

## 2008 Grizzly Bear Population Estimate for British Columbia

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Population estimates for 6 Grizzly Bear Population Units have been revised since 2004 (Hamilton et al. 2004). In all cases, current estimates are lower than previous numbers. The revised estimates presented here have been applied to current harvest management as per the Ministry's 2007 Grizzly Bear Harvest Management Procedure.

In one case, the Multiple Regression model was refined by local knowledge about bear population distribution, density and abundance (Table 1). In two other cases, direct bear inventory using Mark-Recapture / Hair Snagging / DNA-based inventory was applied (Mowat and Fear 2004, Proctor et al. 2007). In the final three cases, lower estimates resulted from the re-application of the multiple regression model described by Mowat et al. (2004) using more recent data inputs.

**Table 1.** Revised British Columbia Grizzly Bear Population Estimate

<b>GBPU</b>	<b>2008 Grizzly Bear Population Estimate</b>	<b>Comments</b>
Alta	133	
Babine	286	Was 487 - Refined Model
Blackwater-West Chilcotin	193	
Bulkley-Lakes	407	
Cassiar	730	
Central Monashee	143	
Central Purcell	86	Was 150 - Hair Snag Inventory
Central Rockies	173	Was 235 - Refined Model
Central Selkirk	178	
Columbia-Shuswap	396	
Cranberry	341	
Edziza-Lower Stikine	371	
Finlay-Ospika	689	
Flathead	151	
Francois	140	
Garibaldi-Pitt	18	
Hart	386	
Hyland	326	
Kettle-Granby	81	
Khutzeymateen	376	
Kingcome-Wakeman	230	
Kitlope-Fiordland	346	

Klinaklini-Homathko	109	
Knight-Bute	186	
Kwatna-Owikeno	316	
Moberly	174	
Muskwa	774	
Nation	241	Was 484 - Refined Model and Hair Snag Inventory
North Cascades	23	
North Coast	214	
North Purcell	228	
North Selkirk	264	
Nulki	192	
Omineca	481	Was 726 - Refined Model
Parsnip	473	
Quesnel Lake North	317	
Robson	631	Was 689 - Refined Model
Rockies Park Ranges	164	
Rocky	730	
South Chilcotin Ranges	104	
South Purcell	158	
South Rockies	304	
South Selkirk	58	
Spatsizi	540	
Spillamacheen	141	
Squamish-Lillooet	56	
Stein-Nahatlatch	61	
Stewart	319	
Taiga	92	
Taku	595	
Tatshenshini	360	
Toba-Bute	75	
Tweedsmuir	279	
Upper Skeena-Nass	661	
Valhalla	96	
Wells Gray	374	
Yahk	44	
<b>Total</b>	<b>16,014</b>	<b>Was 16,887 (-873 bears)</b>

Minor adjustments (<20 bears per GBPU) have also been made on the basis of other DNA-based inventories, research projects, and slight refinements of model inputs. As a consequence of these changes, the Ministry now estimates that there are approximately 16,000 Grizzly bears in British Columbia, rather than the ~17,000 (16,887) reported in 2004 (Hamilton et al. 2004). As stated above, these changes have resulted from refinements to the population model. The new estimate does not reflect a decline in the provincial grizzly bear population. Future work on grizzly bear population estimates will be used to provide a range in the provincial estimate, rather than just the “best” estimate. All changes to the estimates have been applied to current harvest allocations.

## References Cited

Hamilton, A.N., D.C. Heard, and M.A. Austin. 2004. British Columbia Grizzly Bear (*Ursus arctos*) population estimate 2004. B.C. Ministry of Water, Land and Air Protection. Victoria, BC. 7pp.

Mowat, G, D.C. Heard, and T. Gaines. 2004. Predicting Grizzly Bear (*Ursus arctos*) densities in British Columbia using a multiple regression model. B.C. Ministry of Water, Land and Air Protection. Victoria, BC. 16pp.

Mowat, G. and D. Fear. 2004. Grizzly Bear density in the Nation River area of British Columbia. B.C. Ministry of Water, Land and Air Protection. Prince George, BC. 13pp.

Proctor, M., J. Boulanger, S. Nielsen, C. Servheen, W. Kasworm, T. Radandt, and D. Paetkau. 2007. Abundance and density of Central Purcell, South Purcell, Yahk, and South Selkirk Grizzly Bear Population Units in southeast British Columbia. B.C. Ministry of Environment. Nelson. BC. 30pp.