

Towards Livestock Watering Regulations Under British Columbia's *Water Sustainability Act*



Photo credit: Sharon Huffman

RANCHING IN B.C.

Over 96 percent of livestock grazing on rangelands in B.C. are cattle. Other grazing livestock include sheep, goats and horses.

Ranching in B.C. relies on about 21 million hectares of Crown rangeland and 5 million hectares of private rangeland. Access to multiple sources of water on range land is essential for animal health and good range management.

In 2015, the B.C. beef herd was approximately 200,000 cattle on over 4,000 ranches with revenue from cattle sales of about \$250 million.

The purpose of this intentions paper is to describe proposed new policies for livestock watering regulations under the *Water Sustainability Act*. Your feedback on these proposed policies will inform final recommendations to government, currently planned for early 2018. These policies are not final and may change as a result of input from the public, First Nations and government direction.

Proposed Policy Objectives:

- ❖ Improve water management and the protection of the environment by facilitating the development of managed direct access sites and off-stream watering systems for livestock;
- ❖ Apply on Crown and private rangelands where there is low livestock density and well distributed livestock use on the land;
- ❖ Allow the diversion and use of water from a stream or aquifer for livestock watering without requiring an authorization, in particular circumstances and subject to specified requirements;
- ❖ Allow construction of small scale works necessary for that diversion and use without an authorization or change approval, in particular circumstances and subject to specified requirements; and
- ❖ Manage construction of instream works and water use by livestock with clear requirements to minimize any adverse effects on aquatic ecosystems and habitat.

Why is Government Considering New Livestock Watering Regulations?

Historically, water supply for livestock on both Crown and private range lands included direct consumption from streams and other water sources on the land, as well as from off-stream watering systems. An authorization (licence or use approval) has always been required for the diversion and use of water from a stream. The coming into force of the *Water Sustainability Act* (WSA) in February 2016 created a new requirement for licensing of non-domestic groundwater use, including groundwater use for livestock watering.

Public expectations for protection of water quality and aquatic ecosystems along with voluntary environmental farm planning have encouraged livestock producers to develop managed direct access sites or to construct and use off-stream watering systems for livestock watering. The B.C. livestock industry has identified a need for secure access to water to maintain healthy livestock. The 2009 Ranching Task Force identified water use by livestock on range lands as the highest priority for regulatory improvement. The proposed livestock watering regulations would facilitate the development of these types of improvements to livestock watering practices on Crown and private range lands and would benefit livestock, the agriculture sector, other water users and the aquatic ecosystem of the stream.

Related Legislation

The WSA was brought into force on February 29, 2016 and updated and replaced the old *Water Act*. Under the WSA, a person may only divert and use water in accordance with an authorization (licence or use approval) or under the regulations, and a person may only make changes in and about a stream in accordance with an authorization, a change approval, an Order, or under the regulations. The WSA provides authority for regulations to be made to allow for construction of works and diversion, storage and use of water for livestock watering without an authorization, subject to prescribed limitations.

The proposed livestock watering regulations will align with *the Environmental Management Act* and its Agricultural Waste Control Regulation (AWCR)¹, which helps ensure agricultural waste does not cause pollution. Under the AWCR regulation, livestock, poultry and farmed game are allowed to access watercourses under specific circumstances. There are also provisions of the *Forest and Range Practices Act* and *Range Act* that will be considered in the development of these policies.

Highlights of Proposed New Regulations

APPLICATION AND SCOPE OF NEW REGULATIONS

Provisions of the proposed regulations will apply to livestock watering on Crown and private lands, but limited only to extensive use areas where there is low livestock density and well distributed livestock on the land. Under these circumstances the water use by livestock is considered insignificant when compared to demand from irrigation and other uses, as well as in relation to typical runoff from the watershed area where the livestock graze.

Under the proposed new regulations extensive use areas, such as grazing areas, seasonal feeding areas, and temporary holding areas, will be as defined and described in the AWCR¹. The AWCR allows livestock access to watercourses in those areas provided that the agricultural waste produced does not cause pollution and the areas are operated, located and maintained to prevent pollution.

Livestock watering in confined livestock areas (i.e., feedlot, paddock, corral, exercise yard and holding area), will not be included in the proposed new regulations and an authorization (licence or use approval) would still be required unless the water supply is from a water purveyor, such as a municipality, improvement district or water utility. Direct livestock access to a watercourse in “confined livestock areas” is also prohibited by the AWCR.

¹ Note that the Agricultural Waste Control Regulation is currently under review and subject to change.

WHAT IS THE DIFFERENCE BETWEEN AN ACT AND A REGULATION?

An Act is a law that has been introduced in the Legislative Assembly as a Bill, has passed three readings and committee-study by the Legislative Assembly, and has received Royal Assent. Acts typically state legal requirements to advance the Acts’ intent and objectives and establish the overall framework within which the government is expected to act.

A Regulation is “subordinate legislation” (made under the authority of an Act) that provides the details of how the requirements laid out in legislation are to be applied, and must remain inside the boundaries established by the Act.

HOW MUCH DOES A COW DRINK?



Photo credit: Fossen Ranch

A beef cow/calf pair on range land in the southern interior requires about 45 litres of water per day. A water flow of 1 litre/second would supply the needs of 1800 cow/calf pairs.

The summer water needs of livestock grazing on range land in the interior is less than 1% of average summer precipitation and less than 0.5% of evaporation. (Kelowna, Kamloops and Williams Lake data)



Photo credit: Copper T Ranch

SPECIFIED REQUIREMENTS FOR LIVESTOCK WATER USE

The proposed livestock watering regulations will improve water management and the protection of the environment by facilitating the development of managed direct access sites and off-stream watering systems for livestock in areas that are not confined livestock areas.

Under the proposed regulations, livestock may be allowed to consume water directly from a stream or water may be diverted from a stream or aquifer to an off-stream watering system, provided that the water is not:

- from a sensitive stream,
- from a water reservation for conservation purpose or to retain water in the stream,
- from a treaty water reservation or the Nisga'a water reservation, or
- restricted from use under a fish population protection order.

Additional exceptions that may be included in regulations relate to grazing activities on Treaty Settlement or Title Lands and within a park or protected area.

Other requirements related to the design and configuration of a livestock watering system may be included. For example, the system will need to be an enclosed system with a float control or with an enclosed return line intended to minimize water use. Diversion works would not be permitted to obstruct fish passage and any intake would need to be adequately screened.

SPECIFIED REQUIREMENTS FOR CONSTRUCTION OF STREAM DIVERSION WORKS

Construction of stream diversion works typically involves making changes in and about a stream. Part 3 of the Water Sustainability Regulation currently allows a number of low risk changes in and about a stream, called 'authorized changes', to be completed subject to the general requirements of Part 3, and any terms and conditions specified by a habitat officer in response to a notification.

Under the proposed regulations, the construction of managed direct access sites and off-stream watering systems for livestock watering will be added to the list of 'authorized changes'. The notification process will provide an opportunity for a habitat officer to consider the particular circumstances of the stream in respect of notified changes and also allow for additional requirements to be specified to protect aquatic ecosystems.

Under the proposed regulations, construction of minor diversion works would be exempted from the notification requirements of Part 3, but subject to specified conditions to protect aquatic habitat.



Photo credit: Smith Creek Farms

TYPES OF WATER ACCESS AND DIVERSION WORKS

[Managed direct access sites](#) allow direct access by livestock to water sources at sites that are built to reduce impacts of disturbance and may be fenced to limit access to riparian areas. These sites improve protection of the stream channel and riparian area with the intention of maintaining water quality.

Nose hole



Photo credit: Clayton Bradley (FLNR)

[Off-stream watering systems](#) divert water from a stream or aquifer for example, through a pipe to a watering trough, for livestock to drink. Off-stream watering systems help protect water quality and aquatic ecosystems, by moving livestock away from direct access to water sources and their riparian areas.

Watering trough with float control



Photo credit: Rob Dinwoodie (FLNR)

Construction of managed direct access sites and off-stream watering systems for livestock watering on Crown land that is regulated under *Range Act* tenures would be exempt from the notification requirements but continue to be regulated under applicable standards and regulations under the *Forest and Range Practices Act* and the *Range Act*.

SPECIFIED REQUIREMENTS FOR CONSTRUCTION OF GROUNDWATER DIVERSION WORKS

The existing Groundwater Protection Regulation (GWPR) sets out requirements for the construction of wells for the diversion and use of groundwater. Under the proposed livestock watering regulations, construction of drilled and excavated wells for the diversion of groundwater for livestock watering on Crown or private land will still have to comply with the particular provisions of the GWPR.

SPECIFIED REQUIREMENTS FOR LIVESTOCK DUGOUTS

The use of a livestock dugout is a common and often essential development for livestock watering. A livestock dugout may be used as a type of diversion work for diverting or impounding water for use by livestock, often constructed by excavating an artificial opening in the ground. Such a dugout may function as a point of access to groundwater, or as a reservoir for storing water for later use. The water in the dugout often may come from surface water runoff, water from small ephemeral streams and from shallow groundwater, or a combination of those sources.

Specific provisions are proposed that would allow for the construction and use of livestock dugouts for diversion and use of water under the regulations, including the following:

➤ **Limitations on existing livestock dugouts**

Authorization not required for an existing livestock dugout used only for watering livestock provided that:

- It was constructed before the coming into force of the regulation under development,
- It does not have a volume greater than 2500 cubic metres,
- It does not include a dam or berm that has a height greater than 2 metres, and
- Part 2 of the dam safety regulation has not been ordered to apply to any dam or berm.

➤ **Limitations on construction of a new livestock dugout**

Authorization not required for the construction of a new livestock dugout used only for watering livestock provided that:

- It is not constructed on a perennial stream, or on an ephemeral stream tributary to a perennial stream,

Diversion Works typically refer to works that are used to divert water from a stream or an aquifer to an off-stream watering system such as a watering trough.

Dugout and concrete sump



Photo credit: Clayton Bradley (FLNR)

Minor Diversion Works typically refers to a type of diversion work that may be constructed with the objective of not significantly disturbing the bed of the stream and/or not requiring excavation within the stream channel. These works are generally temporary in nature and should not require mechanized equipment for construction or maintenance.

Examples of minor diversion works:

Sling pump



Photo credit: Clayton Bradley (FLNR)

Floating screened intake



Photo credit: Doug Fraser (FLNR)

Submerged screened intake



Photo credits: Clayton Bradley (FLNR)

- It does not have a volume greater than 2500 cubic metres,
- It does not include a dam or berm height greater than 2 metres, and
- Application of Part 2 of the dam safety regulation has not been ordered to apply to any dam or berm.

➤ **Limitations on water storage in a livestock dugout**

Authorization not required for diversion and use of water from a stream or an aquifer for storage in a livestock dugout provided that:

- The diverted water is unrecorded water,
- The water is diverted only during periods of snowmelt or rainfall freshet flow, and
- The water is only used for livestock watering purpose.

An authorization will be required for construction of, or use of water from, a new livestock dugout for any other water use purpose (i.e. other than for livestock watering) except for domestic use.

ENVIRONMENTAL PROTECTION

Part 3 of the Water Sustainability Regulation contains requirements intended to protect water quality and aquatic ecosystems. Those provisions will continue to apply to the construction of managed direct access sites or off-stream watering systems under the proposed new regulations. Some additional provisions to minimize any potential environmental impacts from the diversion of water for use by livestock will also be included.

As already provided under Part 3, the proposed regulations will include authority for the engineer or a water manager to require that changes in and about a stream or water diversion and use be done under an authorization if the change or use might have a significant adverse impact on the stream, including the flow of water in the stream. Under those circumstances, the decision maker would be given authority to require that an application be made for an authorization.

Providing comment

The ministry welcomes comments on the proposals outlined in this intentions paper. We invite you to provide your input and share your feedback about these proposed policies and inform the development of proposed livestock watering regulations by visiting the *Water Sustainability Act* blog at:

<http://engage.gov.bc.ca/watersustainabilityact/>

You may also send related questions and comments to government by email at livingwatersmart@gov.bc.ca.

Comments to the Ministry should be made by **February 16, 2018**.

Thank you for your time and input!

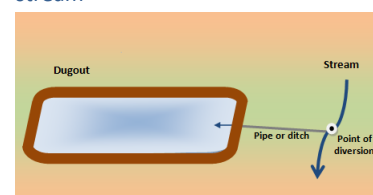
TYPES OF LIVESTOCK DUGOUTS



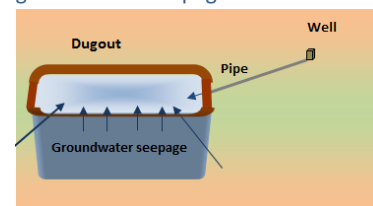
Photo credit: Randy Cairns (ENV)

The source of water in the dugout may be from surface water runoff, water from small ephemeral stream and from shallow groundwater, or a combination of those sources.

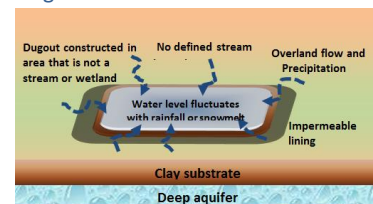
Off-stream dugout filled from a stream



Dugout filled from a well or by groundwater seepage



Dugout filled from surface runoff



FOR MORE INFORMATION

For more on the provincial water program visit: www.gov.bc.ca/water

Other water related questions? Email: livingwatersmart@gov.bc.ca.

