

Forum Notes: Agriculture, Habitat Enhancement & Public Lands**Agricultural Operations Practices Act (AOPA)**

- This legislation is under the jurisdiction of Alberta Agriculture, Food and Rural Development (AAFRD) and administered by the Natural Resources Conservation Board (NRCB). It provides standards for constructing new and expanding confined livestock feeding operations and manure storage facilities, and for managing all livestock operations, to ensure protection of ground and surface water.
- Seasonal feeding and bedding sites must be located >30m from a water body, or an interceptor must be constructed to divert run-off, or manure must be removed before run-off occurs. CFOs with the following number of animals must get approval from the NRCB before constructing or expanding facilities: 150 beef finishers, 50 milking cow dairy, 30 sows farrow to finish, 5000 laying hens, 2000 broilers (incomplete list).
- Manure must be applied according to standards in the AOPA regulations. Manure must not be spread within 30m of a water well, within 10m of a common body of water if using subsurface injection, or within 30m of a common body of water if surface applied and incorporated within 48 hours. The regulations specify soil testing requirements, nitrate-nitrogen limits, salinity limits, and record keeping requirements. Liquid manure or manure run-off must not leave the land it was applied to.
- **For more information see:** www1.agric.gov.ab.ca (click Search and type in AOPA) or www.nrcb.gov.ab.ca/web/legislation/aopa.cfm

Public Lands Act

- This legislation is administered by Alberta Sustainable Resource Development. It governs the use of all Public Lands, including rangelands and shorelands (bed and shores of lakes, rivers, streams and permanent wetlands – all of which are owned by the Crown).
- The Act regulates activities that might affect the bed and shore of water bodies. Authorization is required for any activity that impacts or modifies bed and shore (e.g. beach creation, clearing aquatic vegetation). A formal disposition is required for permanent structures such as weirs, outfalls, launches, marinas, etc. Despite these provisions, the Act is not an effective tool for preventing all activities that damage bed and shore.
- The Battle River flows through an estimated 100 quarters of Public Lands. These are predominantly leased for grazing, and are native grassland – there is very little cultivation. Other uses include recreational, oil and gas, municipal, vacant and natural areas. The Act regulates activities that occur on these lands.
- Grazing leases on Public Land are normally issued for a 10-year term and are renewable. Along the Battle River, grazing leases are mostly held by individual operators. Lessees are required to stock within carrying capacity, maintain fences, and practice good range management. Public Lands staff inspect range condition before renewing leases. Riparian health assessments are now being done as well. There is a mix of healthy and unhealthy riparian areas on Public Lands, similar to that found on private lands.
- **For more information see:** http://www3.gov.ab.ca/srd/land/u_shorelands_app_reg.html

Water and Agriculture

- Licensed water use from the Battle River for agricultural purposes (stock watering and crop irrigation) is estimated to be about 15,000 dam³ of water year every year. This is about 23% of water licensed from

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BATTLE RIVER WATER MANAGEMENT PLANNING

the Battle River. *Actual* water use by agriculture is estimated to be around 14,500 dam³/year, or 32% of the total amount of water *actually* used from the Battle River.

- Agriculture can impact water quality by adding nitrogen and phosphorous, soil particles and sediment, pathogens (diseases), and pesticides. These contaminants affect water when they are carried off the land by rainwater or melting snow, which then runs-off into lakes, rivers, streams or wetlands, or seeps into groundwater.
- Because agricultural contaminants come from a large area of land rather than just one point (such as a discharge pipe) they are called *non-point source pollution*. Non-point source pollution is difficult to measure and to control. Solutions to non-point source pollution caused by agricultural run-off focus on land management practices.
- Large herds + poor site management + run-off = nutrients and pathogens in the water. Runoff diversions, fencing, and berms can be used to reduce the amount of nutrients and manure entering water bodies.
- Riparian areas can be maintained in a healthy, functioning condition with grazing. Techniques include riparian pasture fencing, rotational grazing, and distributing livestock using proper salt and mineral placement, water developments, shelter, herding, etc.
- Encouraging stewardship and sustainable management of riparian areas is initiated by engaging in awareness with landowners and their communities. Awareness leads to understanding; understanding leads to acceptance. Acceptance of the information and the issues provides a pathway to the adoption of management changes.
- Pesticide run-off can be avoided by increasing crop buffer strips around water bodies, avoiding spray drift onto water and riparian areas, using grassed waterways on erodable upland sites, and educating urban users on responsible pesticide use.
- Some riparian areas may have to be permanently fenced off to recover from high livestock traffic. More effort should be given to recovering denuded Public Lands affecting waterways.
- **For more information, see:** www.cowsandfish.org/grazing.html, or www.agric.gov.ab.ca

Water, Wetlands & Habitat

- Wetlands provide water, food, space and shelter for over 400 species of wildlife in Canada. Wetlands also serve as filters to clean pollutants from ground and surface water, and as sponges to collect and store water during wet periods, which they slowly release during dry periods. They also increase livestock forage production and crop yield. 63% of wetlands in Alberta's settled areas have been lost to drainage and filling.
- Ducks Unlimited has a number of water licenses that it uses for enhancing wetland and waterfowl habitat. These projects also help increase water storage and stabilize water flows in the watershed, provide stock water and forage for producers, increase groundwater recharge, and prevent floods.
- Licensed water use from the Battle River for habitat enhancement is estimated to be about 17,000 dam³ of water year every year. This is about 29% of water licensed from the Battle River. *Actual* water use for habitat enhancement is estimated to be around 16,500 dam³/year, or 37% of the total amount of water *actually* used from the Battle River.
- **For more information see:** www.ducks.ca