

# Threats to licensure: How can they be avoided?

by Trent J. Keenan, PLS

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At the 2022 Western Regional Survey Conference, multiple panels focused on brainstorming some of the current threats to the profession, and this is an abstract article based on these discussions.

It's a fabulous time to make money as a land surveyor, but the honeymoon period won't last forever. The land surveying profession is in peril. Therefore, we must identify the various threats to licensure.

## Threat #1: Too Few Licensed Land Surveyors



The number one threat to the licensed surveyor community is our aging workforce. Licensed surveyors are aging out, and we are not recruiting enough replacements.

According to NAICS Code 541370, the number of individuals in the land surveying profession in the United States tops out at approximately 53,000. However, of those 53,000, only 35,000 are licensed surveyors.

Many of those professionals due for retirement in the coming decade leave our nation with a notable absence of licensed surveyors. This is worrisome as our current workforce is already stretched thin, with many clients desperate to get surveyors on the phone—some of them calling 20 different surveying offices with no response.

According to the 2019 US Census Bureau data, there are about 7,200 surveying firms in the United States. 4,400 of those firms have less than five employees, and 6,000 of them have less than 9 employees.

Mom and pop surveying operations do not need a lot of personnel. As a result, they often do not hire additional bodies until an existing staff member retires. The problem is that once those staff members do retire, there will no longer be any newly licensed surveyors ready to fill their shoes.

Surveying is a vital industry that requires bodies to get the work done. When developers can't get their work done, they ultimately will go to the legislature to lobby for change. We don't want to find our profession at the mercy of elected officials who have no idea what we do and the details of our role.

It remains in our best interest to unite our efforts into "ONE" powerful voice that will help us stay ahead of potential legislation that will come.

Too few of licensed surveyors is a recipe for trouble and was clearly the number one threat discussed during the Western Regional Survey Conference.

## Threat #2: Lack of Awareness

After identifying the number one threat as a dwindling workforce, the panel inevitably transitioned to the question, Why are no new young surveyors lined up to take the place of soon-to-be retirees?

A large part of the problem is a lack of awareness of the profession. Our profession's outreach efforts are lackluster, and we simply aren't reaching the right people, at the right time, in the right ways. Again, a consistent, powerful, united voice is needed in order to increase awareness, including:

- Recruiting at a younger age
- Involving the right people, such as school counselors
- Making outreach fun and relevant
- Targeting beyond friends and family



### Threat #3: Rapid Changes in Technology

There is no question that drastic updates to technology are also impacting our ability to educate and equip our workforce properly.

The majority of small survey firms cannot afford to shell out for a hundred thousand dollars worth of gear, so affording the latest and greatest tech resources is one hurdle.

Another hurdle is making sure that educational resources keep up with technology. When tech changes at a fast pace, we rely on resources such as the following to train our workforce:

- Educational institutions
- Professional exams
- Fellow surveyors and mentors
- Associations continuing education



School curricula must be updated regularly to reflect changes in technology, and classrooms need to have access to new, expensive technology if students are to get proper hands-on experience. Both of those factors can be difficult to ensure.

Professional exams like the CST have the potential to be incredibly timely and helpful, but the exams are expensive to take, and the certification is pricey to keep active. A useful exam also relies on up-to-date test banks that reflect the work that is going on in the modern survey industry.

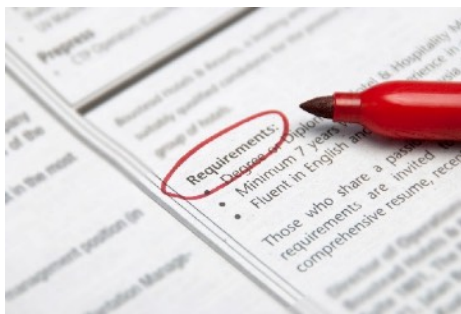
Finally, mentoring on the job is difficult in an era of one-man survey crews. To truly help our workforce progress and prepare for licensure, we need to be able to train them on both the latest tech and pass down wisdom from older surveyors to younger surveyors.

Some firms are raising their prices solely for the purpose of creating 3-man-crews so that they can adequately train new green talent.

Other resources like Mentoring Mondays, Roundtable Tuesdays, and Wisdom Wednesdays seek to fill the training and mentoring void in our profession by bringing professionals together virtually to learn about timely topics.

In the era of emerging tech, it's also a great time to double down on collaboration and cross-pollination between industries and professionals, such as IRWA and GIS professionals.

### Threat #4: Inconsistent Education Requirements



Another perceived threat to our profession is education requirements—or lack thereof.

Currently, states vary between requiring a four-year degree, 2-year degree, experience, or some combination of education and experience to become a licensed surveyor.

There's no question that education is important to do our jobs well, but it is a question of whether that education should take the shape of a formal degree or more abbreviated professional training and certifications.

Right now, it's unclear whether formal degree requirements help or hurt our profession. Both states that do and do not require degrees have seen drops in the number of surveyors getting licensed each year.

It is a notable fact that the average age that a surveyor becomes licensed is approximately 38 years old. In other words, it's often a "later in life" career. The big question is, how many of these potential licensees that likely do not want to go back to school at 38 years old are we losing by requiring a degree?

One surveyor cited that he has roughly half a dozen people at his firm with 25+ years of experience. At this point in their life, they're not planning to go back and obtain a bachelor's degree. But they may certainly be interested in an alternate path to licensure that centers on increased experience rather than a degree.

The final issue with degree requirements stems from the fact that the higher education survey programs is that the ecosystem is at risk. We have a lack of Ph.D. candidates to serve as professors. Nevada's Great Basin program has been seeking a second professor in order to become accredited for over 10 years, without success. And in some cases, existing accredited survey programs are getting cut due to low enrollment.

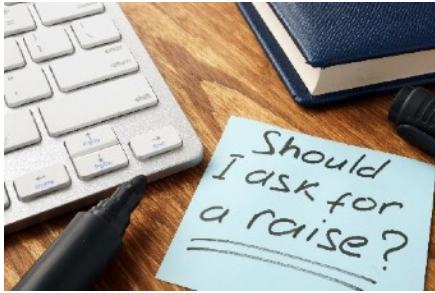
Again, there is no argument here against the value of education. All surveyors benefit greatly from technical courses, boundary classes, and business and communication classes. The question is simply how is the requirement of a



degree for licensure impacting our numbers and the profession. Is it a threat and if so, what is the education-plus-experience recipe for success when it comes to becoming a licensed land surveyor?

We need clearer national standards in order to cultivate a unified voice and enhance public perception of our profession.

## Threat #5: Perceptions of Pay and Advancement



Finally, there is one benchmark that can deter or attract talent to any profession: the perceived ability to make good money and advance your career.

In the current climate of high-demand surveying, there is no reason that firms should not be charging premium rates and paying their employees accordingly. In truth, engineers and surveyors should be paid fairly on par with one another. At Caltrans, surveyors get paid the same rate as the engineers. We need to combat the perception that engineering is a superior career pathway simply because engineers make more money.

Young professionals also want to see a clear path to progression once they enter an industry. They may not expect overnight success, but they do want to know the steps that will take them from step A to B.

While small firms with slow staff turnover may not be able to guarantee quick progression, firms of all sizes can still do things like let new surveyors master equipment sooner, encourage them to attend conferences and professional events, and pay them appropriately.

It boils down to providing the type of working environment and support that allows individuals to feel like true members of the profession rather than just button-pushers. If we can do that for both current and potential employees, we will have a good shot at protecting and enhancing our beloved profession.

### ***About the Author***



Trent Keenan, PLS, WRS, CFedS. Trent's surveying career started when he was 19 and now spans over twenty-five (26) years, including ten (10) years in the public sector working for a large utility company, and fifteen (16) years in the private sector, with 14 of the 16 years being the President / Founder of Diamondback Land Surveying. He has served through all officers positions of both the Southern Chapter and State Association of NALS (Nevada Association of Land Surveyors), received the Meritorious Service Award for NALS in 2013, and was honored as the NALS Surveyor of the Year (2015) as well as receiving the NALS Von Schmidt Award in 2021. He is a past-President of NALS (2015), Current, Editor of The Nevada Traverse Publication (NALS), Current Secretary/ Treasurer for the WestFed (The Western Federation of Professional Surveyors ) Board and current Director from NALS, Current Treasurer on The Nevada Land Surveyors Education Foundation Board (NLSEF), Current Vice President on the Southern Nevada Chapter of the NALS, Moderator/ Facilitator/ Founder of Mentoring Mondays for the Land Surveying Profession as well as Wisdom Wednesdays, and a proud sponsor and brand ambassador for Get Kids Into Survey (GKiS). He is currently licensed in 5 Western States (Arizona, California, Nevada, Utah & Washington). He is also a Certified Federal Surveyor and a Nevada Water Rights Surveyor. He has been an active board member in NALS since 2007 and a regular member since 1997.