The new rule interprets the term “waters of the United States” to encompass the following four categories of waters that are federally regulated under the CWA:

1. Territorial seas and traditional navigable waters;
2. Perennial and intermittent tributaries to territorial seas and navigable waters;
3. Certain lakes, ponds and impoundments of jurisdictional waters; and
4. Wetlands adjacent to other jurisdictional waters.





The rule identifies 12 categories that are not “waters of the United States” and therefore, *not federally regulated under the Clean Water Act, including ephemeral features that flow only in response to rainfall, groundwater, many farm and roadside ditches, artificial lakes and ponds, and waste treatment systems.* The rule also provides clarifying definitions of terms including “typical year,” “perennial,” “intermittent,” “ephemeral,” and “adjacent wetlands.”

The NWPR will become effective 60 days after it is published in the *Federal Register*, pending likely legal challenges. [Read the pre-publication version of the final Navigable Waters Protection Rule here.](#)

The USACE Maine Projects Office will be providing an update at that 2020 Annual Meeting.

**Clean Water Act: Water Quality Certification** – On August 22, the EPA proposed its [Updating Regulations on Water Quality Certification](#) to replace and update the existing water quality certification process under Section 401 of the Clean Water Act (“CWA”). The EPA’s Proposed Rule comes in response to [Executive Order 13868](#), Promoting Energy Infrastructure and Economic Growth, issued on April 10, 2019 to “reduce regulatory uncertainties that currently make energy infrastructure projects expensive and that discourage new investment.” To ensure “the timely construction of the infrastructure needed to move our energy resources through domestic and international commerce,” the Administration directed the EPA to update Section 401 for purposes of achieving a more “efficient permitting process.” The public comment period on these proposed revisions closed on October 21, 2019 and the EPA is reviewing comments. Proposed changes to Section 401 will likely face legal challenges prior to implementation.

**National Environmental Policy Act (NEPA)** – In January 2020, the White House Council on Environmental Quality proposed several significant changes to the NEPA. NEPA requires Federal agencies to consider the environmental impact of major Federal actions significantly affecting the quality of the human environment before taking such actions in a “detailed statement.” Per the Notice of Proposed Rulemaking (*Update to the Regulations Implementing the Procedural Provisions of the National*

*Environmental Policy Act*): “the Council on Environmental Quality (CEQ) is proposing to update its regulations for implementing the procedural provisions of the NEPA. CEQ has not comprehensively updated its regulations since their promulgation in 1978, more than four decades ago. This proposed rule would modernize and clarify the regulations to facilitate more efficient, effective, and timely NEPA reviews by Federal agencies in connection with proposals for agency action. The proposed amendments would advance the original goals of the CEQ regulations to reduce paperwork and delays and promote better decisions consistent with the national environmental policy set forth in section 101 of NEPA. If finalized, the proposed rule would comprehensively update and substantially revise the 1978 regulations. CEQ invites comments on the proposed revisions.” (Federal Register 01/10/2020, [link here](#); comments are due by March 1, 2020).

**Endangered Species Act** – On August 27, 2019, the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service published changes to the Endangered Species Act (ESA) in the Federal Register under the title [“Endangered and Threatened Wildlife and Plants; Regulations for Listing Species and Designating Critical Habitat”](#). The changes apply to ESA sections 4 and 7. Section 4, among other things, deals with adding species to or removing species from the ESA’s protections and designating critical habitat; section 7 covers consultations with other federal agencies. In short, the new rules make it easier to remove a species from the endangered list and redefines protections for threatened species, the classification one step below endangered. Additionally, regulators would be allowed to conduct economic assessments when deciding whether a species warrants protection by the ESA. In January 2020, the U.S. House Natural Resources Committee voted to repeal the ESA changes via passage of the [Protect America’s Wildlife and Fish in Need of Conservation Act](#). It likely that any regulatory changes – strengthening or weakening the ESA – will not pass quietly, and observers expect ongoing legal challenges over the scope of the ESA will continue well into 2020.

Lastly, in late January 2020 the US District Court for the District of Columbia overturned the USFWS decision to list the northern long-eared bat (*Myotis septentrionalis*) as threatened rather than endangered and remanded the



decision back to the agency. The threatened listing will remain intact while USFWS undertakes a new listing decision. Stay tuned for more on this – while not strictly wetlands related, this mammal is oft-discussed by MAWS members.

### **Ethics Update** *Kevin Ryan*

Typically, in this section we present the current research stipend award winner(s), and this issue of *The Obligate* is no exception. However, I wish to ask a favor of you, loyal readers. We want to make sure that the MAWS stipend announcement reaches everyone who is eligible to apply, and ask that you help us spread the word far and wide. Let students know that we offer stipends of up to \$2,000. Recipients also have the opportunity to present at the MAWS annual conference, which looks great on a resume. The application form is available at [www.mainewetlands.org](http://www.mainewetlands.org), and applications are due March 1, 2020. Funds will be awarded in April.

Now, without any further ado, on to this year's stipend winner – Unity College's Emerald Wright. MAWS awarded a \$2,000 research stipend to her in 2019. Emerald will be presenting her research at this year's MAWS Annual Membership Meeting on March 19<sup>th</sup>.

Emerald is working towards a bachelor's degree in Wildlife Biology at Unity College's School of Biodiversity Conservation. Her research involves exploring the use of environmental DNA (eDNA) as a survey method to detect wood turtles (*Glyptemys insculpta*), which are listed as a Species of Special Concern in Maine. For those unfamiliar, eDNA is defined by Thomsen and Willerslev (2015) as *genetic material obtained directly from environmental samples (soil, sediment, water, etc.) without any obvious signs of biological source material*. Detecting species presence using eDNA is touted as an efficient, non-invasive, and standardizable sampling approach.

Emerald submitted to MAWS the following regarding her research and stipend award:

*Over the past two years or so, I had the pleasure of working as a herpetological technician for Unity College. As a technician on the Unity College Wood Turtle Project, I was introduced to a*

*marvelous species, the Wood Turtle. Wood Turtles are renowned for their beautiful orange colors and bright yellow eyes. They are a well sought after species in the pet trade, which is only one of the factors that make them vulnerable. More recently, habitat degradation, disturbance and other anthropogenic factors have caused major declines in Wood Turtle populations throughout their range and few populations are still reported as stable. Currently, the Wood Turtle is listed by the IUCN (International Union for Conservation of Nature) as endangered and is considered a species of special concern in Maine. However, the drastic decline in populations have resulted in a proposed listing of the Wood Turtle under the federal Endangered Species Act.*



*Wood turtle 5/2019.*

*Something I noticed after working a field season with this species is that they can be difficult to monitor. Their use of aquatic and terrestrial environments varies throughout the year and dictates the length of survey seasons. They are also thought to be sensitive to passive human activities, suggesting a need for non-invasive methods for assessing population and status health. A new tool for monitoring species is the environmental DNA survey method (eDNA). This method is increasingly being used for detection of rare and non-native species to inform management actions, especially when traditional field methods are inadequate or harmful to the target species.*

*My research focused on just that. I received location and survey data for Wood Turtles from the Maine Department of Inland Fisheries and Wildlife and the Unity College Wood Turtle Project. The main goal of my research was to develop a working protocol for sampling for Wood Turtles in Maine and determine if it was possible to detect DNA using those methods. By*



sampling streams with survey data already recorded, I could confirm if my methods worked. In October of 2018 and April to May of 2019, I sampled streams for DNA with field equipment and lab materials purchased by the MAWS Wetland Research Stipend. I spent over 300 hours filtering and processing 123 samples; including DNA extraction, PCR amplification and gel electrophoresis. I identified the presence of Wood Turtles in 12 of 13 stream segments sampled, which verified that my sampling protocol worked. Amount of detection varied throughout streams, which leaves room to ask many new questions. I hope that the results of my research will help to take next steps in identifying specific questions related to Wood Turtle populations and health using the eDNA method.

#### Literature Cited

Thomsen, P.F. and E. Willerslev. 2015. *Environmental DNA – An emerging tool in conservation for monitoring past and present biodiversity*. *Biological Conservation* 183:4-18.



Trevor Woodhead and Emerald Wright with Wood Turtle 5-13-2019.

## Membership Update David Brenneman

In 2019 we added four new members to the organization as follows:

Name	Status
Ruth Ladd	Active
Ray Peck	Active
Sarah Maloney	Active
Tyler Everett	Student

Please join me in welcoming these folks to MAWS!

New membership has been declining over the recent past. In addition, payment of membership dues from current members has declined this year as well. To bring in more members, we waived the fee for student membership this year. A handful of students from Maine universities reached out with questions, but only one application was received. In addition, applications from a few potential members were promised, but never received.

To address this, I will be reviewing dues payment and following up with anyone who is not current. I know it can be hard for folks to keep track of when they pay their dues and I appreciate those who ensure they are paid up. If you have questions regarding the status of this or prior year payments please contact me at [dave@flycatcherllc.com](mailto:dave@flycatcherllc.com). An easy way to remember is to pay your dues when you sign up for the annual meeting which is what most folks do!

I will also be reviewing the application process to see if there are ways to streamline. I know we are all very busy and if we can make the process easier, hopefully it will encourage new folks to join.

Lastly, I will appeal to you to spread the good word of MAWS. If you or anyone you know would like to become a member of MAWS, please let me know. Encouraging new colleagues at your company to join is a great way to expand the organization! We have continued to keep the annual dues low to offer a great value. Remember, membership entitles you to reduced rates at events, which





easily “pays” the annual dues fee and then some. Annual dues for 2020 remain at the same price as past years.

**Active Membership - \$25.00 annually**  
**Affiliate Membership - \$15.00 annually**  
**Student Membership - \$10.00 annually**  
**(Fee currently waived for students)**

Dues are paid online or by mail and instructions are available at <http://www.maws.me/store/annual-membership-dues>.

Cheers! I hope everyone has a successful 2020!

### **Program Chair Update** *Matt Kennedy*

Often during the dark and damp days of winter, my mind drifts through thoughts of forthcoming hikes amongst the vivid green blossoms of skunk cabbage, the fresh scents of the newly uncovered earth, and the serene evening choruses of wood frogs. For wetland scientists in temperate climates such as ours, the early signs of spring awaken our spirits like no other season. Fittingly, it is during this time, that for the past three decades, wetland scientists from around Maine have gathered for the MAWS Winter Conference and Annual Meeting. This year, on Thursday, March 19<sup>th</sup>, we will once again congregate at Bowdoin College in Brunswick to reconnect with colleagues and reflect on the past thirty years of our association.

We will begin the conference with MAWS President, Bryan Emerson, summarizing the day’s agenda. In traditional fashion, representatives of state and federal agencies will provide the membership with relevant regulatory updates. Joining us will be Nick Livesay of the MDEP, Jay Clement from the USACE, Patrick Dockens with the USFWS, along with Stacie Beyer and Nick Carr of the Maine Land Use Planning Commission (LUPC).

After a short break, founder and former MAWS President, Steve Pelletier, will guide us through a history of MAWS, lending insight into the motivations for its founding and its evolution throughout the decades. Afterward, there will be time extended to the membership to ask questions and share stories. Next, Brenda Zollitsch of the Association of State Wetland Managers (ASWM) will lead us through a

brief history of the CWA and give some perspective on the impact of recent regulatory changes. Afterward, Jeanne DiFranco of MDEP will provide historical context to Maine’s water classification system and water quality standards. Continuing with this theme, Eric Ham of the Maine Department of Transportation (MDOT) will present on how stream crossing design at MDOT has changed over the years. We’ll then hear from our student stipend winner, Emerald Wright of Unity College, about her research regarding the use of eDNA as a survey method in the study of wood turtles.

After lunch, Dale Knapp of Boyle Associates will moderate a 1.75-hour discussion about the recent increase in solar development here in Maine. Panel participants will include Jim Beyer of MDEP, Sam Boduch of Earthshift Global, Colin Greenan of the USACE, Rich Jordan of Flycatcher LLC, Dave Littell of Bernstein Shur, Troy Moon from the City of Portland, Aaron Svedlow of North Light Energy, and Dylan Voorhees of the Natural Resources Council of Maine. Attendees will be encouraged to take part in the discussion, so come ready with questions for participants of the “Solar Panel.”

Wrapping up the conference portion of the day will be Cole Peters of Power Engineers, who will discuss technological advancements in wetland science over the past thirty years. Afterward, Dr. Matthew Wallhead of the University of Maine, Orono will share his knowledge of drone technology and the potential for its use in future natural resource mapping efforts.

After the conference, we’ll hold the Annual Business Meeting, which all active MAWS members are highly encouraged to attend. During the meeting, there will be a discussion of having a combined annual conference next year with the MAPSS. This has been a topic that has been floated around for several years and it seems as though the idea is gathering some steam. Therefore, if you would like your opinion on the matter known, please join us for this discussion. Additionally, I would love to hear from all of you regarding your thoughts and ideas on future workshops and collaborations. Therefore, I will be handing out survey forms during the conference in order to gather a better sense of the membership’s opinions on the role



MAWS should play moving forward. Your participation in this survey is greatly appreciated.

As usual, we are seeking approval for Continuing Education Units (CEUs) for the MAWS Winter Conference and Annual Meeting from the State Site Evaluator for the Subsurface Wastewater Program and the Maine Department of Economic and Community Development Code Enforcement Officers (CEO) Program. We'll be providing Certificates of Attendance for this event. We will also be providing a limited number of handouts of the speaker presentations again this year, so make sure to arrive early to get a copy.

Registration for the Winter Conference is \$45 for active MAWS members (not including annual dues); \$60 for non-members, and \$20 for students. For payment received *after March 9, 2020* (10 days prior to the event), including payment at the door, add \$10: \$55 for active MAWS members and \$70 for non-members. Student registration will remain \$20. I look forward to seeing you all there!

**If anyone has a workshop idea or would like to assist in organizing workshops and activities for MAWS, please contact Program Chair, Matt Kennedy ([mkennedy@boyleassociates.net](mailto:mkennedy@boyleassociates.net)).**



## Maine Association of Wetland Scientists Annual Business Meeting

### Minutes of 2019 Meeting

**Subject:** Maine Association of Wetland Scientists (MAWS) Annual Business Meeting

**Date:** March 14, 2019

**Time:** 3:45 PM – 4:51 PM

**Location:** Thorne Hall, Bowdoin College, Brunswick, Maine

**Attendees:** MAWS Membership and Executive Committee

Danielle Tetreau (President)- Welcome. This is my last meeting as president. It has been a pleasure. She hopes she didn't disappoint too many since we are still an organization (joke).

#### Executive Committee

Secretary Report (Audie)- Chris Dorion made a motion to accept the minutes as printed in the Obligate, the motion was seconded, and unanimously approved.

Program Chair (Matt)- We had one workshop on Natural Resources Protection Act (NRPA) stream guidance with Tom Danielson and Dawn Hollowell which resulted in a good discussion.

We should send a survey out to MAWS list for workshop/training ideas, as there is large expertise potential in MAWS members.

#### Potential or Scheduled Workshops:

- Reid State Park Workshop with Dave Rocque September 4
  - o Chris Dorion, brought up potential topics:
    - Potential vernal pools (PVPs),
    - Wetland delineations,
    - Palustrine scrub-shrub wetlands (PSS) in coastal wetlands, and
    - Wetlands of Special Significance (WOSS) determinations.
  - o Matt continued that Cole Peters thought we should include more geology, perhaps getting Maine Geological Survey Peter Slovinsky or Steve Dickson who could be good presenters.
- Grasses and Rushes workshop with Matt Arsenault
- Functional Assessment Refresher workshop with Paul Minkin



- Cole Peters brought up flood control beta testing in functional assessment. It may or may not be included. He suggests taking the functions and values and find if there is a Maine based adaptation. This could be used to front load the public comment with provided impute.
- Danielle asked for some topics or ideas- geology.

Danielle then commended Matt Kennedy on a great annual meeting agenda.

Legislative Chair Report - This was covered in the annual meeting.

Treasurer Report (Lee)- Last year's budget ended in the red: Annual meeting \$1,000, Envirothon grant: \$3,750 awarded, stream workshop (free) \$300, fees \$221= -\$1836 last year. The annual meeting attendance over last 4 years has been steady, we have lost some membership, MAWS merchandise is not a factor, workshops: Sebago made money; 2017 bat, twigs, 2018 had no income; and in 2019 the invasive species network did not ask for money. The annual meeting cost is ~+\$1,000 per meeting. Current MAWS year end account balance is \$8,900.

There was a question if online registration may be cause of decline in dues. David Brenneman replied that most people pay \$70, so members are paying both annual dues and annual meeting registration fees. Katelin Nickerson suggested an automatic email blast reminder to members to pay their dues. Dale Knapp suggested maybe make the dues as part of workshops. Danielle said that dues are part of the MAWS constitution and membership is for the year.

Chris Dorion moved to accept the Treasurer's report, and it was unanimously approved.

Membership Report (Dave)- Seven new members were added in 2019.

Bryan asked if we know how many members paid their dues. Dave answered no. Dave indicated that the list of professionals is complete on the website. Audie suggested sending a link to MDEP land supervisors

Ethics (Kevin)- We received only one stipend application this year from a Unity College student. Suggestions on how to increase awareness of stipend award include: giving it to administrative staff at colleges, social media for universities, and putting notice on the MAWS Facebook page.

Rod Kelshaw suggested that an ethic workshop may be a good idea- Ivy Garvey does workshops.

### Standing Committee Report

Education/Student Outreach: Not discussed.

Vernal Pool Technical Committee/WOSS (Roger): Roger wants the technical committee to disband until the next issue comes up.





Outreach Committee (Lauren): If you have something you would like posted then send it to Lauren Leclerc. Things can be put on the website by Dave Brenneman as well.

Research Committee (Rich Jordan): Not discussed.

Open Committees:

**President Elect:** Aleita Burman

**Treasurer:** Open

**Legislative Chair:** Rich Jordan and Dale Knapp

**Ethics Chair:** Kevin Ryan

Voting:

President Elect, Aleita Burman, was approved with a unanimous vote. Treasurer, Roger St.Amand, members present voted to conditionally accept as Roger isn't present to personally accept the nomination. Legislative Chair, nominee Rich Jordan received nine votes and nominee Dale Knapp received five votes, therefore Rich is voted in as Legislative Chair. Ethics Chair, Kevin Ryan, was approved with a unanimous vote.

Norm Famous Wetland Research Stipend was \$2,000 last year. It was \$1,500 for a long time, then was increased to \$2,000. Chris Dorion moved \$2,000 for the Norm Famous Wetland Stipend and \$1,500 for Envirothon. Motions passed.

The Association of Massachusetts Wetlands Scientist is having a New England natural history symposium. We should continue collaboration with that group. Contact is Scott Smyers.

Open Floor:

Steve Pelletier -WOTUS discussion- comments? Danielle Tetreau responded that the Executive Committee/Legislative committee will submit a letter. Katelin Nickerson asked if we had gotten info from membership for letter- answer is yes. Rich Jordan said he will look at old comments and solicit new comments. ASWM did a webinar on it.

Danielle- Anything else? Thank you for staying and being active members.

Rod Kelshaw - Great job Danielle and Lee!

Respectfully submitted by:

Audie Arbo

MAWS Secretary

2/13/2020



<b>MAWS Financial Statement - 2019</b>	
From January 01, 2019 - December 31, 2019	
Respectfully Submitted to the MAWS Membership, January 31, 2020, by Roger St.Amand, Treasurer	
Beginning Balance 01/01/19 \$	8,921.77
Ending Balance 12/31/19 \$	9,230.67
<b>2019 Gain</b>	<b>\$308.90</b>
<b>INCOME</b>	
1 Annual Meeting (Bowdoin College - March 14, 2019)	\$ 4,240.00
2 Membership Dues	\$ 2,045.00
3 MAWS Merchandise	\$ 40.23
4 MAWS Workshop ( Ethics + Reid)	\$ 1,532.78
<b>(A) TOTAL INCOME</b>	<b>\$ 7,858.01</b>
<b>EXPENDITURES</b>	
1 Annual Meeting (Bowdoin College - March 14, 2019)	\$ 3,639.88
2 MAWS Workshop (Ethics) *	\$ 400.00
3 Envirothon Grant	\$ 1,000.00
4 Student Research Stipend Awards (2)	\$ 1,994.82
5 Website	\$ 228.16
6 Bank Fees, Stripe & Squarespace Fees, Sec State Filing, Misc.	\$ 286.25
<b>(B) TOTAL EXPENDITURES</b>	<b>\$ 7,549.11</b>
<b>2019 Gain (A-B)</b>	<b>\$308.90</b>
<b>GAIN / LOSS</b>	
1 Annual Meeting	\$ 600.12
2 Membership Dues	\$ 2,045.00
3 MAWS Merchandise	\$ 40.23
4 Workshops*	\$ 1,132.78
5 Envirothon Grant / Student Stipends	\$ 2,994.82
6 Other Expenses	\$ 514.41
<b>2019 Gain</b>	<b>\$308.90</b>
<b>*Note: with -\$500 outstanding workshop venue fee</b>	
	<b>-\$191.10</b>



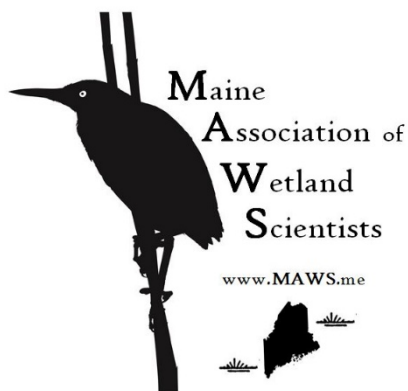
## MAWS Business Meeting Agenda 2020 Annual Meeting - March 19

1. President's Introduction and Update – Bryan Emerson
2. Executive & Standing Committee Updates  
 Secretary Update (approval of minutes from 2019 annual meeting) – Audie Arbo  
 Program Chair Update – Matt Kennedy  
 Legislative Chair Update – Rich Jordan  
 Treasurer Update – Roger St. Amand  
 Membership Chair Update – Dave Brenneman  
 Ethics Chair Update – Kevin Ryan  
 Ad-hoc Subcommittees:  
     Education/Student Outreach Committee – Lee Burman  
     Vernal Pool Technical Committee – Roger St. Amand  
     Outreach Committee (maws.me & Obligate) – Lauren Leclerc  
     Research Committee – Rich Jordan

3. Executive Committee Elections (*2-year terms*)

Open Committee Chair Position	Nominees ( <i>nominations will also be accepted from the floor</i> ):
Secretary	Sarah Maloney
Program Chair	Matt Kennedy ( <i>incumbent</i> )
Membership	Dave Brenneman ( <i>incumbent</i> )

4. Norman C. Famous Wetland Research Stipend Discussion and Award Vote
5. Envirothon Donation - Discussion and Award Vote
6. Open Floor Discussion
7. President's Closing Message, Meeting Adjourns



**Maine Association of Wetland Scientists**  
**Winter Conference & Annual Meeting**  
**Thursday, March 19, 2020**  
**Thorne Hall (Bldg 67), Bowdoin College, Brunswick, ME**

*Thirty Years of MAWS*

**AGENDA**

- 7:45 – 8:25     **Registration**
- 8:25 – 8:30     **Welcome, Introduction of Speakers**, Bryan Emerson, MAWS President
- 8:30 – 8:50     **MDEP Regulatory Update**, Nick Livesay, Maine Department of Environmental Protection
- 8:50 – 9:10     **USACE Regulatory Update**, Jay Clement, U.S. Army Corps of Engineers, New England District
- 9:10 – 9:40     **LUPC Regulatory Update**, Stacie Beyer and Nick Carr, Maine Land Use Planning Commission
- 9:40 – 10:00    **USFWS Regulatory Update**, Patrick Dockens, U.S. Fish and Wildlife Service
- 10:00 – 10:10    **Break**
- 10:10 – 10:40    **MAWS History**, Steve Pelletier, Founder and Former MAWS President
- 10:40 – 11:00    **Changes in Federal Regulation of Waters in the United States: WOTUS and Beyond**,  
 Brenda Zollitsch, Association of State Wetland Managers
- 11:00 – 11:20    **Water Quality and Biological Monitoring in Maine: A Historical Perspective**, Jeanne DiFranco, Maine Department of Environmental Protection
- 11:20 – 11:40    **20 Years of Stream Crossings at MDOT**, Eric Ham, Maine Department of Transportation
- 11:40 – 12:00    **Using eDNA as a Survey Method for the Wood Turtle**, Emerald Wright, Unity College, *MAWS Stipend Winner*
- 12:00 – 1:00     **Lunch Break**
- 1:00 – 2:45     **“SOLAR PANEL”**: Dale Knapp of Boyle Associates will moderate a 1.75-hour panel discussion about the recent increase in solar development in Maine. Panel participants will include:
- Jim Beyer, Maine Department of Environmental Protection
  - Sam Boduch, Earthshift Global
  - Colin Greenan, U.S. Army Corps of Engineers
  - Rich Jordan, Flycatcher LLC
  - Dave Littell, Bernstein Shur
  - Troy Moon, City of Portland, Maine
  - Aaron Svedlow, North Light Energy, LLC
  - Dylan Voorhees, Natural Resources Council of Maine
- 2:45 – 2:55     **Break**
- 2:55 – 3:15     **Advancements in Wetland Identification Technology**, Cole Peters, Power Engineers
- 3:15 – 3:45     **Drone Use and Technology in Resource Mapping**, Dr. Matthew Wallhead, University of Maine, Orono
- 3:45 – 4:00     **Break**
- 4:00 – 5:00     **Annual Business Meeting**

We will provide Certificates of Attendance for attendees at the conference for 6.0 hours of contact time for the conference and 1 hour for the annual business meeting.



**Maine Association of Wetland Scientists  
Winter Conference & Annual Meeting  
Thursday, March 19, 2020**

**Thorne Hall (Bldg 67), Bowdoin College, Brunswick, ME**

**Thirty Years of MAWS**

➔ **Register** online at: <http://mainewetlands.org/store/>

For those that prefer, you may register on line, and send payment to:  
**Roger St. Amand**, MAWS Treasurer, P.O. Box 76, Bass Harbor, ME 04653

Any questions, please feel free to call or email Matt Kennedy,  
MAWS Program Chair, Phone: (978)-578-6801, Email: [mkennedy@boyleassociates.net](mailto:mkennedy@boyleassociates.net)

**Registration should be received by March 9, 2020**

**No Refunds for Cancellations**

**Bowdoin College**

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207-725-3000

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(David Saul Smith Union)  
207-725-3375

Admissions  
(Burton-Little House)  
207-725-3100

Alumni Relations  
(83 Federal Street)  
207-725-3266

Communications,  
Public Affairs; Association  
of Bowdoin Friends  
(McLellan Building)  
207-725-3253

Controller's Office  
(McLellan Building)  
207-725-3787

Development  
(85 Federal Street)  
207-725-3404

Events and Summer  
Programs  
(Coles Tower)  
207-725-3433

Hawthorne-Longfellow  
Library  
207-725-3280

Human Resources  
(McLellan Building)  
207-725-3837

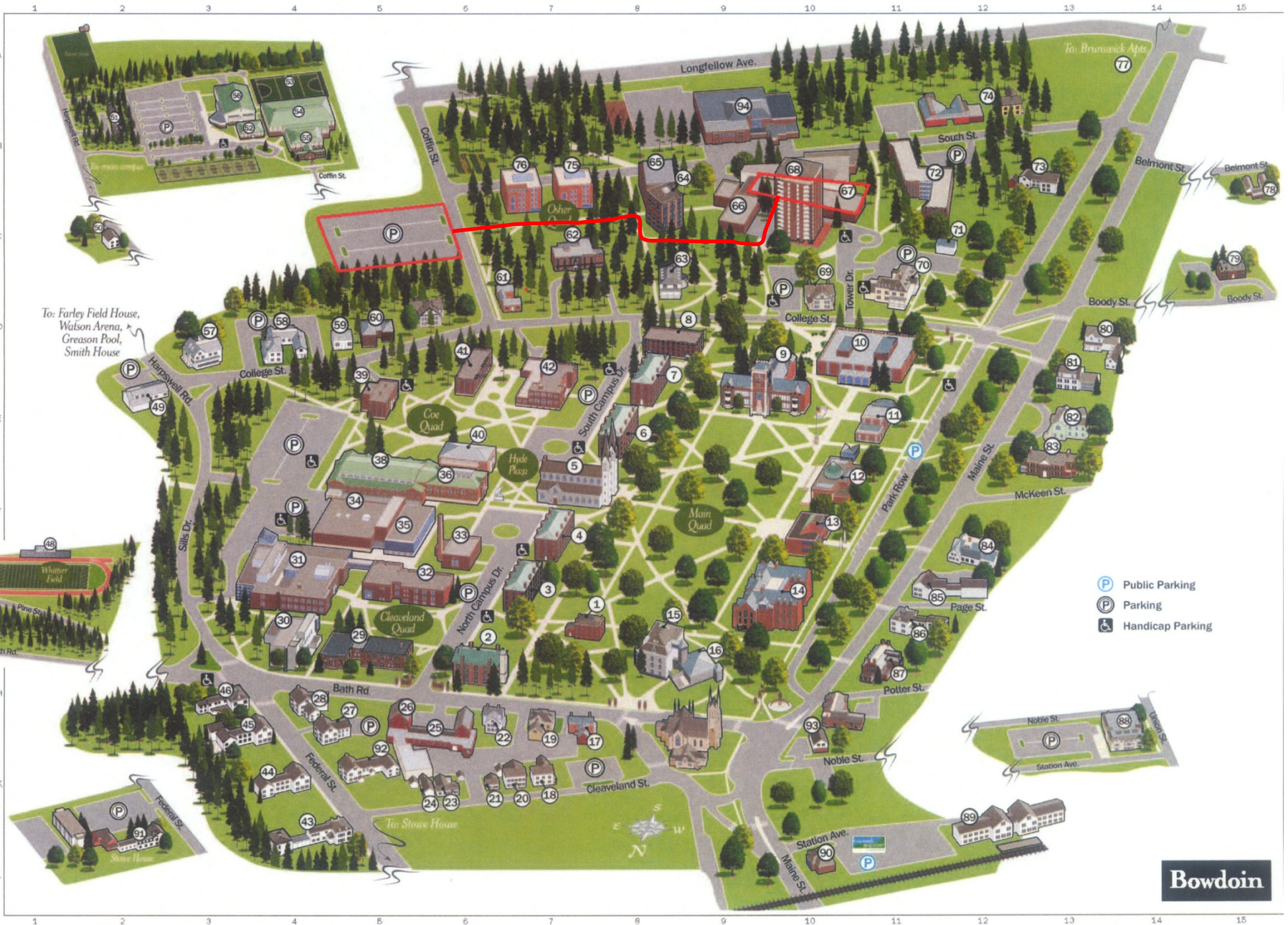
Bowdoin College  
Museum of Art  
207-725-3275

Pease-MacMillan  
Arctic Museum  
(Hubbard Hall)  
207-725-3416

Safety and Security  
(Rhodes Hall)  
207-725-3314  
Emergency-725-3500

Sports Information  
(Sidney J. Watson Arena)  
207-725-3061

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