



# Issue Area: Environment

## Digging a little deeper

On our website and in the summary report for Vital Signs, we have provided a number of statistics for each of our areas. Following is much more detailed data and sources for each statistic.

## Overview

Our region is home to a unique geography, climate, and ecosystems that make up our rich natural landscape. The environment is an important element of our regional identity and a key source of recreation and leisure. The quality of our air, water, and other natural environment is also closely linked to the health and wellness of our region’s residents.

Residents are fortunate to live in a beautiful environment that includes the protected Columbia Wetlands. Air quality, habitat destruction and fragmentation, and terrestrial invasive species are major environmental issues for the Golden area.

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## Indicators

### 1. Air Quality

Synopsis: Levels of fine particulate matter (PM<sub>2.5</sub>) from continuous monitors in B.C. are summarized in Figure 1. Two measurement scales are shown—the highest 2% of daily measurements (or 98th percentile) and the annual average concentrations— because PM<sub>2.5</sub> is linked to both short-term (i.e. hours to days) and long-term (i.e. months to years) exposures. In 2009, a full year of data was collected at 39 continuous monitoring sites across B.C. Annual average concentrations ranged from 3.1 to 8.2 µg/ m<sup>3</sup>. The Quesnel Maple Drive site was the only continuously monitored site to exceed the provincial objective of 8 µg/m<sup>3</sup> (shown by the orange line). Daily values ranged from a low of 9 µg/m<sup>3</sup> in Campbell River to a high of 31 µg/m<sup>3</sup> in Revelstoke (based on the annual 98th percentile concentration). Both the Revelstoke and Quesnel Maple Drive sites exceeded the provincial daily objective of 25 µg/m<sup>3</sup> (shown by the blue line).

### Comparisons

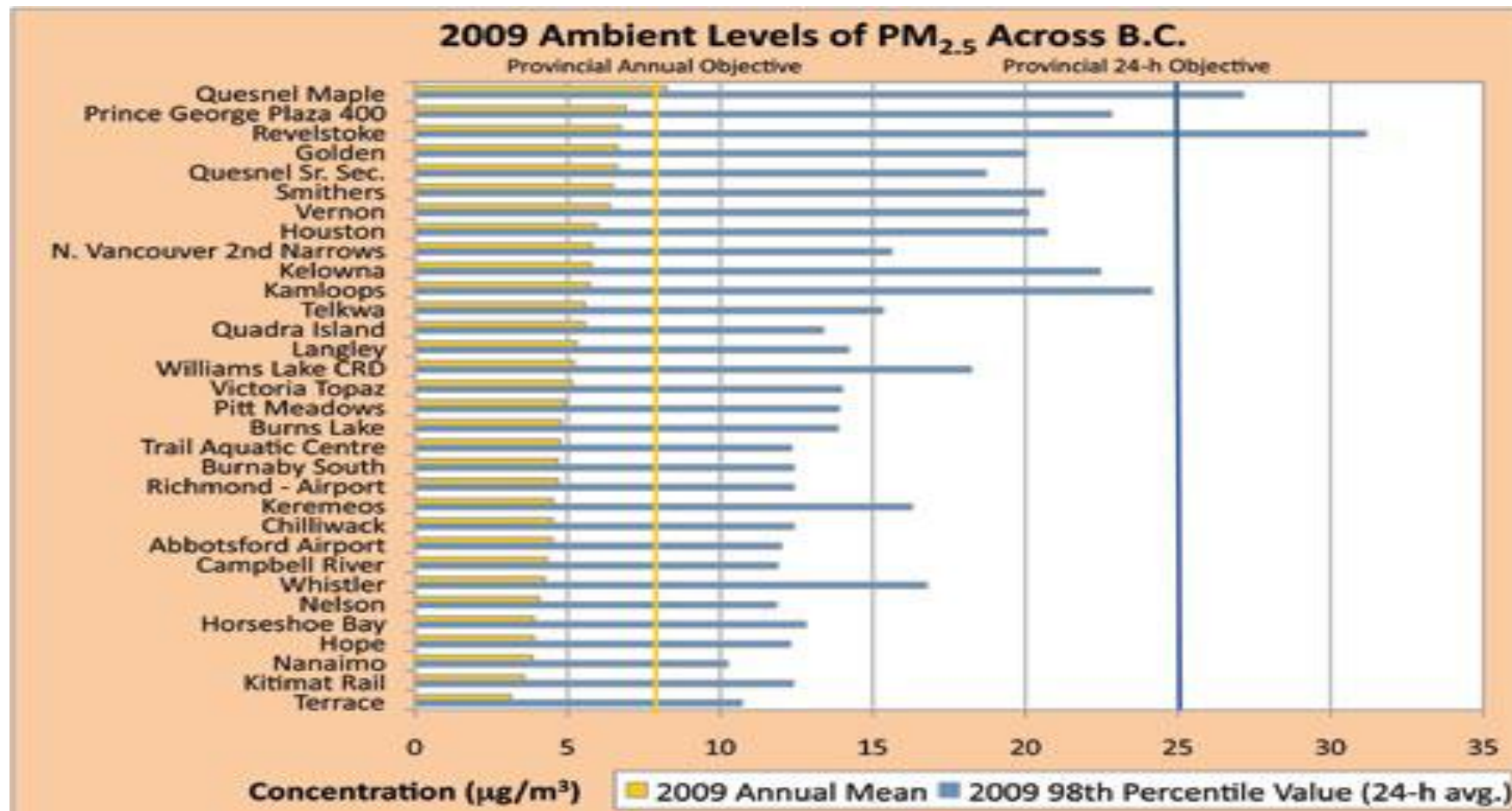


Figure 1: Ambient levels of PM<sub>2.5</sub> at select sites across B.C.

Note: The 98th percentile is the daily value that is greater than 98% of other values in a year.

Reference: The BC Lung Association “State of Air Quality 2010”

<http://www.bc.lung.ca/airquality/documents/StateOfTheAir2010webrevised.pdf>

The sources of emissions include residential wood heating, trains, heavy duty trucks, light duty vehicles, road dust, wood products, prescribed burning, and forest fires. Topographic features influence the air quality in Golden such as the deep valley bottom, Northwesterly/southeasterly winds, and persistent temperature inversions (particularly in winter) which all create an environment for emissions to sit in the valley and accumulate to high and unhealthy levels. In figure 2 it can be seen how the winter inversion in November through February corresponds with highest PM<sub>2.5</sub> levels from data in 2007.

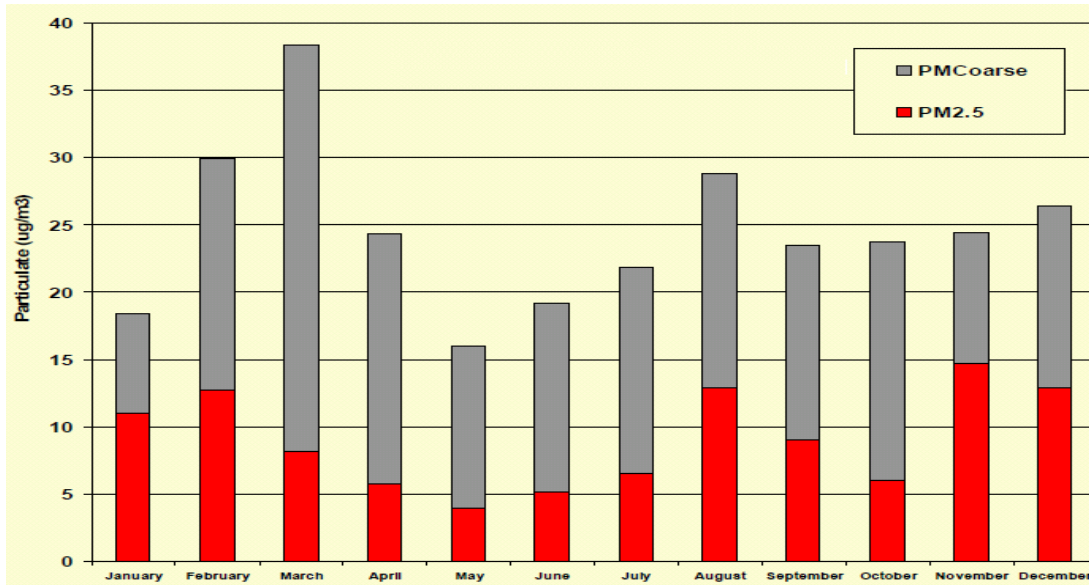


Figure 2: Monthly Particulate Measurements for Golden

Reference: BC Ministry of Water, Land and Air Protection (WLAP) 2007. Speciation Monitoring and Source Apportionment in Golden, BC (2004 - 2007) [http://www.env.gov.bc.ca/epd/bcairquality/reports/pdfs/spec\\_mon\\_source\\_golden.pdf](http://www.env.gov.bc.ca/epd/bcairquality/reports/pdfs/spec_mon_source_golden.pdf)  
 Golden Air Quality Committee. 2010. Kicking Horse Country Community Profile 2010 Air Quality Monitoring.

## 2. Red and Blue listed species

**Synopsis:** In the Columbia Shuswap regional district there are 45 red listed species which are species that are extirpated, endangered or threatened in British Columbia and there are 121 blue listed species, which are listed as species of special concern in British Columbia. This was measured for the regional district but since many species are quite mobile and their exact habitat extents are not necessarily firm this is still a fairly good measure of how many species are at risk in Golden and Area A. Red-listed species and ecological communities are Extirpated, Endangered, or Threatened in British Columbia. Blue-listed species and ecological communities are of Special Concern (formerly Vulnerable). A species or ecological community is placed on the Red or Blue list based on its provincial Conservation Status Rank, which is assigned by the B.C. Conservation Data Centre.

Red and Blue lists are located in appendix 1.

Reference: Ministry of the Environment, Government of BC. [www.env.gov.bc.ca/cdc/](http://www.env.gov.bc.ca/cdc/).

## 3. Invasive Species

In 2010, the local environmental organization Wildsight completed aquatic invasive plant surveys in the Columbia Valley: at 5 lakes within the Columbia Shuswap Regional District (Area A), 10 lakes with the Regional District East Kootenay (RDEK), and to one main side channel of Columbia River located in Fairmont.

This survey found no aquatic invasive species but continues to monitor and address through community “weed pull” events terrestrial invasive species which threaten the aquatic ecosystems in riparian zones.

For more information visit: <http://www.wildsight.ca/invasivespecies>

Reference: Wildsight, Columbia Headwaters Invasive Plant Species Project - Final Report

#### 4. Residential Water Use

The Gross Annual water usage within the Town of Golden reflects water use by all sectors: homes, businesses, schools, etc. It also includes any system loss, such as through pipe leakages. Because the Town of Golden does not have residential water meters, estimating the use per person, per day in Golden is very hard to be accurate with. It is unclear what caused the decrease in water use but the Town is working on a residential water conservation strategy. Water in the Town of Golden comes from wells which have to be pumped. This energy use to access water is another consideration for conservation.

Town of Golden													
Well Pump Totals													
Total Gallons In thousands, rounded													
	Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec	Annual Total
2006	17,826	16,317	16,997	19,271	26,086	28,471	41,772	30,467	22,995	19,403	17,306	18,568	275,479
2007	19,309	18,405	20,652	19,656	26,427	26,885	38,958	32,211	22,786	18,083	15,746	17,598	276,716
2008	17,621	16,808	17,722	16,942	21,953	24,413	27,161	27,326	19,008	16,979	15,332	16,931	238,195
2009	17,088	16,637	18,317	19,529	26,507	32,731	32,755	30,358	20,602	16,795	16,026	17,132	264,477
2010	18,552	16,055	17,841	18,912	24,415	26,920	35,831	29,060	20,096	18,777	16,506	17,065	260,028
													-5.6
													% Change 2006 - 2010

Source: Town of Golden

The total average daily flow of water for residential use in 1999 and 2001 in Golden was 478 L per capita and 444.8 L per capita in 2006 which corresponds to a 6.9% decrease in residential average daily flow of water, which is 2.8% greater change than the Canadian average and 12.3% greater change than the British Columbia average. This trend is positive, but the value of water used daily per capita in Golden is 117 L more per capita than the Canadian average though 3 L less than the British Columbia average.

A caution on this water use measure because it is only for the Town of Golden, and in rural areas which make up about half of the study area the daily water use is not measured.

	1999	2001	2004	2006	% change 01-06
<b>Canada</b>	n.a.	340.8	336.5	327.0	-4.1
<b>British Columbia</b>	n.a.	425.0	426.0	448.0	5.4
<b>Golden</b>	478.0	478.0	444.8	444.8	-6.9

Figure 3: Total Average Daily Flow of Water for Residential Use (L/capita)

Reference: Environment Canada Water Use Data 2006. Based on Municipal Water and Wastewater Survey for survey years 1999 2001 2004 and 2006. <http://www.ec.gc.ca/eau-water/default.asp?lang=En&n=851B096C-1>

## 5. Greenhouse Gas Emissions

Golden produces 34,282 tonnes of CO<sub>2</sub> emissions and the largest source of emissions in the area is road transportation, followed by buildings and solid waste. Our road transportation makes up 86% of emissions which is 26% higher than the provincial average. Buildings (values include heating) produce 3,013 tonnes of CO<sub>2</sub> annually, the largest proportions of which comes from residential propane and commercial electricity.

The vehicle emissions for Golden are further broken down by vehicle type, where light trucks, vans, and SUV's make over half of the tonnes of CO<sub>2</sub> emissions of all vehicles. Solid waste produced 1,846 tonnes of CO<sub>2</sub> which makes up 5% of all CO<sub>2</sub> emissions, and is the same percent as the provincial average.

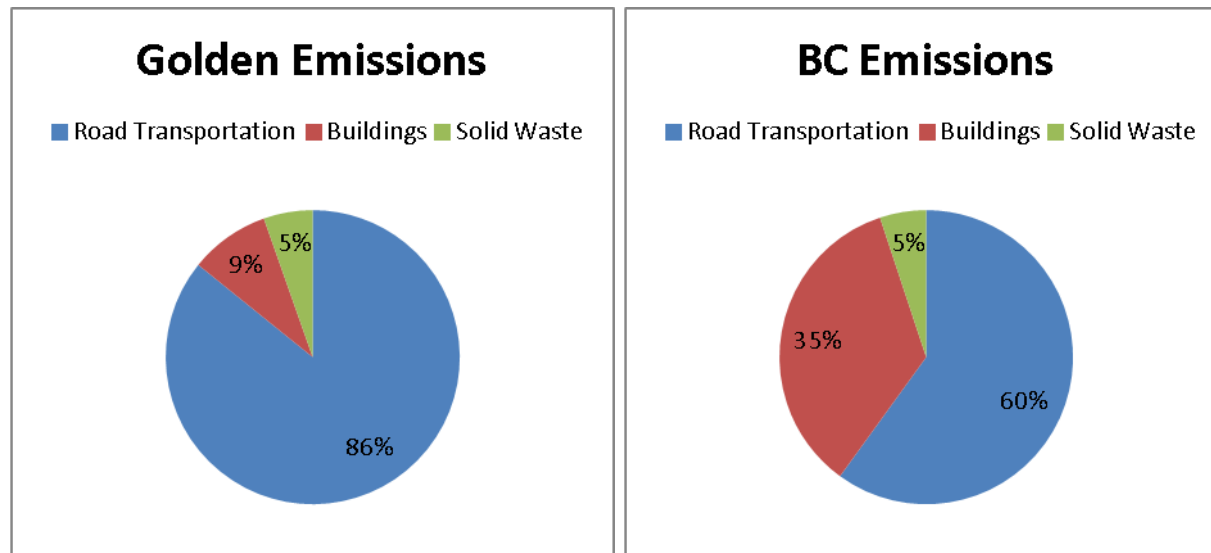


Figure 4: 2007 Greenhouse Gas Emissions Breakdown

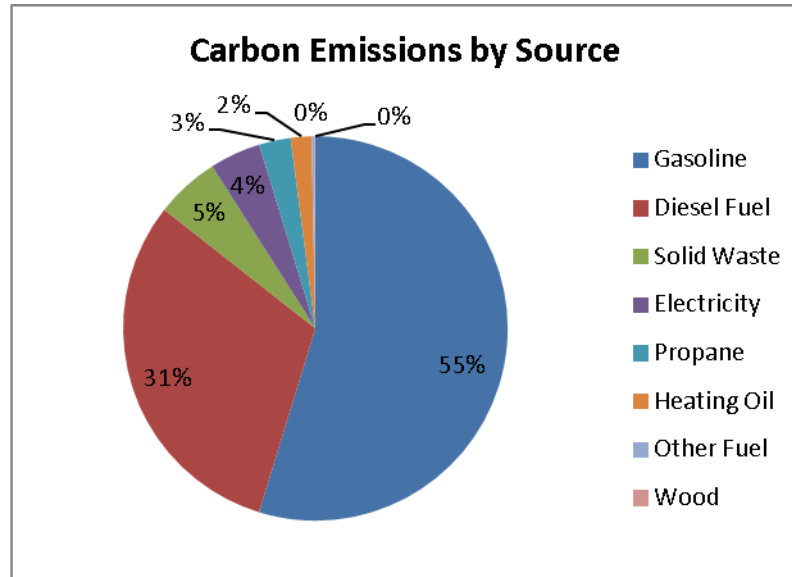


Figure 5: 2007 CO2 Emissions by Fuel Source

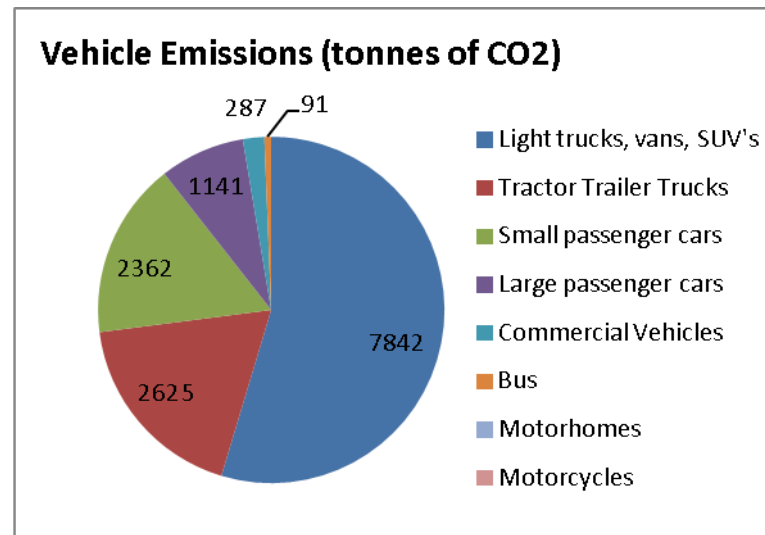


Figure 6: Emissions Breakdown by Vehicle Types

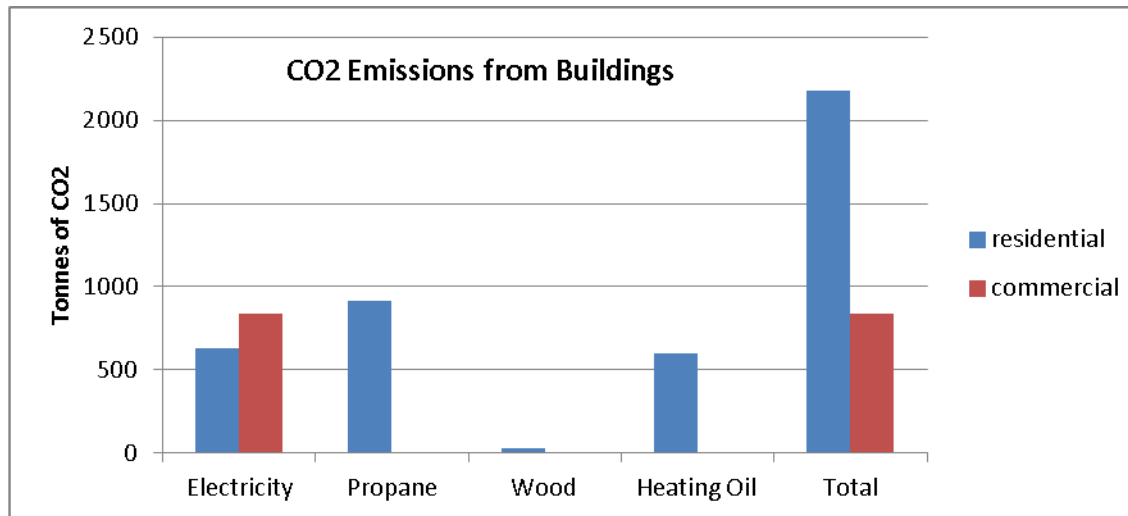


Figure 5: 2007 Greenhouse Gas Emissions from Buildings

Reference: Golden Town 2007 Community Energy and Emissions Inventory. BC's Community Energy and Emission Inventories. Government of British Columbia

## 6. Waste

In 2010, 4912 tonnes of waste was landfilled in the Golden landfill. This area services Golden and Area A. In 2010 a curbside recycling program was started by the Regional District that will service the town of Golden.

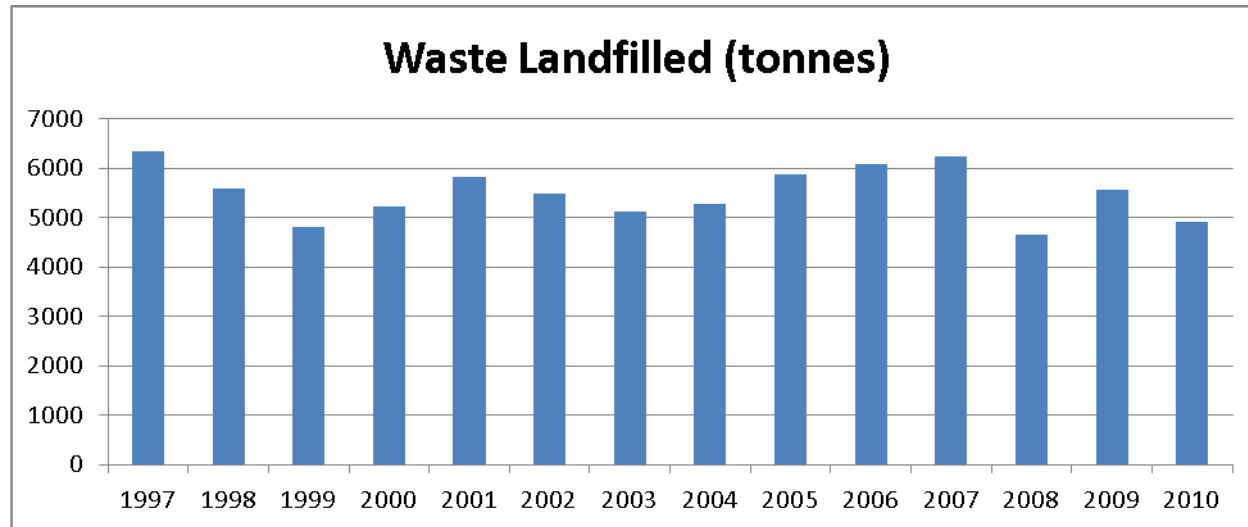


Figure 8: Annual Waste Landfilled in the Golden Landfill

Reference: Data for the Golden landfill, received from the CSRD Environmental & Engineering Services

## 7. Precipitation

Annual precipitation has gone down by 50 mm when you compare the 2001-2010 average annual precipitation to the 1971-2000 average annual precipitation; however there are 3 years missing in the 2001-2010 data which increases the inaccuracy of the average. With less precipitation falling annually we are more susceptible to water shortages and forest fires in the summers, and less snow affects winter tourism potential and our annual spring runoff.

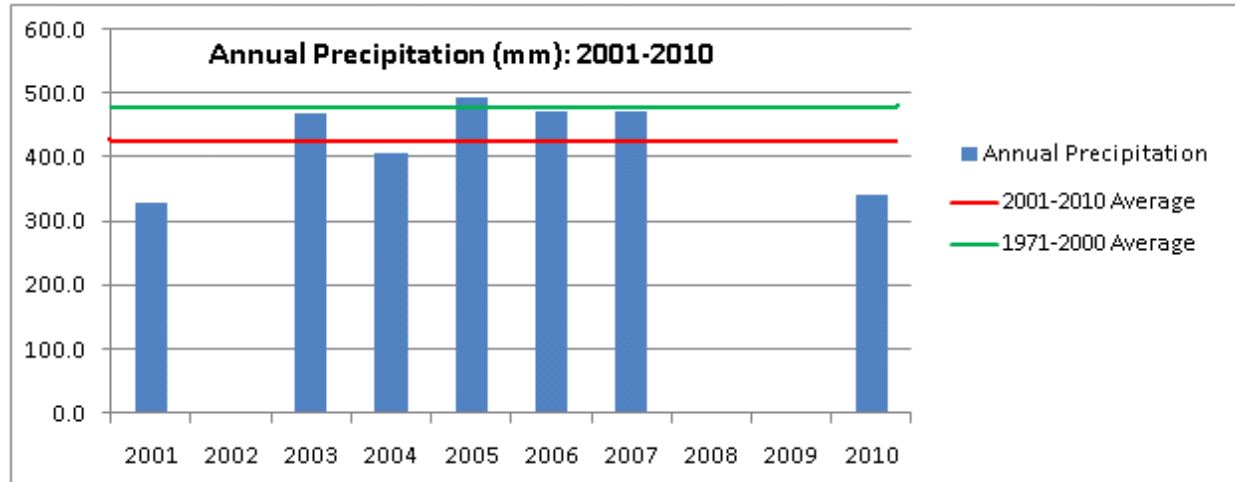


Figure 9: Annual Precipitation

Reference: Environment Canada Daily Data Reports National Climate Data and Information Archive  
[http://www.climate.weatheroffice.gc.ca/advanceSearch/searchHistoricData\\_e.html?timeframe=3&mlyRange=1902-01-01|2007-02-01&Year=2007&cmdB1=Go&Month=6&Day=15](http://www.climate.weatheroffice.gc.ca/advanceSearch/searchHistoricData_e.html?timeframe=3&mlyRange=1902-01-01|2007-02-01&Year=2007&cmdB1=Go&Month=6&Day=15)

## 8. Temperature

The mean annual temperature has increased by 1°C from 1971-2000 to 2001-2009. Because of some of the missing data in the 2001-2009 average and because it is a relatively short period this may not be statistically significant. There is a larger warming in the coldest temperature month (January) compared to the warming in the hottest month (July) which has resulted in a smaller temperature differential between 1971-2000 and 2001-2009.

In the Golden area this may mean a shorter snow season and more rain instead of snow in the winter which may affect our winter tourism industry but also may result in a longer growing season for plants in the summer.

	1971 - 2000 Avg.	2001	2002	2003	2004	2005	2006	2007	2008	2009	2001 - 2009 Avg.	Difference Historic & 2001-2009
Annual Mean Temperature	4.7	5.3	n.a.	5.4	6.1	5.3	6.3	n.a.	n.a.	n.a.	5.7	1.0
Mean Maximum in Hottest Month	24.4	24.7	25.6	27.9	26.4	23.7	28	28.7	n.a.	25.7	26.3	1.9
Mean Minimum in Coldest Month	-13.7	-9.6	-10.5	-7.7	-11.7	-13.1	-3.3	-13.4	n.a.	-6.6	-9.5	4.2
Differential	38.1	34.3	36.1	35.6	38.1	36.8	31.3	42.1	n.a.	32.3	35.4	-2.7

Figure 10: Annual Temperature Statistics (°C)

Reference: Climate data and Climate Normals. 2009. Environment Climate Data Online, Canadian Meteorological Centre, Climate Information Branch [http://climate.weatheroffice.gc.ca/climateData/canada\\_e.html](http://climate.weatheroffice.gc.ca/climateData/canada_e.html)  
[http://climate.weatheroffice.gc.ca/climate\\_normals/index\\_e.html](http://climate.weatheroffice.gc.ca/climate_normals/index_e.html)

## 9. Household Food Security Status, 2007

The Canadian Community Health Survey looks at food security. The comparisons below show that Golden has a higher rate of those severely food insecure than BC or Canadian averages.

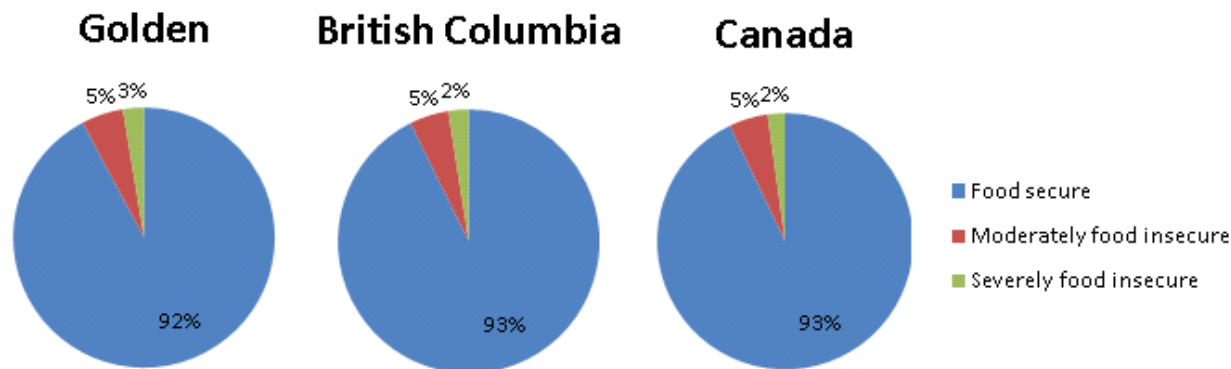


Figure 11: 2007 Food Household Food Security

Reference: CANSIM table 105-0547, based on Canadian Community Health Survey.

### 10. Bear Aware

Living in a small town in the mountains often means that wildlife is part of our immediate environment. To keep both bears and humans safe and healthy requires a balance between not attracting bears with our garbage and food and managing them when they do become a threat. Programs in place such as Bear Aware try to educate people on these issues and reduce negative human-bear encounters and reduce the number of bears shot because they are a threat. Measured values on bear encounters change year to year not only depending on human behaviours, but also depending on the food available to the bears, which varies from year to year.

	2002	2003	2004	2005	2006	2007	2008	2009	2010
# of Black Bear Complaints	70	144	81	215	119	95	115	36	81

Figure 12: Annual Black Bear Complaints to Conservation Office

	RAPP Line	Bear Aware Line	Total
2005	44	192	236
2006	91	352	443
2007	85	112	197
2008	115	43	158
2009	32	4	36
2010	83	5	88

Figure 13: Annual Bear Reports

	Black Bear	Grizzly	Total
2005	0	0	0
2006	0	1	1
2007	0	0	0
2008	0	0	0
2009	0	1	1
2010	0	0	0

Figure 14: Annual Bear Relocations

	Shot by C.O.	Shot by RCMP	Shot/Killed by Residents	Car Accidents	Trains	Found Poached	Total

	Town	OA	Town	OA	Town	OA	Town	OA	Town	OA	Town	OA	
2005	1	0	1	0	0	6	0	2	0	0	0	2	12
2006	1	4	0	0	0	6	0	4	0	1	0	0	17
2007	0	1	0	0	1	4	0	8	0	1	0	0	15
2008	3	0	1	0	1	0	2	4	1	2	0	0	14
2009	0	4	0	0	0	0	n/a	n/a	1	1	n/a	n/a	n/a
2010	5	8	0	0	0	0	0	4	0	4	0	0	21
All black bears. OA = Outlying Areas = West Bench, Habart, Nicholson, Parson, Blaeberry, Donald													

**Figure 15: Bear Fatalities in Golden and Outlying Areas**

Reference: Golden Bear Aware. 2010. Kicking Horse Country Community Profile 2010.

Appendix 1: Red and Blue Listed species

COLUMBIA-SHUSWAP

RED LIST		
Scientific Name	English Name	CF Priority
<i>Acipenser transmontanus pop. 2</i>	White Sturgeon (Columbia River population)	2
<i>Aechmophorus clarkii</i>	Clark's Grebe	2
<i>Aechmophorus occidentalis</i>	Western Grebe	1
<i>Aeshna constricta</i>	Lance-tipped Darner	2
<i>Argia vivida</i>	Vivid Dancer	2
<i>Azolla mexicana</i>	Mexican mosquito fern	2
<i>Botrychium lineare</i>	Linear-leaf moonwort	1
<i>Botrychium montanum</i>	mountain moonwort	2
<i>Botrychium spathulatum</i>	spoon-shaped moonwort	2
<i>Buteo swainsoni</i>	Swainson's Hawk	2
<i>Campylium calcareum</i>		2
<i>Carex comosa</i>	bearded sedge	3
<i>Chenopodium atrovirens</i>	dark lamb's-quarters	1
<i>Chondestes grammacus</i>	Lark Sparrow	2
<i>Cicindela decemnotata</i>	Badlands Tiger Beetle	2
<i>Coleanthus subtilis</i>	moss grass	2
<i>Entosthodon rubiginosus</i>	rusty cord-moss	1
<i>Eutrochium maculatum var. bruneri</i>	Joe-pye weed	1
<i>Hygrohypnum norvegicum</i>		1
<i>Isoetes howellii</i>	Howell's quillwort	2
<i>Liparis loeselii</i>	yellow widelip orchid	2
<i>Lomatium triternatum ssp. platycarpum</i>	nine-leaved desert-parsley	2
<i>Marsilea vestita</i>	hairy water-clover	1
<i>Megascops kennicottii macfarlanei</i>	Western Screech-Owl, macfarlanei subspecies	1

<i>Melanerpes lewis</i>	Lewis's Woodpecker	2
<i>Olsynium douglasii</i> var. <i>inflatum</i>	satinflower	2
<i>Physella columbiana</i>	Rotund Physa	1
<i>Pohlia andalusica</i>		2
<i>Pohlia lescuriana</i>		2
<i>Pohlia longicollis</i>		2
<i>Pohlia melanodon</i>		2
<i>Potamogeton nodosus</i>	long-leaved pondweed	2
<i>Pterygoneurum lamellatum</i>		1
<i>Rangifer tarandus</i> pop. 1	Caribou (southern mountain population)	2
<i>Recurvirostra americana</i>	American Avocet	2
<i>Schoenoplectus saximontanus</i>	Rocky Mountain clubrush	1
<i>Solidago gigantea</i>	smooth goldenrod	
<i>Speyeria mormonia eurynome</i>	Mormon Fritillary, eurynome subspecies	2
<i>Sphaerium occidentale</i>	Herrington Fingernailclam	1
<i>Taxidea taxus</i>	American Badger	1
<i>Tayloria splachnoides</i>		1
<i>Triglochin debilis</i>	slender arrowgrass	2
<i>Verbena hastata</i> var. <i>scabra</i>	blue vervain	2
<i>Vertigo elatior</i>	Tapered Vertigo	1
<i>Weissia brachycarpa</i>		2

Total species on red list= 45

BLUE LIST		
Scientific Name	English Name	CF Priority
<i>Acorus americanus</i>	American sweet-flag	3
<i>Acrocheilus alutaceus</i>	Chiselmouth	2
<i>Agoseris lackschewitzii</i>	pink agoseris	2
<i>Allium geyeri</i> var. <i>tenerum</i>	Geyer's onion	3
<i>Amblyodon dealbatus</i>		3
<i>Ammodramus leconteii</i>	Le Conte's Sparrow	4
<i>Anaxyrus boreas</i>	Western Toad	2

<i>Anemone canadensis</i>	Canada anemone	3
<i>Ardea herodias herodias</i>	Great Blue Heron, herodias subspecies	2
<i>Argia emma</i>	Emma's Dancer	4
<i>Arnica longifolia</i>	seep-spring arnica	3
<i>Asio flammeus</i>	Short-eared Owl	2
<i>Astragalus bourgovii</i>	Bourgeau's milk-vetch	4
<i>Atrichum tenellum</i>		2
<i>Boloria alberta</i>	Albert's Fritillary	2
<i>Botaurus lentiginosus</i>	American Bittern	2
<i>Botrychium crenulatum</i>	dainty moonwort	2
<i>Botrychium hesperium</i>	western moonwort	2
<i>Botrychium simplex</i>	least moonwort	3
<i>Bryum blindii</i>		2
<i>Buteo platypterus</i>	Broad-winged Hawk	4
<i>Campylium radicale</i>		2
<i>Carex crawei</i>	Crawe's sedge	2
<i>Carex hystericina</i>	porcupine sedge	2
<i>Carex incurviformis var. incurviformis</i>	curved-spiked sedge	3
<i>Carex krausei</i>	Krause's sedge	3
<i>Carex lenticularis var. dolia</i>	Enander's sedge	3
<i>Carex petricosa</i>	rock-dwelling sedge	3
<i>Carex rostrata</i>	swollen beaked sedge	3
<i>Carex tenera</i>	tender sedge	3
<i>Catherpes mexicanus</i>	Canyon Wren	4
<i>Chamaesyce serpyllifolia ssp. serpyllifolia</i>	thyme-leaved spurge	2
<i>Chlosyne whitneyi</i>	Rockslide Checkerspot	3
<i>Chrysemys picta pop. 2</i>	Western Painted Turtle - Intermountain - Rocky Mountain Population	2
<i>Colias meadii</i>	Mead's Sulphur	3
<i>Colias pelidne</i>	Pelidne Sulphur	4
<i>Contopus cooperi</i>	Olive-sided Flycatcher	2
<i>Corynorhinus townsendii</i>	Townsend's Big-eared Bat	2

<i>Cryptogramma cascadensis</i>	Cascade parsley fern	2
<i>Danaus plexippus</i>	Monarch	2
<i>Delphinium sutherlandii</i>	Sutherland's larkspur	3
<i>Didymodon subandreaeoides</i>		3
<i>Dolichonyx oryzivorus</i>	Bobolink	2
<i>Draba lactea</i>	milky draba	3
<i>Draba lonchocarpa</i> var. <i>vestita</i>	lance-fruited draba	2
<i>Draba porsildii</i>	Porsild's draba	3
<i>Dryopteris cristata</i>	crested wood fern	3
<i>Elatine rubella</i>	three-flowered waterwort	2
<i>Eleocharis elliptica</i>	Slender spike-rush	3
<i>Eleocharis rostellata</i>	beaked spike-rush	3
<i>Epilobium glaberrimum</i> ssp. <i>fastigiatum</i>	smooth willowherb	3
<i>Epilobium leptocarpum</i>	small-fruited willowherb	3
<i>Epilobium x treleasianum</i>	Trelease's hybrid willowherb	4
<i>Epipactis gigantea</i>	giant helleborine	2
<i>Eremophila alpestris merrilli</i>	Horned Lark, merrilli subspecies	4
<i>Euderma maculatum</i>	Spotted Bat	2
<i>Euphagus carolinus</i>	Rusty Blackbird	2
<i>Galium labradoricum</i>	northern bog bedstraw	2
<i>Gentianopsis macounii</i>	Macoun's fringed gentian	2
<i>Gomphus graslinellus</i>	Pronghorn Clubtail	2
<i>Grimmia mollis</i>		2
<i>Gulo gulo luscus</i>	Wolverine, luscus subspecies	2
<i>Gymnocarpium jessoense</i> ssp. <i>parvulum</i>	Nahanni oak fern	4
<i>Hemphillia camelus</i>	Pale Jumping-slug	2
<i>Hirundo rustica</i>	Barn Swallow	2
<i>Hydroprogne caspia</i>	Caspian Tern	2
<i>Hygrohypnum alpinum</i>		3
<i>Hypericum scouleri</i> ssp. <i>nortoniae</i>	western St. John's-wort	3
<i>Impatiens aurella</i>	orange touch-me-not	2
<i>Juncus albescens</i>	whitish rush	3
<i>Larus californicus</i>	California Gull	4
<i>Lescurea saxicola</i>		2

<i>Libellula pulchella</i>	Twelve-spotted Skimmer	4
<i>Lindernia dubia</i> var. <i>anagallidea</i>	false-pimpernel	2
<i>Macromia magnifica</i>	Western River Cruiser	2
<i>Magnipelta mycophaga</i>	Magnum Mantleslug	2
<i>Martes pennanti</i>	Fisher	2
<i>Megalodonta beckii</i>	water marigold	4
<i>Minuartia austromontana</i>	Rocky Mountain sandwort	3
<i>Mnium arizonicum</i>		2
<i>Muhlenbergia glomerata</i>	marsh muhly	4
<i>Myotis septentrionalis</i>	Northern Myotis	2
<i>Myotis thysanodes</i>	Fringed Myotis	3
<i>Myriophyllum ussuriense</i>	Ussurian water-milfoil	4
<i>Neotamias minimus oreocetes</i>	Least Chipmunk, oreocetes subspecies	3
<i>Nephroma occultum</i>	cryptic paw	2
<i>Numenius americanus</i>	Long-billed Curlew	2
<i>Oeneis jutta chermocki</i>	Jutta Arctic, chermocki subspecies	4
<i>Oncorhynchus clarkii clarkii</i>	Cutthroat Trout, clarkii subspecies	2
<i>Oncorhynchus clarkii lewisi</i>	Cutthroat Trout, lewisi subspecies	2
<i>Oreohelix strigosa</i>	Rocky Mountainsnail	4
<i>Orthotrichum pallens</i>		2
<i>Ovis canadensis</i>	Bighorn Sheep	3
<i>Pellaea gastonyi</i>	Gastony's cliff-brake	2
<i>Persicaria punctata</i>	dotted smartweed	2
<i>Philonotis marchica</i>		2
<i>Pholisora catullus</i>	Common Sootywing	4
<i>Pinus albicaulis</i>	whitebark pine	3
<i>Pinus flexilis</i>	limber pine	2
<i>Platyhypnidium riparioides</i>		2
<i>Plestiodon skiltonianus</i>	Western Skink	1
<i>Pohlia elongata</i>		3
<i>Pohlia vexans</i>		2

<i>Polites themistocles themistocles</i>	Tawny-edged Skipper, themistocles subspecies	4
<i>Pseudocalliergon turgescens</i>		3
<i>Pyrgus communis</i>	Checkered Skipper	4
<i>Pyrola elliptica</i>	white wintergreen	3
<i>Ranunculus pedatifidus ssp. affinis</i>	birdfoot buttercup	3
<i>Salix tweedyi</i>	Tweedy's willow	4
<i>Salvelinus confluentus</i>	Bull Trout	2
<i>Scrophularia lanceolata</i>	lance-leaved figwort	2
<i>Solidago nemoralis ssp. decemflora</i>	field goldenrod	2
<i>Somatochlora forcipata</i>	Forcipate Emerald	3
<i>Spea intermontana</i>	Great Basin Spadefoot	1
<i>Stellaria obtusa</i>	blunt-sepaled starwort	2
<i>Synaptomys borealis artemisiae</i>	Northern Bog Lemming, artemisiae subspecies	1
<i>Trichophorum pumilum</i>	dwarf clubrush	3
<i>Tyto alba</i>	Barn Owl	2
<i>Ulota curvifolia</i>		2
<i>Ursus arctos</i>	Grizzly Bear	2
<i>Warnstorfia pseudostraminea</i>		3

Total species on blue list= 121

Total species on both lists= 166

Reference:

<http://www.env.gov.bc.ca/cdc/>

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