

2018 APEGS Salary Survey Summary Results

The Association of Professional Engineers and Geoscientists of Saskatchewan (APEGS) contacted 6,103 Professional Engineers, Professional Geoscientists, Engineers-in-Training, Geoscientists-in-Training and Licensees living in Saskatchewan. A total of 2,270 members completed the survey representing a 37.2% response rate. Surveys were completed in March and April 2018 and salaries reported were as at December 31, 2017. 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	30	1.3%	\$143,749	\$65,000	\$105,575	\$136,500	\$185,000	\$250,000
1977*	*	*	*	*	*	*	*	*
1978	10	0.4%	\$147,150	\$61,000	\$90,000	\$137,750	\$172,000	\$290,000
1979*	*	*	*	*	*	*	*	*
1980*	*	*	*	*	*	*	*	*
1981*	*	*	*	*	*	*	*	*
1982	22	1.0%	\$138,012	\$85,000	\$105,000	\$141,250	\$162,261	\$185,000
1983	16	0.7%	\$156,124	\$60,000	\$111,250	\$156,000	\$200,478	\$250,000
1984	16	0.7%	\$149,672	\$84,000	\$106,500	\$148,000	\$176,500	\$235,000
1985	18	0.8%	\$150,907	\$35,000	\$102,100	\$130,000	\$200,000	\$275,000
1986	20	0.9%	\$140,458	\$81,100	\$103,686	\$135,000	\$177,500	\$201,750
1987	30	1.3%	\$150,174	\$96,000	\$115,000	\$149,688	\$174,700	\$203,000
1988	21	0.9%	\$139,281	\$73,000	\$125,000	\$145,000	\$168,000	\$186,000
1989	24	1.1%	\$135,604	\$73,000	\$100,118	\$148,500	\$163,750	\$196,000
1990	21	0.9%	\$137,764	\$93,000	\$110,000	\$133,548	\$159,000	\$190,000
1991	19	0.8%	\$148,588	\$55,000	\$120,000	\$134,000	\$175,500	\$270,000
1992	13	0.6%	\$140,463	\$1,000	\$110,000	\$149,000	\$184,217	\$224,000
1993	23	1.0%	\$140,234	\$85,000	\$96,000	\$143,000	\$160,000	\$200,000
1994	32	1.4%	\$135,797	\$65,000	\$95,250	\$135,500	\$171,000	\$244,000
1995	36	1.6%	\$131,151	\$10,000	\$104,000	\$129,000	\$168,750	\$200,000
1996	30	1.3%	\$136,897	\$84,900	\$105,000	\$142,000	\$161,570	\$200,000
1997	37	1.6%	\$128,676	\$75,000	\$108,000	\$125,000	\$154,000	\$196,000
1998	32	1.4%	\$120,573	\$65,000	\$100,830	\$120,027	\$134,000	\$178,000
1999	43	1.9%	\$132,357	\$92,900	\$102,000	\$123,000	\$143,100	\$220,000
2000	48	2.1%	\$116,377	\$57,000	\$95,250	\$114,700	\$135,000	\$175,000
2001	58	2.6%	\$127,595	\$75,000	\$110,000	\$121,500	\$139,850	\$192,000
2002	52	2.3%	\$122,432	\$70,000	\$104,250	\$117,594	\$142,875	\$171,000
2003	77	3.4%	\$119,757	\$68,000	\$98,000	\$118,000	\$135,000	\$190,000
2004	60	2.7%	\$119,327	\$72,319	\$93,000	\$113,500	\$132,550	\$192,068
2005	80	3.6%	\$106,450	\$58,025	\$90,250	\$107,000	\$130,250	\$150,694
2006	71	3.2%	\$106,086	\$71,500	\$91,850	\$106,226	\$121,300	\$145,000
2007	91	4.0%	\$103,988	\$70,000	\$87,000	\$101,000	\$125,000	\$145,000
2008	106	4.7%	\$98,011	\$60,000	\$86,000	\$98,250	\$112,000	\$136,000
2009	113	5.0%	\$97,335	\$50,000	\$85,000	\$96,469	\$107,853	\$141,000
2010	110	4.9%	\$91,559	\$57,200	\$81,068	\$90,299	\$99,798	\$121,800
2011	107	4.7%	\$88,982	\$65,000	\$77,665	\$85,000	\$96,000	\$133,500
2012	161	7.1%	\$82,531	\$59,000	\$72,800	\$80,000	\$90,000	\$112,000
2013	118	5.2%	\$79,448	\$55,000	\$71,760	\$78,000	\$89,566	\$104,000
2014	108	4.8%	\$74,033	\$54,200	\$65,000	\$72,000	\$83,331	\$98,000
2015	121	5.4%	\$69,254	\$53,000	\$63,360	\$67,000	\$75,000	\$92,000
2016	82	3.6%	\$62,200	\$42,000	\$57,000	\$63,000	\$72,000	\$80,000
2017	67	3.0%	\$62,231	\$48,000	\$57,000	\$61,000	\$67,000	\$78,000

*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.	1,407	65.1%	\$117,229	\$74,500	\$91,000	\$109,000	\$135,000	\$189,800
P.Geo.	87	4.0%	\$120,647	\$70,000	\$92,000	\$113,080	\$140,000	\$210,000
P.Eng. and P.Geo.	15	0.7%	\$139,500	\$95,500	\$105,000	\$146,000	\$165,000	\$208,000
Engineering License	12	0.6%	\$118,258	\$76,000	\$97,664	\$106,620	\$154,500	\$166,000
Engineer-in-Training	606	28.0%	\$73,665	\$52,000	\$62,500	\$70,000	\$80,000	\$108,000
Geoscientist-in-Training	33	1.5%	\$80,652	\$46,500	\$70,000	\$82,000	\$93,600	\$114,000
Geo Licensee*	*	*	*	*	*	*	*	*

Annual Salary by Discipline

	Count	Column N %	Mean	Percentile 05	Percentile 25	Median	Percentile 75	Percentile 95
Civil	442	20.4%	\$98,078	\$60,000	\$73,416	\$90,000	\$112,543	\$165,000
Mech/Industrial	506	23.4%	\$106,345	\$60,000	\$77,500	\$97,400	\$129,334	\$184,000
Elec/Eng Physics	336	15.5%	\$103,848	\$62,000	\$80,000	\$98,000	\$125,000	\$162,000
Chem/Ceramic/Metal	110	5.1%	\$110,237	\$55,000	\$84,000	\$102,250	\$129,340	\$195,000
Geo/Mining/Petro Eng.	232	10.7%	\$116,319	\$62,400	\$86,000	\$103,028	\$133,000	\$198,000
Ag/Forestry	40	1.9%	\$93,285	\$53,509	\$68,475	\$81,766	\$114,220	\$174,500
Environmental	141	6.5%	\$95,321	\$56,000	\$72,000	\$90,000	\$112,000	\$161,570
Geosciences	110	5.1%	\$112,808	\$60,000	\$86,000	\$105,500	\$135,000	\$185,000
Software/Computer Eng.	50	2.3%	\$96,552	\$60,000	\$73,000	\$86,689	\$111,885	\$180,000
Biological/Biomedical*	*	*	*	*	*	*	*	*
Other	190	8.8%	\$107,270	\$55,000	\$73,000	\$100,000	\$130,000	\$210,000

Annual Salary by Function

	Count	Column N %	Mean	Percentile 05	Percentile 25	Median	Percentile 75	Percentile 95
Corp Mgmt.	164	7.6%	\$152,049	\$92,000	\$125,000	\$149,000	\$170,910	\$250,000
Project/Op. Mgmt.	814	37.7%	\$109,371	\$61,400	\$83,000	\$102,000	\$129,500	\$185,000
Project Admin.	65	3.0%	\$87,283	\$56,000	\$67,200	\$78,000	\$99,000	\$150,000
Design	488	22.6%	\$90,810	\$56,000	\$70,000	\$83,107	\$104,925	\$147,000
Research/Planning	123	5.7%	\$98,648	\$48,000	\$76,000	\$96,000	\$120,000	\$150,000
Inspect/Quality Control	59	2.7%	\$78,801	\$52,000	\$62,400	\$71,000	\$90,000	\$125,000
Operating/Maint.	197	9.1%	\$104,127	\$56,650	\$82,000	\$102,000	\$123,252	\$156,000
Teaching	36	1.7%	\$114,505	\$65,000	\$87,250	\$99,783	\$148,275	\$182,000
Marketing/Sales	27	1.2%	\$100,394	\$45,700	\$72,800	\$90,000	\$120,000	\$192,250
Reg. Approvals/Enforce	63	2.9%	\$94,415	\$62,000	\$79,000	\$92,000	\$110,000	\$135,000
Exploration	47	2.2%	\$107,266	\$70,000	\$80,000	\$95,000	\$117,000	\$185,000
Other	79	3.7%	\$93,468	\$42,473	\$72,000	\$86,378	\$116,400	\$150,000

*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 Service	479	24.0%	\$97,691	\$60,000	\$71,060	\$87,570	\$113,200	\$175,000
Oil & Gas	109	5.5%	\$97,400	\$55,000	\$75,200	\$90,000	\$116,286	\$155,000
Except Oil & Gas	369	18.5%	\$125,920	\$73,713	\$94,000	\$113,000	\$145,000	\$198,000
Procure/Const.	171	8.6%	\$102,137	\$62,400	\$72,000	\$93,000	\$120,000	\$185,000
Manufac. Durables	182	9.1%	\$89,602	\$53,857	\$67,200	\$82,350	\$109,000	\$145,000
Manufac. Non-Durables	76	3.8%	\$128,908	\$57,700	\$85,445	\$108,450	\$146,860	\$212,000
Service For Profit	29	1.5%	\$102,446	\$49,000	\$70,000	\$81,500	\$101,112	\$205,000
Service Not For Profit	148	7.4%	\$99,331	\$59,892	\$80,000	\$97,270	\$111,050	\$150,000
Utilities	265	13.3%	\$115,930	\$62,000	\$86,000	\$109,920	\$131,635	\$177,610
Educational Services	76	3.8%	\$130,817	\$40,000	\$84,180	\$125,000	\$162,144	\$203,000
Agriculture/Forestry	18	0.9%	\$79,328	\$42,000	\$63,000	\$74,062	\$93,252	\$130,000
Other	74	3.7%	\$89,508	\$24,000	\$69,000	\$85,000	\$110,000	\$159,360

Annual Salary by Degrees

	Count	Column N %	Mean	Percentile 05	Percentile 25	Median	Percentile 75	Percentile 95
Bachelor's	1455	67.3%	\$100,819	\$58,500	\$75,000	\$94,100	\$120,000	\$170,000
...	237	11.0%	\$110,740	\$62,000	\$85,000	\$104,000	\$129,500	\$185,000
Master's Degree	331	15.3%	\$108,965	\$56,000	\$80,000	\$103,204	\$130,000	\$185,000
...	45	2.1%	\$125,692	\$54,000	\$90,000	\$109,000	\$154,000	\$225,000
Doctorate Degree	94	4.3%	\$125,468	\$60,000	\$90,000	\$120,000	\$160,000	\$200,000

Annual Salary by Experience

	Count	Column N %	Mean	Percentile 05	Percentile 25	Median	Percentile 75	Percentile 95
<1 year	94	4.3%	\$66,818	\$50,000	\$58,000	\$64,000	\$72,000	\$95,722
1 year	38	1.8%	\$65,301	\$36,000	\$56,215	\$63,750	\$76,000	\$108,000
1.5 years	69	3.2%	\$72,497	\$52,500	\$61,000	\$67,500	\$81,000	\$110,000
2 years	101	4.7%	\$73,409	\$50,000	\$62,000	\$68,000	\$77,500	\$113,500
3 years	135	6.2%	\$72,146	\$50,000	\$64,000	\$70,000	\$81,500	\$103,000
4 years	141	6.5%	\$81,158	\$60,000	\$70,000	\$77,000	\$89,566	\$110,000
5 years	159	7.4%	\$85,244	\$60,000	\$74,708	\$83,000	\$94,000	\$115,000
6 years	148	6.8%	\$87,886	\$62,000	\$77,316	\$84,212	\$95,950	\$125,000
7-8 years	216	10.0%	\$94,930	\$70,000	\$85,000	\$93,147	\$103,041	\$126,000
9-10 years	197	9.1%	\$106,861	\$76,000	\$92,618	\$103,500	\$120,000	\$148,000
11-12 years	143	6.6%	\$111,949	\$77,157	\$95,000	\$110,076	\$126,000	\$152,000
13-14 years	134	6.2%	\$122,787	\$77,200	\$104,000	\$118,750	\$135,000	\$188,000
15-17 years	150	6.9%	\$129,382	\$91,021	\$107,532	\$129,500	\$143,000	\$175,000
18-20 years	101	4.7%	\$137,411	\$90,000	\$110,000	\$130,563	\$165,000	\$196,000
21-24 years	107	4.9%	\$143,790	\$90,000	\$111,885	\$140,000	\$169,000	\$200,000
25+ years	229	10.6%	\$152,149	\$90,000	\$120,000	\$150,000	\$178,000	\$240,000

Annual Salary by Sector

	Count	Column N %	Mean	Percentile 05	Percentile 25	Median	Percentile 75	Percentile 95
Public Sector	680	100.0%	\$106,900	\$62,525	\$82,585	\$101,000	\$125,000	\$170,000
Private Sector	1,462	100.0%	\$103,771	\$57,600	\$75,000	\$95,400	\$125,000	\$180,000

Total Salary (full time positions)

	Count	Column N %	Mean	Percentile 05	Percentile 25	Median	Percentile 75	Percentile 95
Base Salary	2253	100.0%	\$103,539	\$56,000	\$76,000	\$96,000	\$125,000	\$180,000
Salary incl. bonus	2253	100.0%	\$120,504	\$59,500	\$81,000	\$106,000	\$143,800	\$225,000

*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%

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 2017 explains about 50 percent (48.2%) 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.apcgs.ca, to determine the values for each factor.

Factor	B (Coefficient)	Relative importance (Beta)
(Constant)	41098	
Duties (A)	146	0.220
Experience (C)	390	0.368
Supervision Scope (G)	840	0.203
Recommendations, Decisions and Commitments (D)	62	0.064
Receipt of professional designation	7923	0.090

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

Formula for expected salary (SE) without bonus:

$$Se = 146 * A + 390 * C + 840 * G + 62 * D + 41,098$$

Add 7,923 if you have acquired professional status within your field (P.Eng. or P.Geo.)