



Release Date: January 25, 2012

Will Alison Redford's clearcuts crush bear cubs in their dens?

Conservationists today called upon Alberta premier Alison Redford to halt plans for winter logging would disturb, displace or even kill bears denning in the Castle Special Management Area.

"Logging in winter threatens Alberta's bears at the worst possible time," said WildCanada's Jim Pissot, "when adults and cubs are asleep in their dens."

Numerous studies document the impact of winter logging activities on the dens and on denning behaviour of black bears and grizzly bears. Bears abandon their dens as equipment disturbs them. In many cases, these displaced bears lose weight and have lower survival rates. Cubs born in these dens, and even older cubs denning with their mothers, may not survive disturbance. In more expansive logging operations, bears must travel longer distances, under adverse conditions, to find and excavate new den sites. It is possible that bear mothers and cubs could be crushed and killed by logging equipment that drives over their dens.

"Albertans likely will not take kindly to this cruelty," said Gordon Peterson, of the Castle-Crown Wilderness Coalition.

Spray Lakes Sawmills and CO5 Operating Ground Rules (January 2011) require maps showing den sites of black and grizzly bears. Conservationists have requested copies of these maps and assurances that logging equipment will not disturb bears in their dens, but they have not been forthcoming.

"Researchers recommend keeping up to 1 kilometre away from den sites to allow bears their needed winter sleep," said Nigel Douglas of the Alberta Wilderness Association. "Yet SRD requires that logging equipment only stay 100 metres from known den sites. Why would SRD ignore scientific literature and put Alberta's bears and other wildlife at further risk?"

The government of Alberta designated this portion of the Castle a "Special Place" in 1998, promising—but never providing—permanent legislated protection. A 2011 University of Lethbridge survey found that 80 percent of regional residents opposed the planned logging in the Castle and the same number want the Castle Special Management Area protected as a Wildland Park.

Thousands of Albertans have called for the Castle to be protected as a Wildland Park, celebrating its unique wilderness values. Conservationists oppose this logging proposal and urge permanent protection for southwest Alberta's Castle.

For more information:

Jim Pissot, WildCanada Conservation Alliance, 403-678-0016
Nigel Douglas, Alberta Wilderness Association, 403-283-2025
Gordon Petersen, Castle-Crown Wilderness Coalition: 403 627-3732
Satellite phone: 011 8816 314 66612
Mike Judd, local outfitter, 403-627-2949



Hibernating bears and winter logging

January 2012



BEAR WINTER BEHAVIOUR

Alberta's black and grizzly bears sleep in dens during the winter when conditions are harsh and food is scarce. They are dormant for months, without eating, drinking, defecating or urinating. Unlike "deep hibernators," bears' body temperatures do not decrease during winter sleep, although metabolism is slowed and heart rate drops significantly. Bears put on extra weight in the fall, and live off these fat reserves during winter sleep. Dens are dug into suitable soft soils, located in large hollow trees, under tree roots or large fallen tree trunks or branches, or in natural cavities, caves or rock shelters. In mild winters, bears may wake and wander about outside their dens. Grizzly bears are not considered to be true hibernators, as anything that would disturb a grizzly in summer is highly likely to do the same thing in winter. Bear cubs are born toothless, blind and naked in the den, and survive the winter period on their mother's milk. Female bears can lose up to 40 percent of their body weight during winter hibernation, cub birth and nursing.

ALBERTA SUSTAINABLE RESOURCE DEVELOPMENT (SRD) REQUIREMENTS

In *Spray Lakes Sawmills and CO5 Operating Ground Rules* (January 2011), the Alberta Ministry for Sustainable Resource Development (SRD) requires the sawmill to produce a map showing "known important wildlife sites," including "denning and birthing sites" (7.2.1.3). "Roads, skid trails, landings" are to avoid "den locations" (7.7.1.5). Harvesting activities should avoid "known or discovered den sites" with buffers of "a minimum of 100 m" (7.7.1.8). (SRD has not responded to requests for bear den maps.) Spray Lakes Sawmills also is required to make special considerations for grizzly bears (see 7.7.1.1 et seq.), now listed as a threatened species in Alberta and managed under the Province's Grizzly Bear Recovery Plan. Numerous additional provisions are stipulated for other plant and animal species (including wolverine, pileated woodpecker, long-toed salamander, etc.) and ecological sites (e.g., wetlands, water courses, cirque basins, alpine avalanche paths, etc.)

RESEARCH FINDINGS AND RECOMMENDATIONS

Numerous studies address the impacts of logging activities on bears in their winter dens. Generally, bears select den sites 1 to 2 kilometres from roads, and seem to tolerate industrial activity that occurs more than 1 kilometre from the den. Activity within 1 kilometre—and especially within 200 metres—causes varied responses. Some bears tolerate human and mechanical activity; others abandon their dens, particularly if the activity occurs early in the denning season. Logging activity can destroy den sites and reduce availability of potential denning structures and opportunities. Future den sites are best retained in a logged landscape within larger patches (greater than 1 hectare in size), rather than as individual trees, stumps or other isolated sites.

Bears are particularly vulnerable as they sleep in their winter dens. Disturbance during this period can have greater negative impacts on reproduction and survival than at any other time of the year. Responses vary, from degrees of tolerance and minor behavioural changes to displacement, reduced reproductive success and even death. Bears abandon their dens as equipment disturbs them. In many cases, these displaced bears lose weight and have lower survival rates. Cubs born in dens that are disturbed, and even older cubs denning with their mothers, may not survive disturbance. In more expansive logging operations, bears must travel longer distances, under adverse conditions, to find and excavate new den sites. Bears have been crushed and killed by logging equipment that drove over them asleep in their dens.

Researchers recommend that “activity should avoid known bear dens by at least 1 kilometre.” (SRD requires buffers of only 100 metres.)

SOURCES

Bull, Evelyn L, CG Parks, TR Torgreson (1997) Trees and logs important to wildlife in the interior Columbia River basin. Gen. Tech Rpt PNW-GTR-391. USDA Forest Service, Pacific Northwest Research Station.

Cianrello, Lana M, MS Boyce, DC Heard, DC Seip (2005) Denning behavior and den site selection of grizzly bears along the Parsnip River, British Columbia, Canada. *Ursus* 16(1):47–58.

Davis, Helen, AN Hamilton, AS Harestad, RD Weir (accepted July 2011) Longevity and reuse of black bear dens in managed forests of coastal British Columbia. *Journal of Wildlife Management*.

Davis, Helen (1996) Characteristics and selection of winter dens by black bears in coastal British Columbia. Simon Fraser University, Burnaby, BC.

Hodder, Dexter P, RV Rae. (2005) Bear den site selection and considerations for forest management in the interior of British Columbia. University of Northern British Columbia, Prince George, BC.

Linnell, John DC, JE Swensen, R Andersen, B Barnes (2000) How vulnerable are denning bears to disturbance? *Wildlife Society Bulletin*. 28(2): 400-413.

Mattson, David (1990) Human Impacts on Bear Habitat Use in Bears: Their Biology and Management, Vol. 8, A Selection of Papers from the Eighth International Conference on Bear Research and Management, Victoria, British Columbia, Canada. International Association of Bear Research and Management. pp. 33-56.

Province of Alberta (a). C5 Forest Management Plan (2010) Alberta Sustainable Resource Development. <http://www.srd.alberta.ca/LandsForests/ForestManagement/ForestManagementPlans/ForestManagementUnitC5.aspx>

Province of Alberta (b). Spray Lake Sawmills and CO5 operating ground rules (2011). <http://spraylakesawmills.com/LinkClick.aspx?fileticket=OucR4ia5nYs%3D&tabid=204&mid=616>

Swenson, Jon E, F Sandegren, S Brunberg, P Wabakken (1997) Winter den abandonment by brown bears *Ursus arctos*: causes and consequences. *WildlBiol*. 3: 35-38



WildCanada Conservation Alliance

155 Benchlands Terrace
Canmore, AB T1W 1G2
403-678-0016 | jpissot@shaw.ca | www.MyWildCanada.ca