

FieldNotes...

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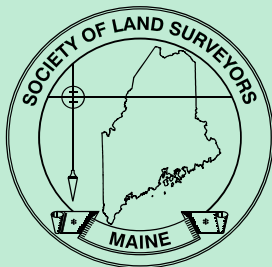
The Monthly Newsletter of the Maine Society of Land Surveyors

Volume 31 Number 9

October, 2024

Maine Society of Land Surveyors
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Ribbons 'Fly' at Celebration



From left to right: **Will Manion**, John C. Bridge Professor and Director; **Giovanna Guidoboni**, College of Engineering and Computing Dean; **Jim Hinson**, Topcon Senior Director, OEM Business Development; **Max Heck**, University of Maine Student; **Richard Vannozzi**, Assistant Professor, Surveying Engineering Technology; **Cassandra Quintal**, President, Maine Society of Land Surveyors; and unfortunately obscured - **Ray Hintz**, Program Coordinator and Professor, Surveying Engineering Technology (*Photo courtesy of Spencer Caron*)

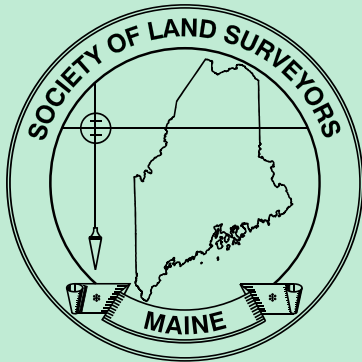
Over 50 attendees from the Maine Society of Land Surveyors' Fall Meeting held at the UMaine Buchanan Alumni House traveled across the beautiful autumn campus to join other guests at a celebratory ribbon cutting recognizing Topcon Precision Systems' generous gift of approximately \$2 million dollars of state-of-the-art equipment and software. They enjoyed a reception featuring remarks regarding the gift and important resource value of it to the surveying education program in Maine. Topcon will maintain, update and replace the equipment (if necessary) every three years. This arrangement was undertaken to ensure students receive instruction with the latest surveying technology as part of the Topcon Learn/Apply/Build (LAB) initiative.



We did manage to get **Ray Hintz** (center) in photo showing his appreciation for **Russ Desjardins** (left) now retired and **Coby Asselin** (right) both of Spillers who have worked closely with Topcon and UMaine over many years. (*Photo courtesy of Spencer Caron*)

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Legislative Committee
(Levi Ladd - Chair & Daniel Bernier, Esq.)

Nominating & Membership Committee
(Donald Dostie - Chair)

Budget & Finance Committee (Jimmy Courbron)

Board of Licensure (Levi Ladd - Liaison)

NSPS (Matt Ek, NSPS Director)

SVT at UM (Stephen Gould - Liaison)

GIS (Greg Copeland - Liaison)

FEMA (Mark Carpenter - Liaison)

DOT (Guy Ladd - Liaison)

Education Committee - (Deborah Briggs - Chair)

Scholarship Committee
(John Lloyd & Stephen Gould - Co-Chairs)

Historical Committee - (Tom Blake - Chair)

Benevolent & Betterment Benevolent Fund Com't
(Matt Ek - Chair)

Program Committee
(Steve Gould & John Lloyd Co-Chairs)

Publications, FieldNotes and Website
(Bruce Bourgoine)

You, Yes You Can Play a Vital Role

Being the Past-President and under our revised By-Laws, I am responsible for recruiting officers when positions open on our Executive Committee, and for recruiting members to fill committee positions that are currently vacant. Many of you know me as someone who has been involved with MSLS in various capacities for many years. Thank you to those who have served as well!



I am asking members, that's you the reader, to be an agent of change in our society. In past conversations with members, I have often heard people expressing an interest "if they only had more time." Well, I put it to you, the members, make the time! In return you will get a chance to impact the professional organization responsible for outlining our ethical standards, keeping track of legislation that impacts our profession.

MSLS provides you with opportunities to network with fellow members and national experts, obtain continuing education credits and develop lifelong friendships by being involved. Don't be the person who complains and doesn't do anything proactive to make changes, be the person who makes the change happen! We have the following opportunities for you to have an impact on the future of MSLS serving on your Executive Committee, known as ExCom:

Vice President – you will spend 2 years gaining experience on the Board in support of the President, then being nominated to be President for a 2 year term. The Vice President is responsible for Chairing the Legislative Committee working with our lobbyist and for attendance at Board of Licensure meetings held every 2 months in Gardiner.

Director at Large – You will serve on the Board for 2 years gaining experience at an executive level preparing you to become Vice President, Treasurer or Secretary, depending on your own aspirations. This is a unique position giving you the opportunity to attend regional Chapter meetings if you choose.

Committee Openings:

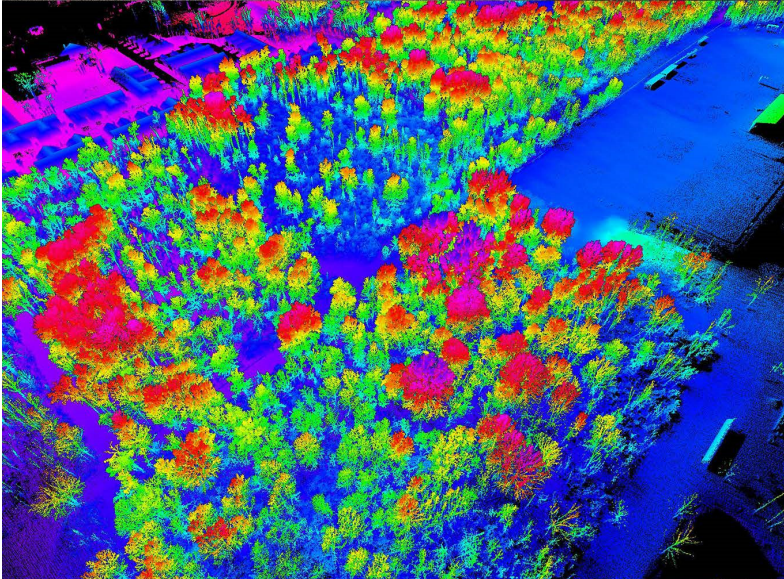
Education Committee – This committee would welcome participants who would like to create additional opportunities for education. This can be accomplished through Zoom brown bag lunch topics, and/or a summer outing coupled with a speaker or two. Should you choose, you can work with our **Programming and Planning Committee** helping with the annual meeting, and/or working with Chapters responsible for the Spring and Fall quarterly meetings.

Public Relations Committee – We need a Chair and committee members who would like to be involved with educating the public and our peer professionals about Land Surveying. High School students need to learn about career choices in our field. As a new committee recently formed, you can establish your own agenda working with approval from ExCom.

Legislative Committee – Work with our Vice President and lobbyist helping with the important work of identifying bills that may negatively impact our profession or draft a bill for approval by ExCom for legislation that will benefit Land Surveyors and the general public. Be a vigilant ward of our standards and licensure requirements.

See additional committees welcoming volunteers in the box at the left.

Don't hesitate, contact me today to get more info or step up!
D.Dostie@EncompassServices.com



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UMaine engineering program bolstered by nontraditional, online students

The first time Zach Robinson stepped foot on the University of Maine campus was for his graduation. In fact, it was the first time he had ever been to the state. Having flown from California to Boston, Robinson was awed by the lush greenery of Maine in May as he drove north from Massachusetts.



Aaron Brown, a UMaine graduate, is conducting surveying work in the woods. Photo courtesy of Aaron Brown

Robinson completed his bachelor's degree entirely online through UMaine's Surveying Engineering Technology (SVT) program. Raymond Hintz, professor of surveying engineering technology, convinced Robinson to visit Maine to celebrate his graduation from the program.

"I got a little teary-eyed because it was my bachelor's," Robinson said. "They gave me so many opportunities," he added of the faculty who molded his experience.



Zach Robinson at his graduation with his wife, Pang. Courtesy of Zach Robinson

Robinson didn't enroll in the SVT program directly following high school; after completing two engineering internships in Florida, he decided the career path wasn't right for him. He found a love for the surveying profession in the process and decided he wanted to pursue it more seriously. Becoming a professional land surveyor in more than half the states in the U.S. requires a bachelor's degree followed by two to four years of work supervised by a licensed land surveyor. Two national tests and a state-based test are also required.

Robinson was drawn to UMaine's SVT program because it was the only one he could find that was offered entirely online.

"I contacted Ray [Hintz] and said, 'Hey, I don't want to do civil engineering. I'd like to do surveying.' And he said, 'Come on over. We'll get your credits transferred. You can take as many or as few classes as you want per semester,'" Robinson said.

While working full time and with help from Hintz, Robinson, now the youngest licensed professional land

surveyor in California, graduated with his bachelor's degree in surveying engineering technology in 2021 and started his master's degree in the program a year later.

Robinson's path to UMaine's SVT program isn't unique. Nearly all of the students who comprise the program's enrollment are online students or are considered nontraditional students – oftentimes they are both.

Different institutions have varying definitions for nontraditional students. At UMaine, nontraditional students are those who are 24 years or older. These students have typically chosen to pursue a college degree several years past their graduation from high school. They may be married, have children or have been through other circumstances that differentiate them from the traditional path – entering college immediately after graduating high school.

The number and proportion of degree-seeking undergraduates who are 24 or older has increased. They now comprise 10% of the undergraduate population at UMaine, an increase from 8% in 2017. Of those nontraditional students, 42% are enrolled in online programs.

Similarly, 40% of undergraduate transfer students are 24 or older, with 49% of that number enrolled in online programs.

A headstart in online learning

At the height of the COVID-19 pandemic, businesses and organizations had to address how best to proceed in a new, virtual environment. Hintz had already jumped into online learning head first in 2015. The Professional Science Masters (PSM) was the first online option Hintz offered to surveyors. Online content was then offered to undergraduate students upon request.

"I started offering online undergraduate classes as an experiment more than anything," Hintz said.

Surveyors use detective-like methods to find accurate locations and measurements and to determine property boundaries. Their studies involve using electronic/optical instruments, levels, GPS receivers and software to process

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data. Understanding how to use the equipment is a primary function of the career, which makes offering the program online especially difficult.

Hintz referred to the first couple of years of online surveying education as the “wild west.” He delivered classes from anywhere, often lecturing during his travels. Despite this, the experiment was a success. In 2018, Hintz formalized a fully online option for an undergraduate surveying degree.

The next challenge was finding students who were interested – making it available online wasn’t enough.

“I do a lot of traveling. So word of mouth is kind of how I got around to people,” Hintz said. His initial work made the transition to online formats during the pandemic much easier. When the time came that everyone had online education top-of-mind, SVT faculty were already prepared to help their students succeed.



Faculty from UMaine test out new equipment provided by Topcon Positioning Systems Inc. in early 2024.

The SVT program is now equipped with an immersive lab and online education production space, which has helped refine the course offerings available to online students. As part of the online experience, students receive instruction with the latest surveying technology provided by a \$1.7 million equipment loan from Topcon Positioning Systems, Inc.

Since 2019, SVT program enrollment has increased 156%, with 91% of students completing their degree entirely

online. Much of it is thanks to Hintz work, as well as his partnership with UMaine’s Division of Lifelong Learning and Admissions.

As more graduates leave the program and communicate with other survey professionals, Hintz said their word is now the program’s predominant recruiting tool.

When Hintz approached his colleagues with the idea of providing an online option, no one expected that it would be as successful as it has been. His colleagues thought the program may get 20-30 online students.

Enrollment has reached nearly 400.

Aaron Brown, a UMaine graduate, earned his PSM fully online while working as an associate project surveyor at Alaska Native Tribal Health Division of Engineering and Environmental Health, the largest tribal health organization in the U.S. The degree made it possible for him to obtain his surveying license and become the owner and operator of Vector Surveying in Anchorage, Alaska,

which he founded in 2023. Much like Robinson, Brown found a love for surveying after pursuing a different educational path.

“I had two options post-undergraduate education after earning a degree in mathematics and applied statistics: go back and complete another four-year degree, with surveying specific course work in Alaska, or take my education to the next level and shoot for a master’s degree or graduate certificate,” Brown said.

Through his research, he narrowed his choices down to two universities that offered graduate education in surveying: the University of Florida at Gainesville and the University of Maine. Brown said Maine’s nontraditional master’s program was affordable in comparison to Florida. Then he had a conversation with Hintz about his 11 years of surveying experience in Alaska, his bachelor’s degree in mathematics and applied statistics and his eagerness to obtain a professional license in surveying, which requires four years of experience and four years of education in Alaska.

“One month later I was on board and completing graduate level course work in surveying to be applied to licensure education in Alaska. It was all because of the University of Maine’s staff and faculty, plus it was backed by a bit of eagerness from me to earn a Professional Land Surveyor (PLS) license.”



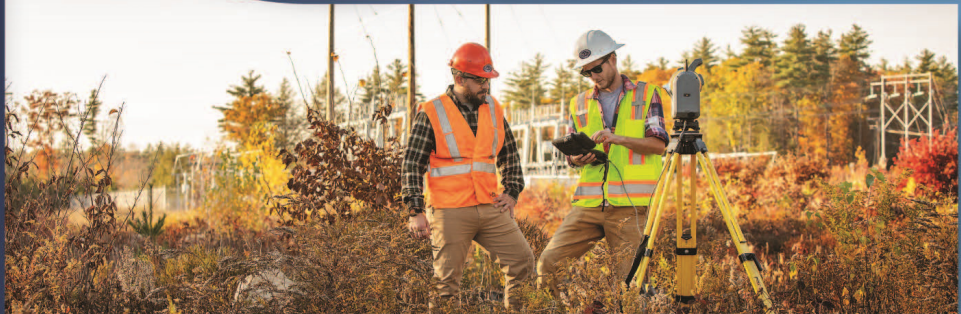
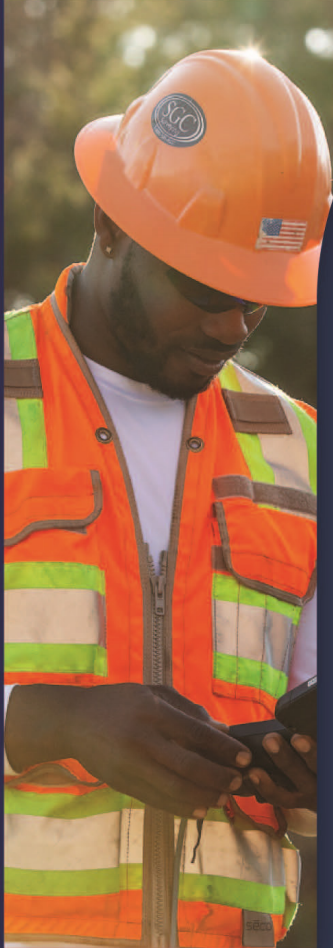
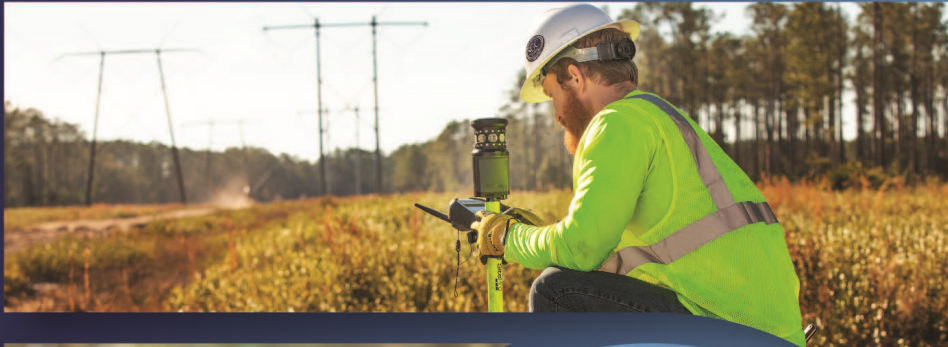
Rich Vannozzi from UMaine’s Surveying Engineering Technology (SVT) program tests out new equipment provided by Topcon Positioning Systems Inc. in early 2024.

As a full-time employee, Brown knew that obtaining his PSM would be difficult. His work schedule required one week in the field, followed by two weeks in the office mapping entire villages. He worked in approximately 70 remote locations across Alaska in under four years.

“It’s challenging logistically to get a classroom-based education while working as a surveyor in Alaska,” Brown said. “Surveyors essentially need to get 12 months of fieldwork completed in one summer while there’s no snow on the ground.”

Brown found that his online class meetings through UMaine were valuable and in line with the transition to remote-based work caused by the pandemic.

“Surveyors from many parts of the nation were discussing survey topics unique to the state where they practiced; we were all on the same page talking the same language,” Brown said.



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Hintz encouraged Brown to fly to Maine for graduation. With airline points Brown had collected flying to and from remote survey assignments in Alaska, he and his wife turned the trip into a vacation, spending time exploring Maine before it culminated in Brown receiving his degree on campus.

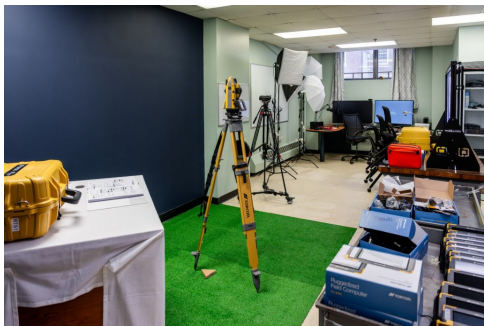
Brown was recently admitted as a Ph.D. student to the Doctor of Engineering in Engineering Technology program, which was approved in April by the University of Maine System Board of Trustees. It is the only online Ph.D. program in surveying in the nation.

Meeting employment demand

“Almost all of our students are nontraditional learners, which is fantastic,” said Rich Vannozi, assistant professor in surveying engineering technology at UMaine. “The surveying profession since the 80s has spent millions of dollars on outreach, supporting undergraduate programs around the country to put people in seats.”

Despite the outreach efforts, data from the Bureau of Labor Statistics states the number of licensed surveyors employed in the U.S. decreased from 56,200 in 2010 to 47,770 in 2020, a decline of 14.3%. But it wasn’t because employers needed fewer surveyors.

Two phenomena are driving the critical need for surveyors, according to Vannozi. Retirements are dropping the number of surveyors in most states by 5-10% every year and the demand for educated surveyors is increasing. In Maine, for instance, local businesses are finding it difficult to staff their surveying departments with fewer than 450 licensed surveyors in the state.



New equipment was loaned to UMaine’s Surveying Engineering Technology (SVT) programs by Topcon Positioning Systems Inc. in early 2024.

“There was a time 40 years ago when you could enter this profession and have a successful career with a minimal amount of formal education. That is not realistic anymore,”

Vannozi said, adding that educational outreach was failing because of an access issue. “As soon as we opened up the idea of access to get a degree remotely, there was a huge amount of demand for what we do,” he said.

Jeff Teunisen is executive vice president and survey director at Haley Ward, a technical consulting firm offering a range of engineering, environmental and surveying services. Haley Ward is headquartered in Bangor with additional holdings in New Hampshire, Massachusetts and Florida.

“The University of Maine is instrumental in providing surveyors for Bangor and Maine,” Teunisen said. “All of our employees here are graduates from the University of Maine.”

Teunisen, who oversees surveying operations across the company’s locations, has had difficulty recruiting surveyors amidst increased demand for the work brought on by the pandemic. “We actually had one client who had us survey three properties before they finally bought one,” he said.



In the Alaskan outdoors is where Aaron Brown works as an associate project surveyor at Alaska Native Tribal Health Division of Engineering and Environmental Health and as owner and operator of Vector Surveying. Photo by Aaron Brown

The struggle isn’t unique to Maine. “There’s a huge demand for surveyors in Alaska,” Brown said. “All the engineering companies are looking to hire land surveyors. There’s always advertising for land surveyors, and the pay scale is really competitive now because there’s a lack of surveyors. It’s supply and demand – less surveyors, more demand, higher pay.”

Vannozi also highlighted the nationwide need for surveyors, as their availability is driving real estate projects and development schedules, as well as the work of UMaine’s program to fill the void. After seeing the huge increase in enrollment, he has found renewed hope for the program and knows much of it is because of the work Hintz, whose coworkers affectionately call him the “pied piper,” has done to connect with students all over the world.

“The program here, which is Ray [Hintz]’ brainchild, is about breaking down barriers,” Vannozi said. “There is no longer a geographic barrier to getting survey education in the United States. And that’s why we went from a footprint of maybe 40 to 50 students on campus to a national footprint.”

Story by Shelby Hartin
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University of Maine Division of Marketing and Communications



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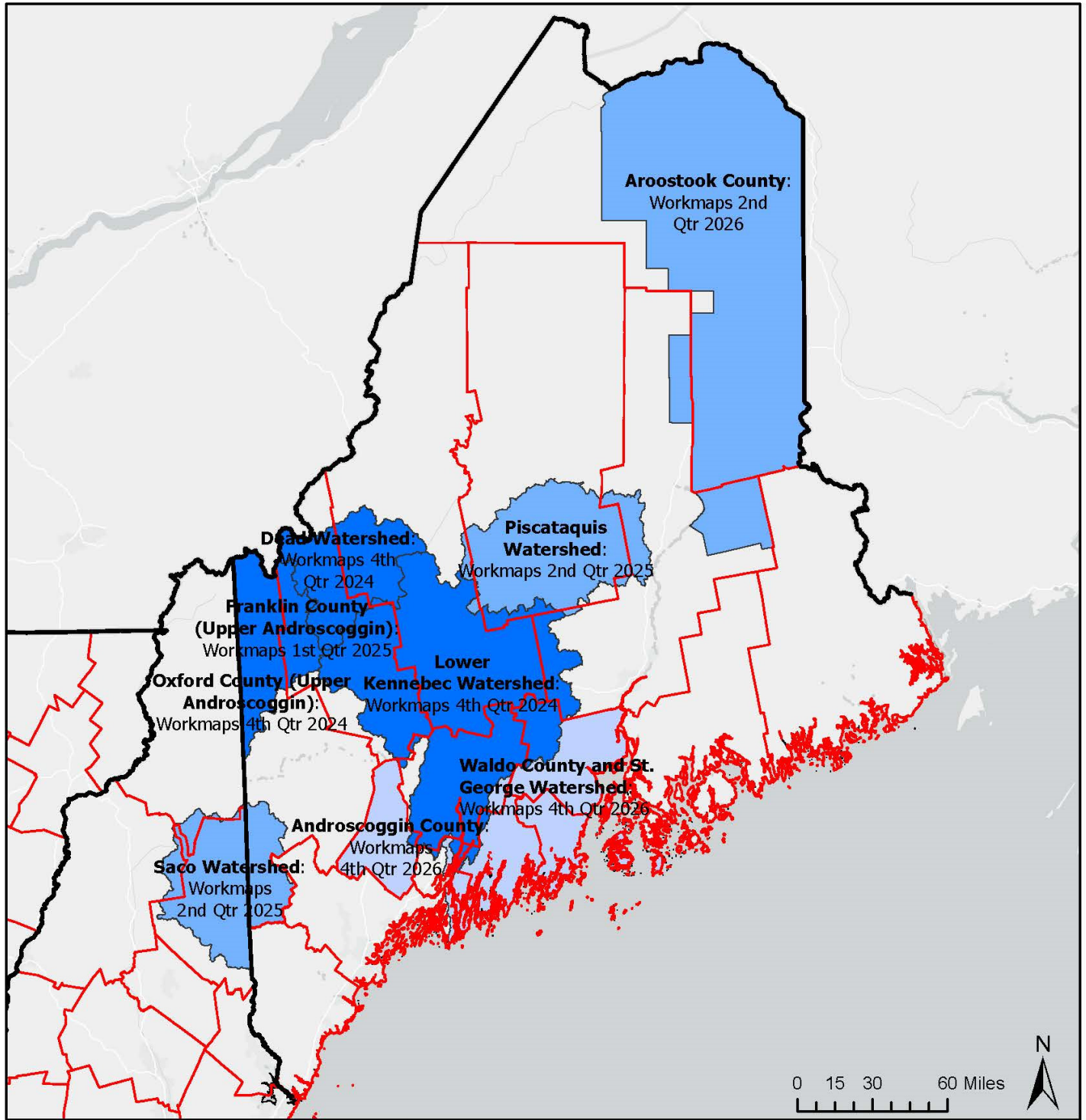
Middle Branch Surveying, located in Alfred, Maine since the late 1960s is seeking a new owner. If interested, please call

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or email at surveyors2@gwi.net for additional information.

Region 1 Active Studies in ME

This map is provided for planning purposes only. Any dates shown on the map are projected and are subject to change. Map produced on 10/8/2024



FEMA
Region I

R1_County_30m_Simplify	Data Development: Workmap Review and Comment
StatusCombined	Post Preliminary Processing: Preliminary Maps Available
Discovery: Pre-Discovery Meeting Activities	Post Preliminary Processing: Formal Appeal Period
Discovery: Discovery Data Collection	Post Preliminary Processing: Resolving Appeals
Discovery: Developing Discovery Report	Post Preliminary Processing: Awaiting LFD
Data Development: Field Survey Underway	Post Preliminary Processing: Adoption Period
Data Development: Developing H&H	Effective: Effective
Data Development: Creating Workmap	<all other values>

Calendar Notes...

MSLS Scholarship Application Period

November 1 to 30

Scholarship applications for the forthcoming year are available for qualified applicants beginning November 1 and all materials **must be received by email or postal mail by noon on November 30** in order to be considered. Please check our website for application information, materials, and procedure.

MSLS November ExCom

November 13 at 6:00 PM

Central Maine location to be determined
Zoom access will also be available.

MSLS Annual Conference

January 30 and 31 *SAVE THE DATE*

The Regency, Portland

Send Your Calendar Notes to: editor@msls.org

The Parting Shot...



We've all seen this costume before.
Happy Halloween!

"The Parting Shot" appears in place of where mailing information is located on postal mailed copies and is a little extra something for email recipients. Email your interesting surveying or Maine "Parting Shot" to editor@msls.org!