

# The Association of Professional Engineers and Geoscientists of British Columbia

## 1998 REPORT ON MEMBERS' COMPENSATION AND BENEFITS

### **INTRODUCTION**

This report presents the findings of the biennial compensation survey of APEGBC members undertaken by the Association in February 1998. Recent surveys were undertaken previously in 1996 and 1994. The information provided reflects the total annual compensation and benefits earned by APEGBC members employed in full-time positions in BC and illustrates the effects of factors such as responsibility level, year of graduation, industry and region.

The prediction of compensation based on any one factor alone is difficult due to market forces and general economic conditions. The exhibits included should provide the reader with general benchmarks for comparing his or her compensation with overall industry values.

### **RECOMMENDED COMPENSATION RANGES**

The Association of Professional Engineers and Geoscientists of British Columbia has published compensation range recommendations annually since 1972, stratified by responsibility point levels as described in the Employment Evaluation Guide (page 14). These ranges are intended to act as a guide for employees and employers to help compare compensation levels within the industry.

The recommendations reflect the latest compensation information available from the 1998 Compensation Survey and other publicly available sources, trends in the cost of living, provincial and national reports on compensation paid by employers, and recent recommendations of the Association.

**Exhibit 1 - Recommended annual compensation  
for engineers and geoscientists by responsibility level  
effective July 1, 1998 as approved by APEGBC Council**

Responsibility Level		Compensation Range		
Point Range	Nominal Points	Low Quartile	Median	High Quartile
200 - 249	225	\$38,980	\$42,370	\$ 47,454
250 - 299	275	44,771	49,199	55,595
300 - 349	325	50,857	56,508	64,419
350 - 399	375	56,929	63,965	73,560
400 - 449	425	62,828	71,396	82,819
450 - 499	475	67,666	77,777	90,999
500 - 549	525	72,464	84,260	99,427
550 - 599	575	76,786	90,336	107,500
600 - 649	625	80,612	95,967	115,160
650 - 699	675	85,036	102,453	123,968
700 - 749	725	90,404	110,249	134,504

**SURVEY METHODOLOGY**

The 1998 compensation survey was sent to practising professional engineers, professional geoscientists, engineers-in-training and geoscientists-in-training residing in British Columbia. Retired members and non-practising life members were excluded from the survey mailing. After removing incomplete responses, a total of 2,786 returned questionnaires were analyzed and form the basis for this report.

As in previous years, the analyses dealing with compensation use a subset of the total respondents; members who indicated that they were full-time students, retired, employed part-time or unemployed were removed from the data set. All respondents who did not indicate both compensation data and job evaluation points were also removed. The remaining compensation subset is comprised of 2,482 valid surveys.

Total annual compensation as defined in this report includes base salary plus additional cash compensation such as bonuses, commissions, profit sharing and paid overtime.

Compensation definitions are as follows:

- Mean – numerical average of compensation values;
- Median – 50% of values are below and 50% of values are above this compensation;
- Low Decile – 10% of values are below and 90% of values are above this compensation;
- Low Quartile – 25% of values are below and 75% of values are above this compensation;
- High Quartile – 75% of values are below and 25% of values are above this compensation;
- High Decile – 90% of values are below and 10% of values are above this compensation.

In many tables, both median and mean compensation information is provided. Median figures are a better indicator of compensation changes and ranges since median values are less affected by very high and very low responses. However, mean values provide a true arithmetic average, which may be of interest to some readers.

**RESULTS****DEMOGRAPHICS****Employment Status**

Exhibit 2 illustrates the employment status of this year's respondents as of February 1998. As surveys were mailed to practising members only, responses reflect the distribution of full-time, part-time, student and unemployed members in the active workforce. Full-time salaried/contract workers account for 81% of respondents, while just over 1% indicated that they are employed part-time. Owners/partners comprise 8% of the sample, while just over 5% of respondents are self-employed. Unemployed members make up 1.9% of the respondents.

Employment Status	Gender				Row
	Male	Female	Not Given	Total	Percent
Full-time Salary	1934	179	44	2157	77.4%
Full-time Contract	79	6	4	89	3.2%
Part-time Salary	9	8	2	19	0.7%
Part-time Contract	14	4	0	18	0.6%
Owner	157	2	7	166	6.0%
Partner	49	4	2	55	2.0%
Self-employed	134	9	6	149	5.3%
Student	0	0	19	19	0.7%
Retired	0	0	35	35	1.3%
Unemployed	0	0	52	52	1.9%
Not Given	20	1	6	27	1.0%
<b>Total</b>	2396	213	177	2786	100.0%
<b>Column Percent</b>	86.0%	7.6%	6.4%	100.0%	

**Region and Gender**

Of the 2,482 valid compensation responses, 90.1% were male, 7.6% were female and 2.3% chose not to indicate their gender. Exhibit 3 provides a detailed distribution of the respondents by branch and gender.

Branch/Region	Gender				Row
	Male	Female	Not Given	Total	Percent
Vancouver Island	142	12	6	160	6.4%
Victoria	142	7	6	155	6.2%
Lower Mainland	1547	146	35	1728	69.6%
Okanagan	84	4	2	90	3.6%
West Kootenay	35	3	0	38	1.5%
East Kootenay	42	0	1	43	1.7%
South Central	64	7	4	75	3.0%
Prince George	88	7	1	96	3.9%
Peace River	27	0	0	27	1.1%
Northern	48	3	2	53	2.1%
Missing/Other	17	0	0	17	0.7%
<b>Total</b>	2236	189	57	2482	100%
<b>Column Percent</b>	90.1%	7.6%	2.3%	100.0%	

**Present Job Function**

The survey indicated that 82.5% of respondents are presently working in engineering or geoscience related occupations, while 14.5% are in unrelated occupations. Just under 53% of respondents indicated that their position is at the management level. Exhibit 4 illustrates the detailed results.

Engineering/ Geoscience related	Management				Row
	Yes	No	Not Given	Total	Percent
Yes	941	956	151	2048	82.5%
No	302	54	5	361	14.5%
Not Given	62	8	3	73	2.9%
<b>Total</b>	1305	1018	159	2482	100.0%
<b>Column Percent</b>	52.6%	41.0%	6.4%	100.0%	

**Education**

Civil engineering forms the largest discipline group with 31.7% of the respondents, followed by mechanical engineering with 21.4% and electrical/electronic engineering at 15.8%. Almost 30% of respondents hold one or more postgraduate degrees as follows:

- MASC/MEng/MSc/MA 23.2%
- MBA 4.5%
- PhD or DSc 4.6%

**TOTAL ANNUAL COMPENSATION BY BACHELOR'S DEGREE**

Exhibit 5 presents total annual compensation by bachelor's degree received and the distribution of the sample. The median annual compensation for all disciplines is \$68,310. The median annual compensation values for metallurgical graduates was the highest at \$84,500 followed by mining engineering graduates and geochemistry graduates at \$80,000.

**TOTAL ANNUAL COMPENSATION BY HIGHEST DEGREE RECEIVED**

Postgraduate degrees are held by just under 30% of respondents. Exhibit 6 illustrates the effect of higher education on compensation. While the median total annual compensation for respondents with master's degrees (\$67,360) is not significantly higher than for those who hold undergraduate degrees only (\$67,195), mean salaries are considerably higher, indicating greater compensation at higher responsibility levels for master's degree holders. The median salary for PhD holders of \$76,000 is \$8,640 more than master's respondents while those holding MBAs reported median compensation of \$81,000. Members holding both engineering and business master's degrees reported the highest median salary at \$103,500.

**DISTRIBUTION OF INCOME**

The distribution of total annual compensation for BC members is provided in Exhibit 7, which shows that 35.1% of respondents report total annual compensation of between \$60,000 and \$80,000, followed by 26.9% who receive between \$40,000 and \$60,000. Only 6% of the survey sample report annual compensation of less than \$40,000, while 32% indicate that they receive over \$80,000 annually.

Bachelor's Degree	Number of Responses	% of Total	Compensation	
			Median	Mean
<b>Geoscience</b>				
Geology	135	5.4%	\$65,000	\$ 72,235
Geochemistry	4	0.2%	80,000	73,525
Geophysics	7	0.3%	72,000	74,230
Geotechnics	25	1.0%	62,000	67,095
Other	16	0.6%	57,025	71,276
<b>Engineering</b>				
Agriculture/Bioresource	37	1.5%	50,000	53,910
Biomedical	4	0.2%	58,500	63,425
Civil	787	31.7%	66,000	74,060
Chemical	145	5.8%	71,000	75,700
Computer	28	1.1%	63,100	70,675
Electrical/Electronic	391	15.8%	76,000	81,040
Forestry	27	1.1%	57,600	64,935
Geological	105	4.2%	62,000	66,820
Industrial	14	0.6%	73,780	75,890
Mechanical	531	21.4%	68,000	73,570
Metallurgical	46	1.9%	84,500	99,531
Mining	49	2.0%	80,000	107,651
Surveying	12	0.5%	59,200	56,415
Other	84	3.4%	64,610	71,745
No Bachelor's Degree/Not Reported	35	1.4%	78,040	77,035
<b>Total</b>	<b>2482</b>	<b>100.0%</b>	<b>\$68,310</b>	<b>\$ 75,220</b>

Highest Degree Received	Number	Median Points	Median	Mean
Bachelor's Degree	1742	415	\$ 67,195	\$ 73,551
MASc/MEng/MSc	576	440	67,360	77,010
PhD	113	545	76,000	79,720
MBA	112	500	81,000	95,103
Master's and MBA	12	538	103,500	107,071

Total Annual Compensation	Number	Percent
\$20,000 - \$39,999	149	6.0%
\$40,000 - \$59,999	667	26.9%
\$60,000 - \$79,999	871	35.1%
\$80,000 - \$99,999	438	17.6%
\$100,000 - \$149,999	271	10.9%
\$150,000 - \$199,999	51	2.1%
Over \$200,000	35	1.4%

**TOTAL ANNUAL COMPENSATION BY YEAR OF GRADUATION**  
**Analysis by Registration Status**

The total annual compensation results by year of graduation are presented for the entire member population as well as separately for professional engineers and professional geoscientists. These values are presented in Exhibit 8. The median compensation and responsibility point level for all years and members combined is \$68,310/428 points. The median total annual compensation was reported as \$68,755 for professional engineers and \$64,000 for

professional geoscientists. However, the reported median responsibility level for geoscientists of 440 is slightly higher than the engineering median of 426.

Due to the smaller numbers of geoscientists reporting, caution should be exercised when examining individual years where small samples are used to calculate median and mean compensation values. Median and mean values have not been provided for samples of three or fewer respondents.

<b>Exhibit 8 - Total annual compensation and responsibility level by year of graduation and registration</b>											
<b>Year of Bachelor's Degree</b>	<b>All Members</b>					<b>Engineering</b>			<b>Geoscience</b>		
	<b>Total Jobs</b>	<b>1998 Median</b>	<b>Median Points</b>	<b>1996 Median</b>	<b>98/96 Increase</b>	<b>Total Jobs</b>	<b>1998 Median</b>	<b>Median Points</b>	<b>Total Jobs</b>	<b>1998 Median</b>	<b>Median Points</b>
All Years	2482	\$68,310	428	\$65,000	5.1%	2317	\$68,755	426	161	\$ 64,000	440
1997	35	40,000	235	N/A	N/A	34	40,000	230	1	N/S	N/S
1996	72	40,800	240	N/A	N/A	72	40,800	240	0	----	----
1995	85	45,000	261	38,000	18.4%	83	46,000	261	2	N/S	N/S
1994	100	48,325	290	41,200	17.3%	96	48,125	289	4	50,500	302
1993	88	48,935	290	42,900	14.1%	85	49,300	290	3	N/S	N/S
1992	78	52,565	313	46,000	14.3%	76	52,775	313	2	N/S	N/S
1991	84	54,790	344	49,423	10.9%	80	55,590	340	4	48,665	375
1990	78	60,000	367	51,520	16.5%	77	60,000	368	1	N/S	N/S
1989	80	59,250	374	57,766	2.6%	74	57,705	367	6	71,075	518
1988	97	64,900	375	56,350	15.2%	91	64,900	375	5	56,046	360
1987	110	64,950	406	59,784	8.6%	99	66,300	408	11	52,000	402
1986	88	65,000	414	62,900	3.3%	79	66,000	413	9	57,000	435
1985	83	68,500	425	62,750	9.2%	77	68,500	425	6	66,650	356
1984	87	75,000	443	63,322	18.4%	84	75,200	451	3	N/S	N/S
1983	75	66,000	443	68,700	-3.9%	63	67,000	460	12	57,968	396
1982	86	73,600	449	68,200	7.9%	84	73,850	450	2	N/S	N/S
1981	72	75,930	463	70,000	8.5%	64	77,080	472	8	70,065	434
1980	68	76,750	482	71,072	8.0%	60	77,980	480	8	72,210	504
1979	64	72,490	510	68,225	6.3%	58	72,990	509	6	66,990	675
1978	68	80,000	468	73,000	9.6%	62	84,500	472	6	64,885	435
1977	56	86,210	480	78,100	10.4%	52	87,500	479	4	71,250	580
1976	48	78,000	560	72,800	7.1%	44	77,625	531	4	91,750	708
1975	56	82,000	521	80,000	2.5%	52	83,350	521	4	64,000	503
1974	59	85,000	568	82,400	3.2%	53	82,700	560	5	88,100	598
1973	63	95,000	556	76,400	24.3%	57	96,000	560	6	73,000	507
1972	56	82,390	511	80,000	3.0%	49	85,000	518	7	73,000	420
1971	46	75,790	504	72,500	4.5%	43	76,140	491	3	63,464	543
1970	52	83,000	550	79,900	3.9%	47	84,000	553	5	78,000	520
1969	43	79,320	500	77,128	2.8%	39	79,320	500	4	77,860	499
1968	42	84,000	539	80,000	5.0%	41	84,000	545	1	N/S	N/S
1967	31	92,500	546	87,225	6.0%	29	92,500	549	2	N/S	N/S
1966	48	81,450	541	81,390	0.1%	46	81,450	532	2	N/S	N/S
1965	44	90,685	555	87,000	4.2%	44	90,685	555	0	----	----
1960-1964	117	84,000	573	80,000	5.0%	113	84,000	570	4	142,780	740
1959 & earlier	42	72,000	557	N/A	N/A	42	72,000	557	0	----	----
No Degree/Not Reported	81	73,230	501	75,000	-2.4%	68	75,000	497	11	\$61,000	540

N/S - Insufficient sample size

Analysis by Gender

Exhibit 9 presents median compensation and point levels for male and female respondents graduating between 1980 and 1997. In the majority of cases, both female median total annual compensation and responsibility point values are less than the male values for the same reporting year. Again, caution should be exercised when examining individual years where small samples are used to calculate median and mean compensation values.

Exhibit 9 - Total annual compensation and responsibility level by year of graduation and gender						
Year of Bachelor's Degree	Male			Female		
	Total Jobs	Median	Median Points	Total Jobs	Median	Median Points
1997	29	\$40,000	237	6	\$39,875	224
1996	54	41,650	248	17	37,975	228
1995	71	47,000	265	13	41,000	235
1994	77	50,400	296	23	44,000	265
1993	76	49,650	290	10	47,380	287
1992	71	52,750	313	7	46,900	286
1991	74	55,590	345	10	51,500	318
1990	69	60,000	365	9	58,000	373
1989	75	60,000	373	4	53,570	348
1988	83	65,000	375	12	62,195	409
1987	97	66,000	408	11	62,000	395
1986	76	65,500	414	11	59,500	410
1985	74	69,325	432	6	62,250	335
1984	80	75,200	463	7	67,000	406
1983	70	66,250	443	4	64,000	429
1982	76	73,600	450	5	74,200	425
1981	63	80,000	460	5	62,000	488
1980	61	78,960	483	7	72,420	428
1979	61	73,000	513	3	65,000	368
1978	62	83,000	477	4	70,180	395
N/S - Insufficient sample size						

TOTAL ANNUAL COMPENSATION BY RESPONSIBILITY LEVEL

Total annual compensation by responsibility point level is illustrated in Exhibit 10. This analysis provides both low and high, decile and quartile values to illustrate the range of total annual

compensation paid to individuals within the same responsibility point range.

The median compensation level for all responsibility point levels and both sexes combined is \$68,310 and ranges from a low of \$38,000 for the less than 200 point range up to \$174,500 at the more than 850 point level. Compared to 1996 median compensation

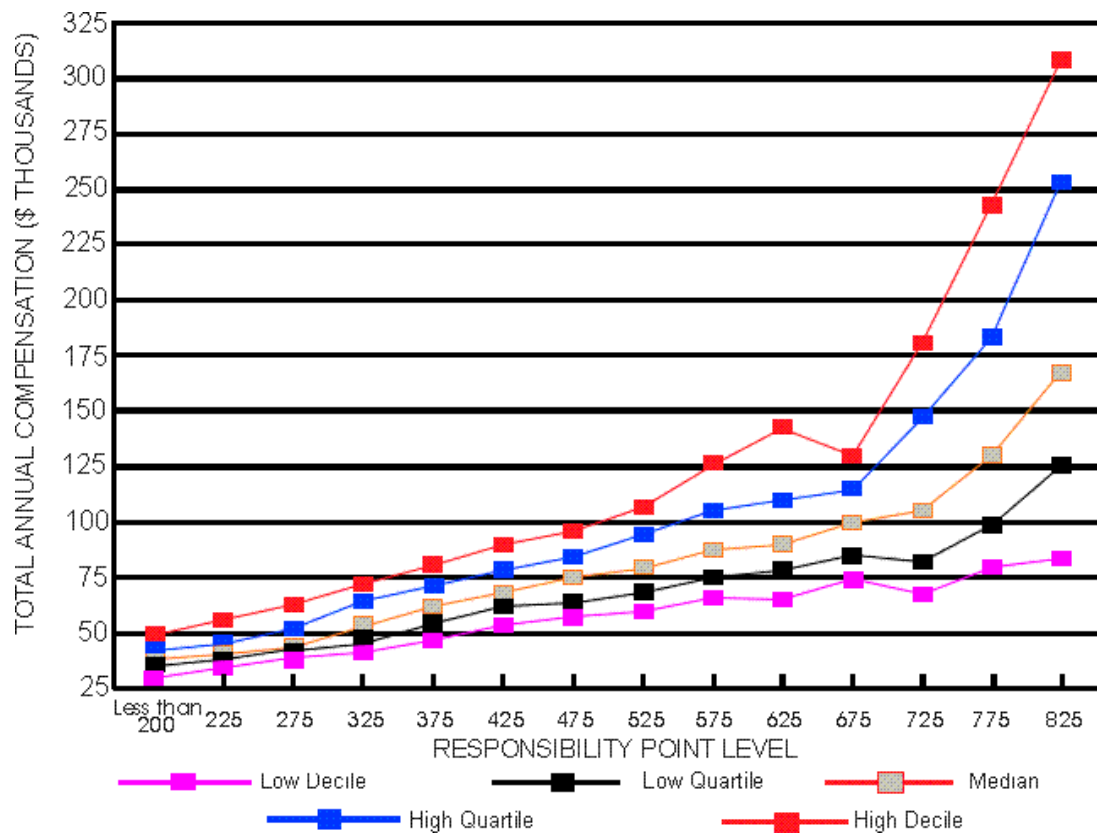
values, almost all point level ranges have recorded an increase, averaging a 4.1% change over the two-year period. When the ranges over the 750 point level are removed from the analysis, the average two-year increase in point range median compensation is 3.3%.

Exhibit 10 - Reported total annual compensation by responsibility level - February 1998										
Responsibility Point Range	Total Jobs	Median Points	Total Annual Compensation						1996 Median	Increase 98/96 Median
			Mean	Low Decile	Low Quartile	Median	High Quartile	High Decile		
Less than 200	15	190	\$ 38,561	\$ 29,760	\$ 35,000	\$ 38,000	\$ 41,500	\$ 48,385	\$ 36,631	3.7%
200 - 249	138	228	43,386	34,750	37,650	41,020	47,315	57,310	39,600	3.6%
250 - 299	264	275	48,981	37,850	42,000	48,000	53,000	63,025	45,850	4.7%
300 - 349	266	326	57,291	42,400	49,150	55,500	64,500	71,915	55,000	0.9%
350 - 399	333	376	63,460	46,910	55,000	62,000	71,390	81,000	60,281	2.9%
400 - 449	370	423	71,105	54,900	61,950	68,950	79,000	90,000	68,033	1.3%
450 - 499	291	474	76,236	57,360	65,000	75,000	85,000	95,945	70,140	6.9%
500 - 549	219	523	83,152	60,000	69,000	80,000	95,000	107,000	78,920	1.4%
550 - 599	185	570	92,178	65,800	75,000	87,285	105,000	126,400	80,000	9.1%
600 - 649	155	621	97,671	65,280	78,000	90,000	110,000	142,400	90,100	-0.1%
650 - 699	95	675	102,580	73,870	85,000	100,000	115,000	130,000	95,500	4.7%
700 - 749	64	728	117,454	67,400	81,395	105,250	146,415	180,250	105,000	0.2%
750 - 799	57	775	146,859	79,600	98,000	130,000	183,300	242,800	116,500	11.6%
800 - 849	24	820	181,143	83,500	125,500	167,500	252,625	308,000	130,000	28.8%
More than 849	6	860	324,833	120,000	135,000	174,500	530,000	950,000	214,000	-18.5%
N/S - Insufficient sample size										

**Total Annual Compensation by Responsibility Point Level -- All Members**

Exhibit 11 graphically presents the total annual compensation by responsibility point level for all members. It appears that compensation is related to responsibility level in generally a linear fashion for point levels between 200 and 625. At higher responsibility levels, other compensation factors may come into effect, particularly performance bonuses and profit-sharing arrangements, that alter the linear relationship.

**Exhibit 11  
Total Annual Compensation by Responsibility Point Level — All Members**



**Analysis by Gender**

A comparative analysis of male and female median total annual compensation by responsibility point level is provided as Exhibit 12. At all point levels, female respondents have reported lower salaries than their male counterparts. For the 200 to 450 point ranges, reported female median compensation varies from 4.1% to 6.5% less than male median compensation values. Above 450 points, the reported difference in median compensation increases significantly. Again, caution should be exercised when examining individual years where small samples are used to calculate median and mean compensation values.

**Exhibit 12 - Total annual compensation by responsibility point level and gender**

Responsibility Point Range	Male		Female	
	Total Jobs	Median	Total Jobs	Median
Less than 200	11	\$ 38,400	4	\$ 36,830
200 - 249	103	41,800	33	40,000
250 - 299	228	48,535	31	46,000
300 - 349	227	55,900	36	53,000
350 - 399	301	62,000	25	58,000
400 - 449	344	69,100	22	65,370
450 - 499	267	75,000	17	64,500
500 - 549	202	80,000	8	65,250
550 - 599	168	90,000	6	73,000
600 - 649	148	90,750	5	68,250
650 - 699	91	100,000	0	-----
700 - 749	64	105,250	0	-----
750 - 799	54	133,000	2	N/S
800 - 849	22	167,500	0	-----
More than 849	6	174,500	0	-----

N/S - Insufficient sample size

**T O T A L      A N N U A L  
C O M P E N S A T I O N   B Y   R E G I O N**

Exhibit 13 presents the median annual compensation and responsibility level values for respondents based on their location of work in the province. The results are provided by geographical region/branch. The highest median compensation of \$70,000 was reported by Lower Mainland respondents, followed by East Kootenay at \$69,000 and Prince George at \$68,000. Peace River Branch respondents reported the lowest median compensation of \$60,000. With the exception of the East Kootenay region, all non-Lower Mainland regions report lower median compensation values than the overall median of \$68,310.

<b>Exhibit 13 - Total annual compensation by geographic region</b>					
<b>Branch/Region</b>	<b>Total Jobs</b>		<b>Compensation</b>		<b>Median Points</b>
	<b>Number</b>	<b>Percent</b>	<b>Mean</b>	<b>Median</b>	
Vancouver Island	160	6.5%	\$71,795	\$65,750	420
Victoria	155	6.3%	66,200	63,000	435
Lower Mainland	1728	70.1%	77,665	70,000	433
Okanagan	90	3.7%	68,100	64,950	411
West Kootenay	38	1.5%	67,730	66,000	400
East Kootenay	43	1.7%	70,435	69,000	426
South Central	75	3.0%	67,415	63,800	395
Prince George	96	3.9%	71,995	68,000	414
Peace River	27	1.1%	63,010	60,000	355
Northern	53	2.2%	71,085	65,800	430



**TOTAL ANNUAL COMPENSATION BY INDUSTRY**

Exhibit 14 illustrates the distribution of respondents by industry. Engineering/geoscience consulting makes up the largest component of responses at 37.2%. The next largest employer group

is government at 15.7%, followed by the primary and resource industries at 14.5%.

The engineering/geoscience consulting group reported a median annual compensation of \$65,000, or \$3,310 less than the median for all sectors (\$68,310). The reported median annual compensation for mechanical consultants of \$56,000 is \$12,310

less than that for all sectors and \$9,000 less than the consulting industry median. This is followed closely by structural consultants who reported an annual compensation median of \$59,000. Metallurgical consultants reported the highest median compensation of all industries at \$97,000 (18 respondents).

**Exhibit 14 - Total annual compensation by industry**

Industry	Total Jobs	% of Total	Total Annual Compensation					
			Mean	Lower Decile	Lower Quartile	Median	Upper Quartile	Upper Decile
<b>All Sectors</b>	<b>2482</b>	<b>100.0%</b>	<b>\$75,220</b>	<b>\$43,000</b>	<b>\$54,000</b>	<b>\$68,310</b>	<b>\$85,000</b>	<b>\$108,000</b>
<b>Management Consulting</b>	<b>58</b>	<b>2.3%</b>	<b>83,980</b>	<b>44,100</b>	<b>59,900</b>	<b>75,000</b>	<b>107,100</b>	<b>141,000</b>
<b>Engineering/Geoscience Consulting</b>	<b>924</b>	<b>37.2%</b>	<b>71,666</b>	<b>40,000</b>	<b>48,100</b>	<b>65,000</b>	<b>85,000</b>	<b>110,000</b>
Chemical	22	0.9%	77,930	51,775	66,125	76,625	91,590	107,900
Civil	192	7.7%	71,348	40,000	47,550	63,900	81,700	114,400
Electrical	56	2.3%	74,888	41,420	56,375	71,115	89,750	110,000
Environmental	94	3.8%	69,719	36,275	43,875	60,500	86,595	107,000
Forest	43	1.7%	67,315	37,000	46,500	60,000	86,300	107,870
Geological	54	2.2%	70,836	26,000	45,000	64,500	81,250	112,000
Geotechnical	106	4.3%	72,542	41,380	47,615	61,800	83,625	120,600
Industrial	37	1.5%	76,848	49,300	66,500	75,000	86,600	104,320
Mechanical	79	3.2%	62,264	36,000	44,000	56,000	81,800	88,600
Metallurgical	18	0.7%	106,822	70,000	83,725	97,000	131,500	171,000
Mining	13	0.5%	77,222	49,600	64,250	75,000	92,080	106,200
Structural	115	4.6%	65,942	36,390	43,000	59,000	78,000	110,000
Other	95	3.8%	77,659	44,600	53,500	73,000	93,000	114,000
<b>Utilities, Communications and Transportation</b>	<b>268</b>	<b>10.8%</b>	<b>79,339</b>	<b>53,980</b>	<b>63,675</b>	<b>75,000</b>	<b>86,890</b>	<b>100,230</b>
Communication and Telecommunication	72	2.9%	75,431	55,000	63,855	72,000	82,025	103,500
Electric and Gas Utilities (incl. BC Hydro)	142	5.7%	80,335	57,600	68,275	78,400	87,625	98,210
Transportation	54	2.2%	81,931	40,900	53,500	64,625	95,000	128,465
<b>Government</b>	<b>387</b>	<b>15.7%</b>	<b>66,667</b>	<b>50,000</b>	<b>57,000</b>	<b>64,200</b>	<b>73,600</b>	<b>86,025</b>
Crown Corporations (except BC Hydro)	26	1.0%	77,359	60,800	64,600	73,500	82,850	104,180
Federal	37	1.5%	62,037	43,640	54,770	63,075	68,445	79,360
Provincial	151	6.1%	61,183	50,592	55,735	61,000	65,300	72,000
Regional, Municipal, Local	118	4.8%	69,880	47,335	56,950	68,000	80,650	94,775
Education	46	1.9%	72,680	50,100	60,395	69,500	86,030	100,000
Health Care	9	0.4%	73,989	54,500	64,000	75,000	80,700	101,000
<b>Primary and Resource Industries</b>	<b>361</b>	<b>14.5%</b>	<b>87,461</b>	<b>51,485</b>	<b>64,500</b>	<b>77,000</b>	<b>95,000</b>	<b>120,000</b>
Chemical	21	0.8%	74,821	43,740	60,000	76,000	91,250	106,030
Forestry	157	6.3%	77,870	51,920	64,000	75,500	90,000	100,000
Mining	137	5.5%	99,829	48,800	65,500	78,100	107,550	167,200
Oil and Gas	46	1.9%	89,129	54,052	66,525	79,650	101,850	124,578
<b>Construction and Manufacturing</b>	<b>204</b>	<b>8.2%</b>	<b>79,641</b>	<b>40,750</b>	<b>48,000</b>	<b>66,250</b>	<b>90,625</b>	<b>121,000</b>
Construction	76	3.1%	81,927	41,830	50,500	68,950	95,750	137,000
Heavy Manufacturing	100	4.0%	80,553	41,000	47,600	65,570	85,875	119,600
Light Manufacturing	28	1.1%	70,178	35,880	44,725	62,750	82,500	124,800
<b>High Technology</b>	<b>197</b>	<b>7.9%</b>	<b>75,977</b>	<b>41,600</b>	<b>51,900</b>	<b>68,000</b>	<b>85,900</b>	<b>115,000</b>
Research and Design	134	5.4%	75,693	39,175	51,000	67,250	85,200	111,500
High Technology Manufacturing	63	2.5%	76,581	43,820	56,000	70,500	90,000	116,740
<b>Service</b>	<b>44</b>	<b>1.8%</b>	<b>67,056</b>	<b>40,500</b>	<b>48,320</b>	<b>59,500</b>	<b>78,720</b>	<b>100,900</b>
<b>Other/not reported</b>	<b>39</b>	<b>1.6%</b>	<b>71,863</b>	<b>40,000</b>	<b>50,000</b>	<b>70,000</b>	<b>90,500</b>	<b>102,000</b>

Exhibit 15 provides the percentage increases/decreases in median compensation for comparable sectors between 1996 and 1998. The overall increase in median annual compensation for all sectors was 5.1%. However, lower median salaries were reported in the Transportation, Regional /Local Government, Construction, Light Manufacturing and Service sectors.

#### WORKING HOURS, OVERTIME AND OTHER COMPENSATION

##### Working Hours

The most commonly reported standard work week for full-time salaried and contract employees is 40 hours, indicated by 45.2% of the full-time respondents. A 37.5 hour base week is reported by 37.8% while 13.1 % have a base week of 35 hours. The average number of hours worked weekly is almost unchanged from 1996 at 44.3 hours.

<b>Exhibit 15 - Total annual compensation by industry - 1998/1996 comparison</b>			
<b>Industry</b>	<b>1998 Median</b>	<b>1996 Median</b>	<b>Increase 98/96</b>
<b>All Sectors</b>	\$68,310	\$65,000	5.1%
<b>All Consulting Services</b>	65,000	61,180	6.2%
<b>Utilities, Communications &amp; Transportation</b>			
Communication and Telecommunication	72,000	65,750	9.5%
Electric and Gas Utilities (incl. BC Hydro)	78,400	76,300	2.8%
Transportation	64,625	66,210	-2.4%
<b>Government</b>			
Crown Corporations (except BC Hydro)	73,500	72,300	1.7%
Federal	63,075	63,075	0.0%
Provincial	61,000	60,280	1.2%
Regional, Municipal, Local	68,000	68,950	-1.4%
Education	69,500	64,410	7.9%
Health Care	75,000	60,000	25.0%
<b>Primary and Resource Industries</b>			
Chemical	76,000	68,200	11.4%
Forestry	75,500	73,000	3.4%
Mining	78,100	70,900	10.2%
Oil and Gas	79,650	74,150	7.4%
<b>Construction and Manufacturing</b>			
Construction	68,950	70,500	-2.2%
Heavy Manufacturing	65,570	61,500	6.6%
Light Manufacturing	62,750	66,950	-6.3%
<b>High Technology</b>			
Research and Design	67,250	60,000	12.1%
High Technology Manufacturing	70,500	61,800	14.1%
<b>Service</b>	67,250	70,400	-4.5%
<b>Other/not reported</b>	70,500	60,000	17.5%

##### Bonuses and Overtime Pay

Almost 50% of respondents indicated that they receive some form of compensation for overtime worked. Almost 63% receive cash or time in lieu, 12% receive cash only and 25% receive

time in lieu only. Of those who receive cash compensation, just over 49% receive straight time and 31% receive time-and-one-half or more, while 20% have a bonus or other arrangement for overtime worked.

The amount of overtime or bonus paid as a percentage of total annual compensation is

presented by responsibility point range in Exhibit 16. In general, bonus and/or overtime payments form a larger percentage of overall compensation at higher responsibility point levels.

<b>Exhibit 16 - Bonuses, overtime, profit sharing and other compensation as a percentage of total annual compensation</b>								
<b>Responsibility Point Range</b>	<b>Consulting Services</b>	<b>Utilities, Communications &amp; Transportation</b>	<b>Government</b>	<b>Primary &amp; Resource Industries</b>	<b>Construction &amp; Manufacturing</b>	<b>High Technology</b>	<b>Service/ Other</b>	<b>All Sectors</b>
200 - 249	3.6%	4.4%	2.2%	3.7%	3.3%	5.3%	2.9%	3.7%
250 - 299	5.9%	7.2%	3.4%	3.0%	3.9%	4.8%	10.0%	5.3%
300 - 349	3.7%	7.7%	2.4%	4.8%	8.1%	5.3%	9.2%	5.1%
350 - 399	8.5%	6.1%	4.1%	4.8%	4.6%	6.8%	15.0%	6.8%
400 - 449	6.5%	8.1%	3.8%	4.2%	6.1%	9.8%	16.2%	6.3%
450 - 499	13.7%	7.2%	2.5%	5.2%	8.0%	8.3%	11.9%	8.4%
500 - 549	13.7%	9.8%	1.6%	5.5%	11.3%	8.6%	13.9%	9.8%
550 - 599	11.6%	12.7%	6.1%	6.2%	18.8%	10.1%	5.1%	10.2%
600 - 649	9.5%	5.9%	4.6%	4.3%	16.2%	3.8%	4.1%	7.7%
650 - 699	14.6%	16.4%	1.0%	5.5%	15.9%	14.0%	N/S	11.6%
700 - 749	22.4%	11.5%	2.8%	12.3%	19.6%	20.2%	N/S	15.5%
750 - 799	28.0%	11.6%	0.6%	10.9%	22.2%	22.3%	N/S	16.5%
800 - 849	14.5%	N/S	N/S	17.5%	N/S	N/S	N/S	14.8%

N/S - Insufficient sample size

Exhibit 17 provides the percentages of respondents by industry who receive additional compensation over annual base salary. For all employment sectors, 72.2% of respondents indicated that

they receive some form of additional compensation. This is usually in the form of a bonus, indicated by one third of respondents, followed by overtime paid to 19.2% of respondents. On a broad sectoral basis, a majority of respondents

receive some form of additional compensation over base salary, ranging from 46.5% in the government sector to 78.7% in utilities, communications and transportation.

**Exhibit 17 - Percentage of respondents receiving overtime, commission, bonus or other pay**

Industry	Total Jobs	Bonus	Commission	Overtime	Profit Sharing	Other	All Categories
<b>All Sectors</b>	<b>2482</b>	<b>33.3%</b>	<b>1.0%</b>	<b>19.2%</b>	<b>11.4%</b>	<b>13.3%</b>	<b>72.2%</b>
<b>Management Consulting</b>	<b>58</b>	<b>17.2%</b>	<b>1.7%</b>	<b>13.8%</b>	<b>10.3%</b>	<b>15.5%</b>	<b>46.6%</b>
<b>Engineering/Geoscience Consulting</b>	<b>924</b>	<b>37.9%</b>	<b>0.5%</b>	<b>18.9%</b>	<b>14.5%</b>	<b>10.9%</b>	<b>62.0%</b>
Chemical	22	40.9%	0.0%	45.5%	4.5%	9.1%	68.2%
Civil	192	42.7%	0.5%	11.5%	18.8%	9.4%	60.9%
Electrical	56	44.6%	0.0%	26.8%	14.3%	12.5%	71.4%
Environmental	94	43.6%	1.1%	17.0%	18.1%	10.6%	67.0%
Forest	43	27.9%	0.0%	23.3%	7.0%	16.3%	60.5%
Geological	54	18.5%	1.9%	7.4%	11.1%	13.0%	38.9%
Geotechnical	106	58.5%	0.0%	15.1%	17.0%	7.5%	78.3%
Industrial	37	21.6%	0.0%	51.4%	2.7%	10.8%	64.9%
Mechanical	79	38.0%	1.3%	20.3%	12.7%	10.1%	62.0%
Metallurgical	18	22.2%	0.0%	27.8%	11.1%	11.1%	44.4%
Mining	13	0.0%	0.0%	38.5%	7.7%	38.5%	53.8%
Structural	115	33.0%	0.0%	18.3%	13.9%	13.9%	55.7%
Other	95	30.5%	1.1%	16.8%	15.8%	7.4%	58.9%
<b>Utilities, Communications &amp; Transportation</b>	<b>268</b>	<b>64.9%</b>	<b>0.4%</b>	<b>12.7%</b>	<b>9.7%</b>	<b>20.5%</b>	<b>78.7%</b>
Communication & Telecommunication	72	66.7%	1.4%	11.1%	20.8%	20.8%	83.3%
Electric and Gas Utilities (incl. BC Hydro)	142	75.4%	0.0%	15.5%	5.6%	26.1%	88.0%
Transportation	54	35.2%	0.0%	7.4%	5.6%	5.6%	48.1%
<b>Government</b>	<b>387</b>	<b>4.4%</b>	<b>0.0%</b>	<b>34.9%</b>	<b>0.3%</b>	<b>9.0%</b>	<b>46.5%</b>
Crown Corporations (except BC Hydro)	26	30.8%	0.0%	3.8%	0.0%	7.7%	38.5%
Federal	37	0.0%	0.0%	29.7%	0.0%	0.0%	29.7%
Provincial	151	1.3%	0.0%	56.3%	0.7%	3.3%	60.3%
Regional, Municipal, Local	118	5.9%	0.0%	28.0%	0.0%	12.7%	42.4%
Education	46	0.0%	0.0%	4.3%	0.0%	26.1%	30.4%
Health Care	9	0.0%	0.0%	33.3%	0.0%	11.1%	44.4%
<b>Primary and Resource Industries</b>	<b>361</b>	<b>28.3%</b>	<b>0.0%</b>	<b>18.6%</b>	<b>8.9%</b>	<b>14.1%</b>	<b>54.8%</b>
Chemical	21	33.3%	0.0%	19.0%	14.3%	14.3%	61.9%
Forestry	157	13.4%	0.0%	27.4%	5.7%	17.2%	43.9%
Mining	137	34.3%	0.0%	13.9%	7.3%	9.5%	58.4%
Oil and Gas	46	58.7%	0.0%	2.2%	21.7%	17.4%	78.3%
<b>Construction and Manufacturing</b>	<b>204</b>	<b>41.7%</b>	<b>3.4%</b>	<b>10.3%</b>	<b>12.3%</b>	<b>10.8%</b>	<b>63.2%</b>
Construction	76	46.1%	2.6%	5.3%	13.2%	10.5%	61.8%
Heavy Manufacturing	100	40.0%	5.0%	14.0%	13.0%	10.0%	66.0%
Light Manufacturing	28	35.7%	0.0%	10.7%	7.1%	14.3%	57.1%
<b>High Technology</b>	<b>197</b>	<b>28.9%</b>	<b>2.0%</b>	<b>16.2%</b>	<b>23.9%</b>	<b>19.8%</b>	<b>61.9%</b>
Research and Design	134	28.4%	0.7%	13.4%	21.6%	20.9%	57.5%
High Technology Manufacturing	63	30.2%	4.8%	22.2%	28.6%	17.5%	71.4%
<b>Service</b>	<b>44</b>	<b>38.6%</b>	<b>13.6%</b>	<b>2.3%</b>	<b>20.5%</b>	<b>20.5%</b>	<b>72.7%</b>
<b>Other/not reported</b>	<b>39</b>	<b>35.9%</b>	<b>5.1%</b>	<b>7.7%</b>	<b>10.3%</b>	<b>12.8%</b>	<b>53.8%</b>

**EMPLOYEE BENEFITS AND PERQUISITES**

Only full-time salaried and contract employees were asked to respond to this section of the survey.

The majority of respondents indicated that their employer pays for, or partly subsidizes, BC basic medical coverage (70.5%), extended health benefits (80.9%), long-term disability (74.0%), dental plans (81.4%) and life insurance (75.6%). Related education costs are reimbursed for 71.4% of respondents, almost 62% participate in an employer-sponsored pension or RRSP plan, and just under 52% have their Association fees paid for or partly sponsored by their employer.

Exhibit 18 provides a summary of the percentages of respondents receiving various benefits and perquisites.

<b>Exhibit 18 - Employee benefits and perquisites</b>					
<b>Benefit/Perquisite</b>	<b>Benefit Provided</b>			<b>Benefit Not Provided</b>	<b>No Response</b>
	<b>100% Paid</b>	<b>Partly Paid</b>	<b>Total Provided</b>		
Life Insurance	39.4%	36.2%	75.6%	10.4%	14.0%
BC Basic Medical	48.1%	22.4%	70.5%	16.7%	12.8%
Extended Health Plan	42.6%	38.3%	80.9%	6.1%	13.0%
Dental Plan	37.0%	44.4%	81.4%	6.0%	12.6%
Prescription Drug Plan	30.4%	38.6%	69.0%	14.8%	16.2%
Long-term Disability Insurance	37.7%	36.3%	74.0%	11.0%	15.0%
Pension/RRSP Plan	17.8%	43.8%	61.7%	23.8%	14.6%
Education (related)	48.3%	23.1%	71.4%	13.7%	14.9%
Education (unrelated)	2.7%	10.2%	12.9%	66.2%	20.9%
APEGBC Registration Fees	49.5%	2.1%	51.6%	35.5%	12.9%
Other Professional Fees	31.3%	5.9%	37.2%	44.5%	18.3%
Paid Parking			38.8%	45.8%	15.4%
Company Car			11.1%	74.3%	14.6%
Car Allowance			19.7%	64.2%	16.1%
Telecommuting			14.8%	69.5%	15.7%
Flex-time			50.1%	35.7%	14.2%
Fitness Facility/Membership			17.4%	67.5%	15.1%
Employee Share Ownership			21.5%	63.5%	15.0%
Bonus or Profit-sharing Plan			39.8%	46.1%	14.1%
Stock Options			14.2%	70.6%	15.2%
Isolation Allowance			10.9%	73.0%	16.1%
Paid Parental Leave			15.4%	65.2%	19.4%

n.b. It is not known whether no response was intended to indicate that the benefit is not received

**Vacation Entitlements**

The most commonly reported vacation entitlement is 3 weeks. Almost 71% of respondents receive between 3 and 4 weeks of vacation annually. Over 17% receive 5 or more weeks each year. Exhibit 19 presents the vacation responses.

**Exhibit 19 - Vacation Entitlements**

<b>Weeks of Vacation</b>	<b>Number</b>	<b>Percent</b>
2	234	11.6%
3	850	42.1%
4	582	28.8%
5	222	11.0%
6	87	4.3%
7	31	1.5%
>7	14	0.7%