

Water in the Castle



BY PETER SHERRINGTON

*What would the world be, once bereft
Of wet and wildness? Let them be left.*

Gerard Manley Hopkins, *Inversnaid*,
1881.

The plains of southern Alberta are dry with most places averaging only around 350 mm of annual precipitation. The reason for this aridity is that they fall within the rain shadow of the Rocky Mountains to the west where moist pacific weather systems dump their load mainly in the form of winter snow. The Castle Mountain resort, for example, annually receives over 1,100 mm of precipitation, over 900 mm of which falls as winter snow. It is the water gathered in the headwaters of the Oldman watershed and carried by the streams and rivers to the east that sustains much of the agriculture and settlement of southwestern Alberta. In fact the Castle Special Place, although it only comprises four percent of the Oldman River basin, contributes a massive 30 percent of its yearly water flow.

Critical to this process are the headwater sub-alpine and montane forests that capture the snowfall, protect it from the fierce dry chinook winds for which the area is famous, and regulate its release as water into the headwater streams through the forest's spongy soils. This complex of forests, together with the magnificent mountains, lakes, and grasslands that make up the 1,004 km² of the Castle Wilderness are also second only to Waterton Lakes National Park in Alberta in biodiversity. Its residents include many rare or at-risk species including grizzly bear and bull trout.

A Fading Legislative Commitment to Water in the Castle

The importance of these forests was recognized in the 1906 *Dominion Forest Reserves Act* which included the Kootenay Lakes Dominion Forest Reserve. This area now includes Waterton Lakes National Park and the Castle Wilderness. The Act established the reserves "for the maintenance and protection of the timber growing or which may hereafter grow thereon, for



Blue Lake, Castle Wilderness.

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the protection of the animals and birds therein, and the fish in the waters therein, and for the maintenance of conditions favourable for a continuous water supply."

In 1930 the control of Alberta's natural resources was transferred from the Federal government to the province. Today the recognition of the importance of water is found in Section 4 of the provincial *Forest Reserves Act* (2000): "All forest reserves are set aside and constituted for the conservation of the forests and other vegetation in the forests and for the maintenance of conditions favourable to an optimum water supply in those reserves." The *Forests Act* of the same year, however, has no such purpose statement. The *Alberta Land Stewardship Act* (2009) further dilutes the emphasis on water. Section 2(a) specifies that one purpose of the Act is "to provide a means by which the Government can give direction and provide leadership in identifying the objectives of the Province of Alberta, including economic, environmental and social objectives."

The Castle's value as a critical "water tower" together with its high biodiversity and its central importance for wildlife connectivity throughout the Crown of

the Continent ecosystem should have resulted in its legal protection long ago. Regretfully this has not yet happened and the history of the area is a long litany of unfulfilled expectations and broken promises.

For seven years the Castle was actually protected as part of Waterton Lakes National Park to which it was joined in 1914 when the Carbondale River formed the park's northern boundary. In 1921, however, it was removed from the park and was then administered as a provincial game reserve until 1945. In 1953, the first fire road penetrated along the South Castle River allowing access for recreational use and in 1957 the discovery of the Waterton gas field led to mineral exploration throughout the area. The government then granted subsurface leases in the Castle to Shell Canada. Gas exploration, together with logging, inspired the Pincher Creek Fish and Game Association to call for protection of the South Castle area in 1958. Fifteen years later AWA proposed establishing a South Castle Wildland Recreation Area during the Eastern Slopes hearings. In the same year the Alberta Land and Forests branch expressed concern that "... headwaters of streams have been allowed

to be logged, including some protection forest, in order to meet the quotas.”

In 1974 a government study recommended establishing a park in the headwaters of the Castle River. That same year the Eastern Slopes policy again identified the Castle as having “considerable park potential” and in 1979 the Integrated Management Plan for the Castle River proposed “a large Provincial Park for the Castle River sub-basin.” Nothing came of these proposals. By the mid-1980s the government’s Integrated Resource Plan (IRP) weakened protection to allow the expansion of drilling by Shell while still stating, rather cynically, that watershed protection and recreation remained primary values. In 1993 the



Two of the dozens of protesters who braved bitterly cold temperatures this past winter to oppose plans to clearcut in the Castle.

PHOTO: © G. PETERSEN

Natural Resources Conservation Board approved the expansion of the Westcastle Ski Hill under Vacation Alberta’s four-season resort proposal. But it insisted that most of the Castle be given National Park-like protection and recommended that this protection be given whether or not the project went ahead.

In 1998 it appeared that all the hard work had borne fruit when the Castle, together with 80 other areas, was designated a Special Place in the Special Places 2000 program. Unlike those other 80 areas, however, the Castle has yet to receive its final legislated protection, although its status as a Special Place is confirmed on the Alberta Tourism, Parks and Recreation website. The designation of the area as a Forest Land Use Zone was intended as an interim measure to regulate access to the area. It was to be followed by a revised Integrated Resource Plan that

would finally give the area protection. This plan was not accepted and the Castle is still managed under the outdated 1985 IRP, that still recognizes, largely in name only, watershed protection, recreation and tourism as the highest management priorities.

In 2010 following an extensive but highly flawed public consultation exercise the C5 (Crowsnest) Forest Management Plan was approved. This plan gave scant heed to the avowed priority of watershed protection. The Department of Sustainable Resource Development (SRD) ignored concerted protests from local citizens and concerns from government fisheries specialists and approved a clearcut proposal by Cochrane-based Spray Lake Sawmills (SLS) to log in the Castle in late 2011. Despite more protests, rallies, pickets and a huge letter writing campaign to the Premier the first phase of the logging started this past February.

Government justification for the logging has varied from the need to control pine beetle infestation (there are none currently in the area), fire control (although all major fires in the area since 1934 have occurred in clearcut areas), and the obligation to provide “fibre” to SLS (which has other approved timber sources and the Castle only represents 8 percent of its five-year appetite for timber).

Recreational Threats to Water Quality

The other large and growing threat to Castle water quality is unregulated off-road vehicle use and random camping. The number of motorized recreational vehicles using the area has increased considerably in recent years resulting in the development of an extensive network of illegal trails. These trails parallel and radiate from designated trails; bridges over streams are widely ignored. Random camping sites are usually located adjacent to a water source and often take on the character of villages during the summer months, albeit without garbage and sewage disposal facilities. Logging roads increasingly open up new areas for illegal motorized recreation. Even if roads and bridges are decommissioned or gated this appears only to add to the challenge of the “sport.” Enforcement of regulations is sporadic and often limited to summer long-weekends when the problem becomes particularly acute.

And What About Climate Change?

The degradation of the Castle water catchment area, already well advanced, is also taking place within a context of a changing climate. Whatever these effects they will likely impact the water supply in important ways and we will need intact forest systems to collect and regulate water flow. Today there is little or no old growth forest (over 230 years in age) left in the Castle and mature forest (over 150 years old) is now reduced to nine percent of the region’s forests. A further 5 percent of the region is scheduled to be logged by SLS over the next three to five years. Models predict that mature trees should comprise about 40 percent of an “unmanaged” forest in the Castle. We should also note that the same forest type occurs in adjacent Waterton Lakes National Park where it is neither “managed” for beetle or for fire prevention and it seems to be doing just fine! Clearcuts and immature forest are less efficient at retaining snow and because of disruption of their soils they are unable to filter and regulate the runoff when thaws occur.

Alan Brice, a well-known fly-fishing guide from the Crowsnest Pass, recounted a graphic illustration that occurred last June. He planned to take clients to fish the Oldman River downstream from an extensively logged area. But, because of heavy persistent rains the river had risen in a matter of hours by 170 percent (from 60 to 180 m³/sec) but rapidly dropped within one day to 50 percent above normal flow. By contrast the upper Castle, where clearcut logging is not yet a factor, received the same amount of rain yet because of the retention properties of the forest the water rose only by 25 percent and gradually returned to a normal flow over a period of several days. The Oldman became considerably turbid with the water becoming opaque and the river bottom being extensively scoured; the Castle remained clear and the river bed was not scoured. June coincides with trout spawning and it requires little imagination to predict which river will be the more productive this year.

Fish are, of course, excellent indicators of water quality and river health, and the Castle has two at-risk species of cold-water fish. The province has classified the bull trout as a Species of Special Concern; the westslope cutthroat trout

is classified as Threatened. Lorne Fitch charted the extirpation of the bull trout from the Crowsnest River, mainly as a result of human activities (see Lorne's Article in the June 2012 issue of *WLA*). They still inhabit the cold waters of the upper Castle, but historically they, and cutthroats, could be found as far downstream as Lethbridge. Their retreat has been driven by the warming of the water, in part because of the removal of thermal cover afforded by trees, by changes in water chemistry and flow rates through human agencies (probably including the controversial construction of the Oldman Dam) and by the severe limiting of breeding sites ("redds") through increased fine sediment flow that cements the interstices in the stream gravels where the eggs develop. These fines originate in increased erosion and runoff because of logging and its associated surface disturbance and through stream degradation by motorized off-road vehicles. Sixty years of logging and its associated and resultant activities in the upper Oldman drainage have also eliminated bull trout there.

Hear, Listen to the Voices of the People

It is often the cumulative effect of many small-scale changes in water flow and quality in the smallest streams and through subsurface flow that prove to be critical. These are rarely, if ever, measured or monitored. Stable thick snow cover in mature forests maintains a gentle subsurface flow throughout the winter to sustain stream flows and water quality, yet this critical element is unmeasured and therefore not taken into account. By allowing logging in the Castle Special Place the government has certainly not learned from its mistakes in the Crowsnest, Oldman, and elsewhere.

The Castle area does not exist in a vacuum but forms part of the headwaters of the Oldman River watershed and ultimately of the South Saskatchewan River system that is the main source of water for southern Saskatchewan. In 2010 the Oldman Watershed Council (OWC) produced a *State of the Watershed Report* that rated both the quality and quantity of water in the Castle river sub-basin as good, but all other downstream sectors were judged to be fair or poor.

Phase 1 of the Integrated Watershed Management Plan will follow this report. The planning for the management

plan is well advanced. Its initial intent is to manage and protect the integrity of headwaters and source waters. In 2011 a core team of 37 stakeholders who live and/or work in the watershed identified the top ten risks in most need of action. The top three were: a lack of understanding of the cumulative effects, the degradation and loss of aquatic and terrestrial habitat, and headwaters degradation. They also recognized that groundwater and emerging contaminants are knowledge gaps that have to be addressed. A draft action plan should be completed by mid-2013. In partnership with *Water Matters* a series of two public meetings in eleven communities will be held as part of the process in the fall and winter of 2012-13. It is assumed that the action plan will align with the pending South Saskatchewan Regional Plan (SSRP) and will connect with provincial policy. And that, of course, is where things will get tricky!

The residents of southwestern Alberta and Alberta as a whole, however, have already made their opinions on the Castle crystal clear. Early in 2011 the Praxis Group conducted public opinion surveys among residents of the Municipal District of Pincher Creek, the Town of Pincher Creek, the Municipality of the Crowsnest Pass, the Piikani First Nation, Fort Macleod, the City of Lethbridge and the Town of Coaldale. Praxis found that 78 percent of respondents either strongly or somewhat opposed commercial logging in the Castle, 80 percent supported the establishment of a Wildland Park in the Castle, and 85.5 percent prioritized watershed protection ahead of recreational use in the Castle.

In March 2012 the Praxis Group produced a report on Community Values Assessment for the M.D. of Pincher Creek and the Southwest Alberta Sustainable Community Initiative (SASCI). The report found that out of 38 value statements, "conserving and protecting water sources" was number five, and in a list of eleven land use options "enforcing appropriate use of public lands" was number one. The statement about "more opportunities for motorized recreation, such as off-roading, dirt biking" came in last; "allowing clear-cut logging in the Castle Special Management Area" was second to last.

In late 2011 and early 2012 over 100,000 communications opposing the

logging of the Castle were sent to the Premier and Government of Alberta. The weeks leading up the start of the logging saw hundreds of Albertans attend protest rallies at the site and a protest camp was sustained for three weeks in temperatures that fell to -40°C. These activities received widespread media coverage but on February 1 the first trees fell, albeit not before four protesters were arrested and briefly detained by the RCMP for refusing to leave the site.

The Castle-Crown Wilderness Coalition and local residents have asked the courts to review the Alberta government's decision to allow clearcut logging in the Castle. The case will be heard in Court of Queen's Bench on November 8.

The April 23 provincial election returned a Progressive Conservative government led by Alison Redford who campaigned on a platform of "change." Subsequently the Departments of Sustainable Resource Development and Environment were combined under a single minister but to date little or nothing appears to have changed as far as the Castle is concerned.

The reality in the Castle, however, still remains and needs a positive response from the Redford administration. Without immediate regulation of off-road vehicles in the Castle and a rescinding of the current logging license given to SLS the most prolific source of clean water in southwestern Alberta will continue to be jeopardized. It is just not worth the risk. ♣

As of the time this story went to press, AWA has learned that Alberta Environment and Sustainable Resource Development has put some logging within the Castle on hold pending the completion of the SSRP. While logging slated for the 2012-2013 season (representing about 230 ha of clearcut area, and with an estimated yield of approximately 50,000m³) will be allowed to continue, any further logging is to be deferred.