

Saving surveying: What does it take to get people involved?

Prepared by Trent J. Keenan, PLS & Kristina Poulter

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In almost every state, the number of licensed surveyors is dwindling in comparison to the number of surveyors who are projected to retire in the coming decade.

In Alaska alone, over 12% of surveyors will disappear from the ranks in the coming years. While a short-term viewpoint might celebrate more work and higher wages for the surveyors who remain, from a long-term standpoint, the situation looks grim.

Surveyors are a passionate bunch. Many surveyors who "retire" can't seem to stay entirely out of commission for long. It's the type of passion that results in a thirst to pass down knowledge and wisdom to future generations. So how can we ensure that enough hands will be ready to take up the reins?



During a recent Mentoring Mondays, surveyors in attendance brainstormed the challenges and hurdles facing the profession.

Balancing academics and experience



Michael Schoder, PLS and retired BLM Chief Cadastral Surveyor for Alaska is concerned about filling the surveying ranks.

He thinks that the solution to the dilemma likely lies in creating a system of mentoring.

While the University of Alaska has a strong geomatics program for surveyors, including a dedicated cadastral track, Michael doesn't know if education alone can inspire and prepare the next generation of surveyors.

"The problem is that in my view is that you can't do this all with academia. And I think once we said, hey, well, it's a four-year degree. Great. We can train them. Now I can back off. I don't have to mentor them. I know when I get

somebody out of one of those programs, they're going to have some basic knowledge," Michael said.

While programs these days are sophisticated, a thorough career like surveying requires a delicate balance of hands-on experience.

"Working experience is huge. And it's really hard to get the people that want the right desire to be in the field or deal with that," said Michael.

He raised the point that many young potential surveyors are also considering careers like engineering, which can have a much faster return on investment than a surveying degree. When it comes down to weighing finances against passion, passion doesn't always win when higher education degrees clock in at up to \$40k per year.

"I really think the best surveyors are the ones that get the passion. You know here we are, some of us in retirement that we - I thought when I walked out, hey, I've done it for 45 years. I'm going to do something else," Michael said. "I don't think we can take the surveying out of a real surveyor. You can't."

So every Wednesday, everyone came in early. Those who wanted to learn land surveying did so under his instruction. It took structure and dedication, but it paid off. Today, four of those individuals now have their licenses.

In a way, Michael sees online workshops like Mentoring Mondays as the perfect mentoring program, bringing novices and professionals together every week.

"I mean, this is crowdsourced mentoring, right? So why does every LS that maybe isn't a good teacher, but gosh, you want to learn how to do elevations with GPS? Who better than retired NGS head Dave Doyle who is going to talk about it in two weeks?" said Michael.



Suppose a program like Mentoring Mondays can be formalized, recorded, and turned into lesson plans. In that case, it could serve as the perfect vehicle to take the full weight of teaching off of busy professional land surveyors' shoulders.

The value of CFedS

While how to structure surveying education is up for debate, the value of education as a whole is undeniable.

Every professional surveyors can benefit from life-long continuing education. One program heavily discussed among attendees was the [CFedS program](#), which provides the training necessary to execute boundary surveys on or near federal interest lands.

"As a professional land surveyor and also a past BLM chief, I think it's invaluable. And if you have a need for continuing education, why not? Because you'll get more in-depth sight into the federal procedures of original surveys and dependent resurveys, understand the plats, and how to do acreage from a plat without dimensions when you have government lots. A lot of little things like that," Michael said.

While the value of pursuing CFedS depends on where you live and practice, the program has both educational and social benefits.

"It's good credentials. I know this from being on the other side of the fence at an agency too. If I'm looking at a proposal from a company and they show me some of their staff have CFedS designations, I know that those people took the commitment to do all the hours of going through it. And they had to have a passing grade. That shows an interest in higher learning and a commitment to continuing education far beyond what they needed to do to keep their license," said Michael.

Steve Parrish, PLS, the current chairperson and training coordinator for CFedS, has seen 1,300 people sign up for the program since 2006, with about 550 certified CFedS currently practicing.

He is currently organizing five presenters for an upcoming conference, where participants can take a special two-credit hour CFedS course that is offered at half the price of the regular online course.

Attracting attendees



A shortage of new students in surveying programs isn't the only problem facing the surveying world.

At the state level, chapter organization meetings are not seeing participation and attendance from people from the field.

While private-sector employees tend to show up, others don't. The pandemic has only served to exacerbate this pre-existing issue.

"A lot of it has to do with the influx of probably that individual company and what they're willing to step out and do for those guys that say hey look, we want you to advance yourself and just not be a technician or a robot for us," said one attendee.

Surveyor shortages and public scrutiny

John Brady, PLS, a surveyor located in Fairbanks, Alaska, has his own concerns about surveyor shortages.

"This year, I am president of our local Fairbank's chapter of ASPLS. And I'm the youngest guy in the room by 30 years, usually sometimes even 40. And that's a huge issue to me. Because what is the society going to look like in 10 years when I'm pretty much the only one left?" he wondered.

That's one reason why John is so thrilled to have the opportunity to participate in Mentoring Monday sessions and connect with other surveyors across the United States.

"That's the beauty of the technology we have available these days to be able to network outside of our locales and be able to actually get an idea of what people are doing across the country and across the world," he said.

John is also a fan of the [Get Kids Into Survey](#) program, which inspires future geospatial experts. During the pandemic, he's been working the program into the homeschooling curriculum for his own children.

"I mean, it's great in one sense because I'll always have a job. But I also want to see the profession grow and continue on and still be around when I'm ready to pass it off to the next generation. Which hopefully will be quite a ways down the line," said John.

Trent Keenan, PLS, raised the important point that fewer surveyors does not necessarily translate into riches and smooth sailing for the surveyors that remain.

"As much as we talk about it's going to be nice because we're always going to have job security; I think the biggest problem that we're going to run into is the public can't wait around for three, four, five, six weeks when we tell them that we can't get to it for a month and a half. So we're going to have an issue on the PR side of things," he said.

In other words, efforts to grow the surveying profession aren't just to ensure there are more bodies in the office. It's to prevent the unknown of new legislation that could follow when the necessary work of surveying simply can't be done on time.

A new teaching model



It's becoming clear that what the surveying profession needs is a new teaching model, where practicing experts and retired professionals can join forces to create engaging and comprehensive educational content without burning out.

Crowdsourced mentoring like Mentoring Mondays and recorded lessons may be able to provide a digital starting point.

For physical in-person classes, Ian Wilson, PLS, is interested in exploring shared teaching opportunities.

"In Evergreen College out here, I keep getting jingles from them saying, can you come to teach a class? Can you come and teach a class? I do not have time to spend, unfortunately, to teach an entire semester of classes. And one thing that I've proposed over and over again, and it seems to get crickets or falls on deaf ears, is to get together a few surveyors," he said.

In Ian's vision, he would be able to commit to three weeks teaching about survey boundaries, after which another surveyor would pick up where he left off with another topic, and so on until the 16-week semester was over.

Why has his idea fallen on deaf ears? He imagines it must be due to the internal logistics at the college.

"Somebody is going to have to really do some work on this because then you run all the crap about, okay, now we've got ten teachers who are going to be here. Ten guys are going to teach this seminar next semester. Do they all need to be set up as employees? How do we - you know, there's a whole lot of logistics that need to be dealt with, but somebody has got to do it," Ian said.

Despite the unknowns, one thing is clear: a passion for the profession drives surveyors. And where there's passion, anything is possible.

With modern technology at our fingertips, there's hope that we can bridge the centuries-old art of surveying with the modern world, helping to educate and inspire a new generation of surveyors to follow in our footsteps.

If you are interested in learning more about [Mentoring Mondays](#) or volunteering as a featured speaker, please contact [Trent J. Keenan](#).

