

2019 APEGS Salary Survey Summary Results

The Association of Professional Engineers and Geoscientists of Saskatchewan (APEGS) contacted 5,923 Professional Engineers, Professional Geoscientists, Engineers-in-Training, Geoscientists-in-Training and Licensees living in Saskatchewan. A total of 1,923 members completed the survey representing a 32.5 % response rate. Surveys were completed in March and April 2019 and salaries reported were as at December 31, 2018. Inshtrix Research Inc. compiled and tabulated all results. The detailed report, which includes analysis by gender, can be found on the APEGS web site at <http://www.apegs.ca/Portal/Pages/salary-survey>

The main goals of the survey are:

- to provide information to all members regarding monetary compensation for different levels of responsibility and advanced degrees;
- to provide information to employers to assist them in establishing appropriate pay levels for recent graduates and ensuring competitive compensation packages for experienced professionals; and
- to give students, career counsellors and other interested persons information on employment, including salaries, in the engineering and geoscience professions in Saskatchewan.

Annual Salary by Final Year of Graduation (B.Sc.)

| | Count | Column N % | Mean | Percentile 05 | Percentile 25 | Median | Percentile 75 | Percentile 95 |
|--------------|-------|------------|-----------|---------------|---------------|-----------|---------------|---------------|
| 1976 & Prior | 22 | 1.2% | \$142,977 | \$40,000 | \$105,000 | \$138,638 | \$176,000 | \$223,400 |
| 1977* | | | | | | | | |
| 1978* | | | | | | | | |
| 1979* | | | | | | | | |
| 1980 | 10 | 0.5% | \$116,756 | \$10 | \$82,636 | \$127,255 | \$170,000 | \$195,000 |
| 1981* | | | | | | | | |
| 1982 | 13 | 0.7% | \$148,035 | \$90,000 | \$105,000 | \$150,000 | \$173,000 | \$260,107 |
| 1983 | 15 | 0.8% | \$155,230 | \$24,000 | \$135,307 | \$162,867 | \$182,400 | \$285,000 |
| 1984 | 11 | 0.6% | \$151,992 | \$60,000 | \$110,000 | \$140,000 | \$210,000 | \$245,000 |
| 1985 | 13 | 0.7% | \$158,379 | \$90,000 | \$110,000 | \$127,000 | \$198,500 | \$255,000 |
| 1986 | 16 | 0.9% | \$147,568 | \$79,000 | \$107,250 | \$152,500 | \$174,645 | \$239,000 |
| 1987 | 24 | 1.3% | \$146,365 | \$86,000 | \$115,500 | \$147,955 | \$170,000 | \$212,000 |
| 1988 | 24 | 1.3% | \$155,933 | \$93,000 | \$131,250 | \$152,945 | \$184,096 | \$240,000 |
| 1989 | 21 | 1.2% | \$135,177 | \$93,000 | \$105,000 | \$138,000 | \$155,000 | \$180,000 |
| 1990 | 20 | 1.1% | \$124,382 | \$37,700 | \$92,000 | \$123,300 | \$166,000 | \$189,602 |
| 1991 | 20 | 1.1% | \$141,102 | \$44,850 | \$114,250 | \$137,000 | \$163,750 | \$219,250 |
| 1992 | 10 | 0.5% | \$131,042 | \$53,500 | \$120,000 | \$134,000 | \$152,000 | \$188,921 |
| 1993 | 15 | 0.8% | \$134,232 | \$51,000 | \$119,508 | \$135,000 | \$161,235 | \$208,000 |
| 1994 | 22 | 1.2% | \$142,582 | \$75,000 | \$100,000 | \$141,567 | \$173,000 | \$203,000 |
| 1995 | 27 | 1.5% | \$136,307 | \$45,806 | \$104,000 | \$133,600 | \$180,000 | \$210,000 |
| 1996 | 24 | 1.3% | \$154,324 | \$102,500 | \$121,250 | \$153,835 | \$182,250 | \$210,000 |
| 1997 | 27 | 1.5% | \$129,047 | \$85,060 | \$102,820 | \$129,100 | \$147,000 | \$200,000 |
| 1998 | 22 | 1.2% | \$117,556 | \$52,000 | \$100,000 | \$113,709 | \$145,000 | \$180,000 |
| 1999 | 43 | 2.4% | \$126,898 | \$70,000 | \$105,000 | \$120,000 | \$146,400 | \$192,000 |
| 2000 | 36 | 2.0% | \$120,269 | \$58,200 | \$93,750 | \$116,250 | \$143,750 | \$190,605 |
| 2001 | 49 | 2.7% | \$124,824 | \$62,000 | \$102,000 | \$125,000 | \$145,000 | \$180,000 |
| 2002 | 47 | 2.6% | \$120,582 | \$74,000 | \$104,212 | \$120,000 | \$148,000 | \$165,000 |
| 2003 | 49 | 2.7% | \$121,946 | \$82,500 | \$107,120 | \$119,000 | \$136,140 | \$177,070 |
| 2004 | 58 | 3.2% | \$117,687 | \$75,000 | \$87,000 | \$120,750 | \$135,150 | \$175,000 |
| 2005 | 67 | 3.7% | \$110,066 | \$54,400 | \$93,845 | \$110,000 | \$130,000 | \$155,709 |
| 2006 | 50 | 2.7% | \$100,790 | \$26,623 | \$89,000 | \$103,500 | \$120,000 | \$149,400 |
| 2007 | 85 | 4.7% | \$111,022 | \$80,000 | \$94,259 | \$105,000 | \$126,822 | \$154,000 |
| 2008 | 86 | 4.7% | \$104,617 | \$75,000 | \$91,500 | \$100,000 | \$120,000 | \$147,000 |
| 2009 | 86 | 4.7% | \$98,886 | \$70,000 | \$87,000 | \$97,750 | \$105,000 | \$155,000 |
| 2010 | 89 | 4.9% | \$98,344 | \$50,000 | \$85,000 | \$98,000 | \$108,000 | \$148,000 |
| 2011 | 83 | 4.6% | \$95,043 | \$55,000 | \$81,900 | \$92,000 | \$105,000 | \$138,000 |
| 2012 | 116 | 6.4% | \$85,674 | \$65,000 | \$75,125 | \$85,000 | \$95,000 | \$117,000 |
| 2013 | 92 | 5.1% | \$82,654 | \$56,000 | \$73,125 | \$81,259 | \$93,675 | \$115,000 |
| 2014 | 97 | 5.3% | \$79,942 | \$55,000 | \$70,000 | \$79,000 | \$89,551 | \$108,000 |
| 2015 | 91 | 5.0% | \$74,056 | \$58,240 | \$65,000 | \$70,000 | \$82,500 | \$96,000 |
| 2016 | 74 | 4.1% | \$68,453 | \$51,000 | \$60,900 | \$65,779 | \$77,000 | \$87,443 |
| 2017 | 71 | 3.9% | \$69,958 | \$48,000 | \$60,000 | \$65,280 | \$75,000 | \$103,500 |
| 2018 | 74 | 4.1% | \$64,992 | \$50,500 | \$60,000 | \$63,000 | \$68,000 | \$89,600 |

*Not available due to reporting rules (insufficient data)

Annual Salary by Designation

| | Count | Column N % | Mean | Percentile 05 | Percentile 25 | Median | Percentile 75 | Percentile 95 |
|--------------------------|-------|------------|-----------|---------------|---------------|-----------|---------------|---------------|
| P.Eng. | 1,172 | 64.3% | \$118,403 | \$75,000 | \$92,699 | \$110,000 | \$138,000 | \$188,921 |
| P.Geo. | 85 | 4.7% | \$121,628 | \$71,760 | \$92,000 | \$115,000 | \$150,000 | \$190,000 |
| P.Eng. and P.Geo | 16 | 0.9% | \$122,715 | \$82,500 | \$96,375 | \$108,550 | \$146,500 | \$196,000 |
| Engineering License | 14 | 0.8% | \$113,360 | \$62,000 | \$86,794 | \$107,500 | \$130,000 | \$170,000 |
| Engineer-in-Training | 501 | 27.5% | \$72,365 | \$50,000 | \$62,400 | \$69,600 | \$80,000 | \$104,000 |
| Geoscientist-in-Training | 34 | 1.9% | \$85,906 | \$50,000 | \$73,000 | \$82,500 | \$96,000 | \$138,000 |
| Geo Licensee* | | | | | | | | |

Annual Salary by Discipline

| | Count | Column N % | Mean | Percentile 05 | Percentile 25 | Median | Percentile 75 | Percentile 95 |
|--------------------|-------|------------|-----------|---------------|---------------|-----------|---------------|---------------|
| Ag/Forestry | 47 | 2.6% | \$100,033 | \$60,000 | \$72,000 | \$85,000 | \$112,000 | \$200,000 |
| Biolog/Biomed* | | | | | | | | |
| Chem/Ceramic/Metal | 83 | 4.6% | \$105,590 | \$58,500 | \$80,000 | \$95,680 | \$135,000 | \$179,000 |
| Civil | 389 | 21.4% | \$99,212 | \$58,000 | \$73,065 | \$94,000 | \$115,000 | \$169,800 |
| Elec/Eng Physics | 262 | 14.4% | \$107,617 | \$62,000 | \$82,000 | \$100,423 | \$131,000 | \$165,000 |
| Environmental | 132 | 7.2% | \$97,119 | \$56,000 | \$73,836 | \$92,700 | \$112,863 | \$164,580 |
| Geo/Mining/Petro | 188 | 10.3% | \$117,427 | \$66,000 | \$88,125 | \$106,000 | \$142,375 | \$200,000 |
| Geosciences | 95 | 5.2% | \$108,462 | \$63,750 | \$84,000 | \$101,000 | \$130,000 | \$170,000 |
| Mech/Ind | 409 | 22.4% | \$106,849 | \$58,000 | \$77,900 | \$100,000 | \$128,000 | \$183,547 |
| Software Eng | 38 | 2.1% | \$91,237 | \$56,100 | \$74,200 | \$84,750 | \$95,540 | \$160,000 |
| Other | 172 | 9.4% | \$107,153 | \$50,000 | \$75,850 | \$101,000 | \$129,225 | \$190,000 |

Annual Salary by Function

| | Count | Column N % | Mean | Percentile 05 | Percentile 25 | Median | Percentile 75 | Percentile 95 |
|------------------------|-------|------------|-----------|---------------|---------------|-----------|---------------|---------------|
| Corp Mgmt | 138 | 7.6% | \$153,215 | \$95,000 | \$120,000 | \$147,000 | \$173,000 | \$255,000 |
| Project/Op Mgmt | 681 | 37.4% | \$111,330 | \$63,000 | \$85,000 | \$104,000 | \$135,000 | \$180,000 |
| Project Admin | 45 | 2.5% | \$88,424 | \$58,000 | \$67,000 | \$85,000 | \$102,000 | \$143,000 |
| Design | 389 | 21.3% | \$89,324 | \$56,000 | \$70,000 | \$84,420 | \$102,000 | \$142,500 |
| Research/Planning | 124 | 6.8% | \$94,207 | \$42,000 | \$73,250 | \$88,729 | \$120,000 | \$150,000 |
| Inspec/Quality Control | 52 | 2.9% | \$83,389 | \$50,000 | \$65,104 | \$76,000 | \$98,584 | \$158,000 |
| Operating/Maintenance | 151 | 8.3% | \$106,501 | \$62,400 | \$83,135 | \$103,500 | \$125,000 | \$153,384 |
| Teaching | 27 | 1.5% | \$140,373 | \$81,900 | \$93,000 | \$146,400 | \$181,383 | \$217,000 |
| Marketing/Sales | 23 | 1.3% | \$84,200 | \$41,000 | \$60,000 | \$82,500 | \$104,000 | \$122,166 |
| Reg Approvals | 66 | 3.6% | \$91,713 | \$64,600 | \$79,000 | \$90,000 | \$100,750 | \$130,000 |
| Exploration | 44 | 2.4% | \$98,104 | \$62,376 | \$75,140 | \$91,500 | \$109,000 | \$170,000 |
| Other | 82 | 4.5% | \$96,972 | \$45,900 | \$65,000 | \$92,971 | \$120,000 | \$161,500 |

*Not available due to reporting rules (insufficient data)

Annual Salary by Industry

| | Count | Column N % | Mean | Percentile 05 | Percentile 25 | Median | Percentile 75 | Percentile 95 |
|---------------------------|-------|------------|-----------|---------------|---------------|-----------|---------------|---------------|
| Consulting | 434 | 23.8% | \$100,384 | \$58,000 | \$71,760 | \$93,406 | \$120,000 | \$179,000 |
| Resource Oil & Gas | 94 | 5.2% | \$108,739 | \$63,000 | \$85,000 | \$99,900 | \$130,000 | \$172,000 |
| Resource Except Oil & Gas | 289 | 15.9% | \$121,249 | \$73,000 | \$95,000 | \$115,000 | \$142,500 | \$200,000 |
| Procurement/Construction | 146 | 8.0% | \$96,018 | \$58,000 | \$72,000 | \$87,000 | \$110,000 | \$160,000 |
| Manufacture Durables | 187 | 10.3% | \$88,920 | \$55,000 | \$65,211 | \$83,000 | \$103,950 | \$159,000 |
| Manufacture Non-Durables | 61 | 3.3% | \$120,719 | \$58,200 | \$91,000 | \$107,100 | \$144,000 | \$187,500 |
| Service For Profit | 37 | 2.0% | \$89,692 | \$56,000 | \$70,720 | \$84,000 | \$100,645 | \$155,000 |
| Service Not For Profit | 157 | 8.6% | \$99,420 | \$62,500 | \$80,000 | \$95,500 | \$112,000 | \$152,955 |
| Utilities | 270 | 14.8% | \$112,932 | \$64,000 | \$85,500 | \$109,710 | \$136,140 | \$175,000 |
| Educational Services | 60 | 3.3% | \$121,460 | \$29,650 | \$84,299 | \$98,962 | \$167,318 | \$223,080 |
| Agriculture and Forestry | 24 | 1.3% | \$91,244 | \$52,000 | \$68,088 | \$79,250 | \$101,500 | \$165,000 |
| Other | 63 | 3.5% | \$96,778 | \$50,000 | \$72,000 | \$92,000 | \$120,000 | \$155,000 |

Annual Salary by Degrees

| | Count | Column N % | Mean | Percentile 05 | Percentile 25 | Median | Percentile 75 | Percentile 95 |
|-------------------|-------|------------|-----------|---------------|---------------|-----------|---------------|---------------|
| Bachelor's Degree | 1279 | 70.2% | \$102,152 | \$58,000 | \$75,000 | \$95,000 | \$120,000 | \$170,000 |
| ... | 177 | 9.7% | \$111,041 | \$63,000 | \$86,000 | \$104,000 | \$135,000 | \$180,000 |
| Master's Degree | 266 | 14.6% | \$108,737 | \$56,000 | \$80,000 | \$99,774 | \$130,000 | \$187,500 |
| ... | 25 | 1.4% | \$121,239 | \$53,500 | \$87,000 | \$104,000 | \$154,000 | \$243,202 |
| Doctorate Degree | 75 | 4.1% | \$127,624 | \$47,000 | \$87,000 | \$131,800 | \$165,000 | \$206,873 |

Annual Salary by Experience

| | Count | Column N % | Mean | Percentile 05 | Percentile 25 | Median | Percentile 75 | Percentile 95 |
|-------------|-------|------------|-----------|---------------|---------------|-----------|---------------|---------------|
| <1 year | 79 | 4.3% | \$70,260 | \$50,000 | \$59,000 | \$64,604 | \$73,000 | \$123,800 |
| 1 year | 37 | 2.0% | \$64,882 | \$24,000 | \$56,100 | \$65,000 | \$72,100 | \$100,000 |
| 1.5 years | 67 | 3.7% | \$68,649 | \$48,000 | \$60,000 | \$65,000 | \$78,500 | \$105,000 |
| 2 years | 79 | 4.3% | \$72,665 | \$51,000 | \$62,000 | \$68,000 | \$81,476 | \$110,000 |
| 3 years | 106 | 5.8% | \$76,113 | \$58,000 | \$65,000 | \$72,000 | \$83,416 | \$106,600 |
| 4 years | 104 | 5.7% | \$78,725 | \$56,000 | \$68,625 | \$75,000 | \$87,617 | \$104,000 |
| 5 years | 108 | 5.9% | \$86,845 | \$63,000 | \$75,000 | \$84,000 | \$95,845 | \$125,000 |
| 6 years | 113 | 6.2% | \$87,444 | \$65,000 | \$75,800 | \$84,000 | \$94,000 | \$118,000 |
| 7-8 years | 192 | 10.5% | \$96,439 | \$70,720 | \$85,000 | \$95,070 | \$105,000 | \$130,000 |
| 9-10 years | 167 | 9.2% | \$104,248 | \$75,000 | \$89,482 | \$100,000 | \$114,686 | \$151,000 |
| 11-12 years | 153 | 8.4% | \$114,019 | \$76,764 | \$96,900 | \$114,500 | \$130,000 | \$154,000 |
| 13-14 years | 111 | 6.1% | \$118,096 | \$86,000 | \$102,000 | \$115,000 | \$132,000 | \$160,000 |
| 15-17 years | 130 | 7.1% | \$133,386 | \$83,000 | \$110,000 | \$128,250 | \$154,000 | \$190,000 |
| 18-20 years | 98 | 5.4% | \$131,574 | \$83,000 | \$105,800 | \$126,995 | \$146,400 | \$210,000 |
| 21-24 years | 86 | 4.7% | \$144,005 | \$86,000 | \$117,000 | \$145,000 | \$170,000 | \$206,500 |
| 25+ years | 192 | 10.5% | \$150,667 | \$87,000 | \$120,000 | \$150,000 | \$173,750 | \$240,000 |

Annual Salary by Sector

| | Count | Column N % | Mean | Percentile 05 | Percentile 25 | Median | Percentile 75 | Percentile 95 |
|----------------|-------|------------|-----------|---------------|---------------|----------|---------------|---------------|
| Public Sector | 603 | 100.0% | \$106,574 | \$62,500 | \$81,229 | \$99,800 | \$125,000 | \$175,000 |
| Private Sector | 1,205 | 100.0% | \$105,938 | \$57,000 | \$75,000 | \$96,563 | \$126,900 | \$180,000 |

Total Salary (full time positions)

| | Count | Column N % | Mean | Percentile 05 | Percentile 25 | Median | Percentile 75 | Percentile 95 |
|--------------------|-------|------------|-----------|---------------|---------------|-----------|---------------|---------------|
| Base Salary | 1,822 | 95.8% | \$105,287 | \$58,182 | \$78,000 | \$97,500 | \$126,000 | \$179,000 |
| Salary incl. bonus | | | \$127,247 | \$61,000 | \$84,840 | \$110,000 | \$154,000 | \$251,200 |

*Not available due to reporting rules (insufficient data)

Salary Changes - Full-Time Positions

| | median | % increase | mean | % increase |
|------|----------|------------|-----------|------------|
| 1987 | \$48,000 | | \$49,269 | |
| 1989 | \$50,928 | 6.10% | \$62,887 | 27.64% |
| 1991 | \$54,110 | 6.25% | \$57,578 | -8.44% |
| 1993 | \$54,480 | 0.68% | \$56,703 | -1.52% |
| 1995 | \$56,400 | 3.52% | \$59,142 | 4.30% |
| 1997 | \$60,000 | 6.38% | \$62,266 | 5.28% |
| 1999 | \$62,500 | 4.17% | \$65,401 | 5.03% |
| 2001 | \$66,000 | 5.60% | \$68,877 | 5.31% |
| 2003 | \$68,800 | 4.24% | \$71,210 | 3.39% |
| 2005 | \$71,008 | 3.21% | \$73,607 | 3.37% |
| 2007 | \$74,000 | 4.21% | \$77,374 | 5.12% |
| 2008 | \$76,352 | 3.18% | \$83,025 | 7.30% |
| 2009 | \$80,000 | 4.78% | \$86,908 | 4.68% |
| 2010 | \$82,950 | 3.69% | \$91,548 | 5.34% |
| 2011 | \$84,224 | 1.54% | \$91,154 | -0.43% |
| 2012 | \$89,472 | 6.23% | \$96,219 | 5.56% |
| 2013 | \$90,000 | 0.59% | \$98,030 | 1.88% |
| 2014 | \$94,500 | 5.00% | \$102,475 | 4.53% |
| 2015 | \$97,000 | 2.65% | \$105,111 | 2.57% |
| 2016 | \$96,000 | -1.03% | \$104,628 | -0.46% |
| 2017 | \$97,000 | 1.04% | \$107,130 | 2.39% |
| 2018 | \$96,485 | -0.53% | \$104,743 | -2.23 |
| 2019 | \$97,500 | 1.05% | \$107,287 | 2.43 |

Regression Analysis

A stepwise linear regression was used to find the best model for predicting salaries for engineers and geoscientists working in different industries. This process was used to:

- Identify key factors which predict salary as well as factors which are not related to salary
- Make the results independent of the different scales used to measure each factor
- Identify Boolean components (such as receipt of professional designation) influencing salary
- Create a linear formula with as much predictive power as possible

An overall formula was also produced which members of APEGS can easily use to estimate their salary. The formula for 2018 explains about 57 percent (57.2%) of variance in salary. Any model explaining at least 50% of the variance in the dependent variable can be considered an effective model. B-values are the raw numerical coefficients of each variable. Since the scales for each variable are different, the beta values are a better measure of relative importance of factors within the model. Refer to the "Classification Rating Guide", which can be found on www.apegs.ca, to determine the values for each factor.

| Factor | B (Coefficient) | Relative importance (Beta) |
|---|-----------------|----------------------------|
| (Constant) | 46481 | |
| Duties (A) | 127 | 0.196 |
| Experience (C) | 342 | 0.325 |
| Leadership Authority and/or Supervision Exercised (F) | 151 | 0.113 |
| Supervision Scope (G) | 784 | 0.200 |
| Receipt of professional designation | 10739 | 0.123 |

To calculate the approximate projected salary, input the points for each variable in the following formula:

Formula for expected salary (SE) without bonus:

$$SE = 46,481 + 127*A + 342*C + 151*F + 784*G$$

Add 10,739 if you have acquired professional status within your field (P.Eng. or P.Geo.)