

Surveying Faces Workforce Challenges

Despite high satisfaction rates and good compensation, surveying struggles to attract new talent.

By Perry A. Trunick

Compensation comes in many forms. If we can borrow from the old cliché of, “If you love what you do, you never work a day in your life,” land surveyors are among the most highly compensated professionals. Allowing for a little statistical margin for error, three quarters of land surveyors expressed the highest levels of job satisfaction in the last four *POB* studies of salaries and benefits.

Satisfaction doesn't pay the bills, so what are some of the specifics we were able to measure in the *Salary & Benefits Study 2015-2018*? The study was conducted by

POB and BNP Market Research in March 2018 and includes historical data back to 2015. Salary trends over the period show some shifts and changes, but over 20 percent of respondents have reported salaries of \$100,000 or more in the last three study years. In the 2015 study, salary distribution was dramatically different. For that study period, respondents were clustered in the \$60,000 to \$89,999 ranges, with 51 percent reporting salaries in that range. In the three subsequent study years, that percentage dropped to 41 to 42 percent, and the ranges of \$90,000 to over \$100,000 grew from 17 percent in 2015 to around 30 percent in the following three periods.

SALARIES OVER TIME - 2018 VS 2015

	2018	2015
\$100,000 or more	21%	11%
\$90,000 to \$99,999	11%	6%
\$80,000 to \$89,999	16%	16%
\$70,000 to \$79,999	16%	18%
\$60,000 to \$69,999	10%	17%
\$50,000 to \$59,999	9%	13%
Below \$50,000	17%	19%

Over the comparison period of the latest report, salaries for land surveyors have grown.

There are a couple of ways to explain the change from 2015, but a significant salary increase may not be one of them. Asked how salaries had changed in the current year and the year prior to the study, respondents in 2015 said “about the same” to “slightly higher.” The percentages were 38 percent for “about the same” and 44 percent for “slightly higher.” The number reporting significantly higher salaries has consistently been around 8 percent in each of the studies from 2015 to the current 2018 study. The mean percentage for salary increases was 11 percent for the reports in 2015, 2016 and 2017, and 8 percent in 2018.

Age and experience have certainly contributed to the rising fortunes of land surveyors. For the 2015 report, 43 percent reported having 30 or more years of experience. In the 2018 period, that number had risen to 62 percent. As many of the surveyors ticked over that 30-year mark, moving from the category of 15 to 29 years, quite a few also moved from five to 14 years of experience into the 15-year bracket. Since then, the shifts have been a little less dramatic.

The same can't be said for the age of respondents. The average age of land surveyors responding to the study in 2015 was 52. That increased by one year in 2016 and 2017, but there was a jump in

2018 as the average reached 57. The age category that seems to be losing or not gaining is under 35 years old. In 2015, 24 percent of respondents were 36 to 45 years old. By 2018, that number was halved to 12 percent. In the 26- to 35-year-old age group, the drop was more dramatic – from 11 percent in 2015 to three percent in 2018. This can't be explained by simply the march of time. The numbers support the observation that fewer young people are entering the profession.

OTHER FORMS OF COMPENSATION

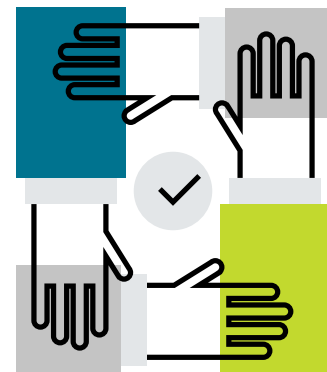
Company-paid and shared-cost benefits are important elements of any compensation package. Over half of respondents' employers offer life and/or dental insurance, while three-quarters offer health

insurance. The percentage of respondents who say health insurance is entirely company-paid dropped from the 2017 report to the 2018 study period. The same is true of life insurance and dental cover-

AVERAGE SALARY (MEAN)

2018	\$77,607
2017	\$79,570
2016	\$80,603
2015	\$70,443

Year-to-year comparisons of salaries show some volatility, though the mean average of salaries in 2018 shows a 10 percent rise over four years.



BENEFITS – WHO PAYS?

	Employee-Paid	Jointly-Paid	Employer-Paid
Health Insurance	7%	74%	19%
Life Insurance	16%	50%	34%
Vision Insurance	17%	68%	15%
Dental Insurance	13%	73%	13%
Paid Vacation	20%	1%	79%
Paid Sick Leave	22%	3%	74%
Company Vehicle	19%	12%	69%
Fuel Allowance	23%	13%	65%
Profit Sharing	15%	24%	61%
Continuing Education	19%	24%	58%
Retirement Plan	8%	76%	16%

HIGHEST LEVEL OF EDUCATION

	2018	2015
High School Diploma	18%	17%
Associate Degree	28%	32%
Bachelor's Degree	44%	44%
Master's or PhD	10%	7%

Education levels appear to show a subtle shift towards more higher-level degrees.



age. Retirement plans were the only benefit showing an increase in the employer-funded category. In most cases, except

healthcare, the number of benefits that are fully employee-paid increased. The gain there for employees was in plans that are partially employer funded.

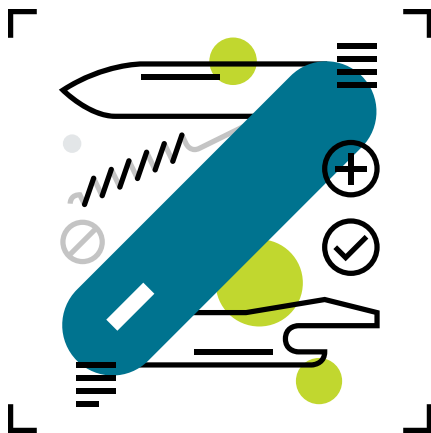
EDUCATION AND TRAINING

Licensing requirements vary by state, with some states requiring a bachelor's degree along with professional qualifications. Professional development hours (PDH) or continuing education credits are another factor in maintaining a professional surveying license once it is earned.

Overall, in the span of the years covered in the current study, education levels have remained pretty close. But, when 2017 results are compared with 2018,

there's a little more movement towards higher degrees. For instance, the percentage of land surveyors reporting bachelor's degrees is the same in 2015 and 2018, but from 2017 to 2018, the number increased five percent. Those with a master's degree or doctorate increased from seven percent in 2015 to 11 percent in 2016, falling back to seven percent in 2017, and rising again to 10 percent in 2018.

Licenses remain an important factor with over 80 percent of respondents reporting holding at least one license. Most are licensed professional surveyor or equivalent, but the number of engineers has shown a steady increase over the last three study periods. From nine percent in



TYPES OF WORK PERFORMED

	2018	2015
Boundary Surveying	83%	79%
GPS Surveying	72%	74%
Construction Site Surveying	70%	68%
Cadastral or Topographic Surveying	63%	69%
Civil Engineering	53%	59%
GPS Mapping	41%	46%
Geodetic Surveying	30%	38%
Cartography/Map Making	29%	37%
Hydrographic Surveying	24%	24%
Water/Wastewater Management	22%	26%

The top 10 types of work performed by respondents is consistent, while there are mostly subtle shifts in the numbers within the group.



2016, the number of engineering licenses among respondents has increased to 14 percent. The number of state licenses has remained at a consistent mean of two states, but there has been a little movement within the results. Half of respondents (53 percent) are licensed in one state. The number of respondents licensed in two states increased from 15 percent in 2017 to 19 percent in 2018. This matches the number in 2015.

The types of work performed by respondents varies, and year by year, it will change with market demands. This means comparing one year to the next may show a change, but it is difficult to call it a trend. Even plotting multiple years won't usually show a steady pattern (unless that pattern is up-down-up-down or up, up, down, up). Can a comparison of 2015 vs. 2018 offer any better insight on a trend? Boundary surveying is up, while GPS surveying and construction site surveying are down slightly when viewed over that span. In fact, that may not be the trend.

Viewed from the perspective of a single year, nearly all of the core types of work performed by land surveyors dropped. Yet, when describing bonuses, respondents cited company profit or success in 89 percent of the cases and improved economy in 40 percent (multiple answers were allowed). On top of that, those two drivers increased their percentages from 2017 to 2018. It may not be more types of work that are driving improvements, but more work in general. For some, this might mean focusing more on construc-

tion site surveying while others focused more on boundary surveys.

There's not a lot of drama within or among the numbers (though hydrographic surveying did increase from 17 percent to 24 percent from 2017 to 2018 in the types of work reported.) Even UAS/aerial imaging, a new category added in 2017, remained steady at 16 percent. So, there doesn't appear to be a rush away from any one category and into another. Instead, the numbers probably indicate the market of the moment and will always fluctuate, while the top 10 categories of work remain essentially the same.

SPEAKING CANDIDLY

In the anecdotal portion of the 2018 study, respondents had an opportunity to describe changes they had made to address business conditions. While unfortunately some said they had downsized, most answers focused on acquiring or upgrading technology. This included UAVs. Others expanded by adding people, branches or acquiring another business they had previously partnered with.

When it comes to challenges, there are a lot of ways to say it, but the central theme is workforce. Either there are not enough workers available, there are too

few qualified workers, the available workers are insufficiently trained or the tight labor market is driving up the cost to hire. Next comes retaining good workers and expanding their skills and knowledge. A consequence of all of this is expressed by the frustration many have with trying to keep up with their workload or decide which projects to take and which to turn down.

Technology has, and will continue to, improve productivity. This may help a little on the workforce front if a surveyor can afford the technology and the skill set required. In fact, respondents cited nearly every new and existing technology in land surveying as having a significant impact and providing future benefit.

The story behind compensation in land surveying continues to go beyond simple dollars and cents. There will always be volatility in the markets, but there is growth opportunity lurking somewhere. Surveyors continue to report a high satisfaction with their work, and they have demonstrated a willingness to stick around. Even longtime veterans are excited about picking up new technologies. And, almost without exception, surveyors reflect not only a willingness, but a desire to pass along the knowledge and skills that will help the profession grow. ●

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