

## College of Natural Sciences, Forestry, and Agriculture



### Student introduces new technology to Maine forest products industry

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The Maine forest products industry has been a part of Walker Day's life for as long as he can remember.

Growing up in the small western Maine town of Lovell, Day watched as his father and grandfather spent the majority of their professional careers in forestry.

"They both had a very big impact on how I was raised, and naturally, I looked up to both of them," says Day, a senior at the University of Maine.

It was this admiration and Day's love of the outdoors that led him to pursue a degree in forestry in the School of Forest Resources; a decision he calls the best he has ever made.

"I was never an indoors type of kid, and always wanted to be outside," Day says. "I knew I never wanted to have a job that required me to sit behind a desk."

Day was drawn to working with large, industrial private landowners.

"I like the idea of having such a large landscape at my fingertips to work with," he says. "I like the idea that I can sit back at the end of my career and look at the thousands of acres that I have impacted in some way, and be proud because signs of that work will be around for much longer than I am."

While at UMaine, he has spent his summers working as a research assistant with the Cooperative Forestry Research Unit (CFRU), a collaboration among the School of Forest Resources and most of the state's largest landowners and managers; and as an intern with Plum Creek Timber Co., now known as Weyerhaeuser, and Seven Islands Land Co.

His most recent summer internship with Seven Islands evolved into an academic-year position as an applied forest technology intern with cooperation from UMaine's Barbara Wheatland Geospatial Analysis Laboratory. The position was created to showcase new technology that could help the company make informed management decisions more efficiently, Day says.

In this position, Day aims to demonstrate to Seven Islands the practicality of using new technology in forestry, such as unmanned aerial vehicles (UAV) or drones. At the end of the semester, Day will deliver a presentation on his UAV research using test sites in the company's Rangeley district.

"The knowledge possessed by the Barbara Wheatland Geospatial Programs team is my greatest asset for this project," Day says.

Day says UAVs can be used to create photo-derived point clouds of the forest canopy, as well as high-resolution orthophotos, or aerial photographs that have been geometrically corrected to have a uniform scale. Using UAVs instead of a traditional aircraft could potentially save time and money for foresters.

In order to fly a UAV for any reason other than personal enjoyment, Day was required to become a certified remote pilot through the Federal Aviation Administration (FAA). To do so, he took — and passed — a knowledge test that focused on UAV rules and regulations, as well as in-depth understanding of airspace, weather and the interpretation of sectional aeronautical charts — subjects that don't necessarily come to mind when studying forestry.

"Right now is a great time to be a college student in forestry. There are so many new innovations that are coming out right now, and there is no better place to learn these things than at the University of Maine," says Day, who points to UAVs as well as Light Detection and Ranging (LiDAR) analysis, a remote-sensing method that uses light in the form of a pulsed laser to measure ranges to Earth.

Despite many mill closures around the state, Day is optimistic about the future of the industry.

"The forest products industry is still a driving force in Maine," he says. "Some of the mills have closed, however we are still an \$8.5 billion industry. Any industry has its ups and downs, so I think the future looks pretty bright. Technology will continue to advance, so hopefully our practices in the woods will continue to get more efficient."

A recently announced partnership between UMaine and a federal Economic Development Assessment Team (EDAT) is working to revive the state's forest products industry. In January, the Maine Forest Economy Growth Initiative released the report, "Recommendations to Strengthen and Diversify Maine's Forest Industry and Rural Economies." In the report, the coalition unveiled nine priorities to be addressed in the next three years, with the top priority being to develop a long-term vision and roadmap for the forest economy, according to an MDF release.

"Maine is 89 percent forested, so I know there will always be a need for land managers, as well as supply of timber into the open market. Wood is a renewable resource, and I think that as time goes on, more people are starting to see that," Day says. "I look forward to the future and think the forest products industry in Maine will continue to be the driving force of this state's economy."

Day chose to attend UMaine not only because it was close to home, but because he says it is known for producing top-tier foresters and for having one of the oldest, continually accredited professional forestry programs in the country.

"It just seemed like the right fit for me, and it turned out to be an awesome fit," he says.

Day says he believes the School of Forest Resources provided many opportunities and experiences that he wouldn't have had elsewhere, as well as a top-notch faculty. He interacts with most professors in the school on a first-name basis.

"We have a strong community in Nutting Hall, and I think they all have impacted me in some way," he says.

Day's advice for incoming forestry students is to keep an open mind and try everything.

"I wouldn't trade any of the experiences I have had in my summer jobs for anything," he says. "What I learned about forestry, and more importantly myself, during those jobs has proved to be invaluable."

While work and studying is essential, Day recommends leaving some time for fun.

"I have had a blast during my time here, and I think you need that in order to be able to focus when it counts," he says.

After Day graduates in May, he hopes to continue working in the woods, preferably in Maine.

“Maine will always be my home,” he says.

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