



*Watershed Management Plan:
Water Quantity Component*

Drought Adaptation and Management: Policy Advice



Susanna Bruneau

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About This Document

The Battle River and Sounding Creek watersheds are prairie fed, and are more susceptible to periodic droughts. To limit the impact of drought in the region adaptive and ongoing drought management is necessary to protect the social, economic and environmental welfare of the watershed community.

The following document outlines the BRWA's policy advice for drought adaptation and management in the Battle River and Sounding Creek watersheds in Alberta. Drought adaptation and management is one component of the BRWA's watershed management planning process.

This advice was developed with broad input from watershed residents, stakeholders and decision-maker, and is supported by information compiled in the BRWA's *Understanding the Policy Context for Drought Management Battle River and Sounding Creek Watersheds*¹.

Accompanying Guidelines for Implementation

This policy advice document is accompanied by corresponding implementation guidelines². Whereas the policy advice outlined below puts forward an overarching policy direction for drought adaptation and management, the implementation guidelines document describes options for management strategies to support the implementation of this policy direction.

Policy Statement

The objective of this policy is to enhance drought adaptation and drought management planning in the Battle River and Sounding Creek watersheds to address social, economic, and environmental impacts of drought to ensure watershed sustainability. Policy advice is comprised of two components: (1) drought adaptation, and (2) drought management.

Drought adaptation is defined as actions society takes to reduce the social, economic and environmental vulnerability to potentially negative impacts of climate variability, including drought. Drought adaptation strategies are employed when impacts of drought are not observed.

Drought management refers to the responses and actions that are employed when the impacts of drought are experienced.

¹ Bruneau, S. (2012). *Understanding the Policy Context for Drought Management Battle River and Sounding Creek Watersheds*. BRWA Watershed Planning Document. Available from <http://www.battleriverwatershed.ca/publications/232/view>

² Bruneau, S. (2013). *Drought Adaptation and Management: Implementation Guidelines*. BRWA Watershed Planning Document.

Policy Advice Goals

Drought Adaptation Policy Goals:

1. To work proactively to minimize potential impacts of climate variability, including drought;
2. Continuous improvement to the health of aquatic and terrestrial ecosystems; and
3. Encourage community knowledge and skill to implement self-reliant approaches to managing social, economic, and environmental effects of climate variability, including drought.

Drought Management Policy Goals:

1. Encourage collaborative rural and urban water management during low water periods;
2. Encourage development of appropriate support networks for watershed residents to manage social, economic, and environmental impacts of drought; and
3. Encourage watershed sustainability to enable recovery of economic, ecological, and community well-being to long-term sustainable levels after a drought event.

Policy Application

This policy advice applies to the Battle River and Sounding Creek watersheds within Alberta. All four orders of government (municipal, provincial, federal and First Nations), urban and rural residents, agricultural producers, business and industry, environmental and community organizations, academia, recreational users, and watershed stewardship groups are encouraged to collaborate with the intent of this policy, and to utilize its guidelines when developing drought policies.

The BRWA's Watershed Management Planning Process is non-regulatory. This means that implementation of policy advice and implementation guidelines developed for each of the 12 watershed management priority areas is dependent on the voluntary actions of watershed residents, stakeholders and decision-makers. The BRWA will work to support the implementation of policies and management practices that align with the goals and objectives outlined in this document.

Policy Advice

1 Agriculture

Adaptation is an integral part of sustainable agricultural management practices to reduce vulnerabilities caused by climate variability and their associated changes in economic, ecological, and social wellbeing.

Adaptation Policy Advice

Agriculture sectors must explicitly recognize the impacts of short term climate variability and long term climate change impacts to agricultural operations. Drought Adaptation strategies should be developed and implemented as part of routine management decision-making in advance of drought periods.

Management Policy Advice

Drought management plans should be developed before a drought occurs and fully implemented during drought periods. Implementation should occur in a reasoned and systematic way, remembering that a degree of flexibility in responses should be part of plan implementation.

2 Individual, Family, and Community Support

Drought has a significant impact on the health and wellbeing of watershed residents. Being proactive can limit the social impacts to individuals, families and communities.

Adaptation Policy Advice

Government and community leaders must explicitly recognize the impacts of short term climate variability and long term climate change impacts to individual, family and community. Strategies are developed and implemented to ensure agencies, communities, and families understand how climate variability affects them.

Management Policy Advice

Government and community leaders must recognize when their community is experiencing drought and begin implementing response plans aimed at supporting individual, family and community wellbeing. Strategies are developed and implemented to support communities and families during drought periods.

3 Natural Areas

The degradation of land in the planning area caused by climate variability and climate change, and human activities is of concern because it reduces the natural potential of the land, as well as the depletion of surface and groundwater resources. But above all, negative repercussions of poor management of natural areas have a compounding effect during periods of drought, thereby reducing the ability of the watershed community to cope with drought periods in the future.

Adaptation Policy Advice

People with land management decision making authority must unambiguously recognize that management of natural areas is of primary importance to the mitigating effects of drought. Strategies to improve the health of natural areas should be developed and implemented on a routine basis

Management Policy Advice

People with land management decision making authority must unambiguously recognize that management of natural areas is of primary importance to the mitigating effects of drought. Drought management strategies are implemented to maintain the health of natural areas during periods of drought.

4 Water Supply

Water security is a key component of the social, environmental, and economic wellbeing of everyone in the watershed. During a drought there is potential that new water licence holders will not be able to access and utilize the water resource. Moreover, with respect to water quality, during low flow periods the ability of receiving waters to assimilate contaminants (i.e. nutrients, bacteria, metals) is minimized. This has an impact on water intake and treatment processes, as well as impacts to the health of the aquatic environment.

Adaptation Policy Advice

With respect to water quantity, all users of the water resource must explicitly recognize that during water shortage periods it is probable that not all water licence holders will be able to access and utilize the water resource. Drought adaptation strategies should be developed with a view toward reducing the risk that some water licence holders will not be able to access and utilize the water resource during deficit periods.

With respect to water quality, all users of the water resource must recognize that the ability of receiving waters to assimilate contaminants is greatly impaired. Drought adaptation strategies should seek to minimize contaminants entering the aquatic environment through improved management of both point and non-point sources.

Management Policy Advice

With respect to water quantity, all users of the water resource must explicitly recognize that during water shortage periods it is probable that not all water licence holders will be able to access and utilize the water resource. Drought management strategies should be implemented with a view toward reducing the impact of water scarcity on other water licence holders.

With respect to water quality, all users of the water resource must recognize that the ability of receiving waters to assimilate contaminants is greatly impaired. Drought management strategies should be implemented to deal with increased concentration of contaminants in the aquatic environment through improved water treatment facilities and land management practices.

About the Battle River Watershed Alliance

The Battle River Watershed Alliance (BRWA) was created in 2006 as a non-profit society. Shortly after its formation, the BRWA was selected by Alberta Environment, under *Water for Life: Alberta's Strategy for Sustainability*³, as the designated Watershed Planning and Advisory Council (WPAC) for the Battle River and Sounding Creek watersheds within Alberta.

Under Alberta's *Water for Life* strategy, WPACs have a role to report on the state of the watershed, lead in watershed planning, develop best management practices, educate users of the water resource and foster stewardship activities within the watershed.

The BRWA works in partnership with communities, individual watershed residents, watershed stewardship groups, all four orders of government (municipal, provincial, federal and First Nations), industry, academia, and environmental organizations to promote the health and sustainable management of the land and water resources of the Battle River and Sounding Creek watersheds using the best science and social science available.

We exist to have a watershed that sustains all life by using sound knowledge, wisdom, and wise actions to preserve our watershed for future generations.

³ Government of Alberta. 2003. *Water for Life: Alberta's Strategy for Sustainability*. Available from <http://www.waterforlife.alberta.ca/>

About BRWA's Watershed Management Planning Process

As the provincially designated Watershed Planning and Advisory Council (WPAC) for the Battle River and Sounding Creek watersheds within Alberta, the BRWA has a role to lead in watershed planning.

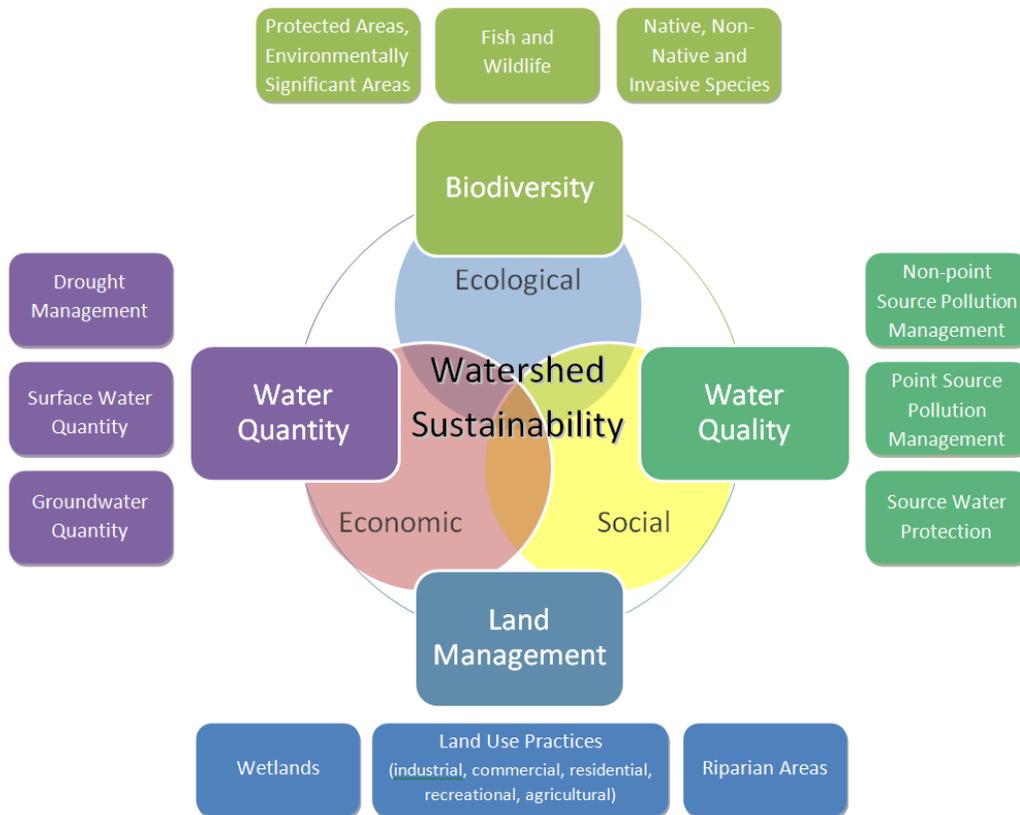
The BRWA's Watershed Management Planning Process was initiated in 2011. This planning process will ultimately result in a comprehensive Watershed Management Plan for the Battle River and Sounding Creek watersheds in Alberta, and is guided by the *Battle River Watershed Management Planning Process Phase Two Terms of Reference*⁴.

The Watershed Management Planning Process will address a number of watershed management priorities that have been identified through the BRWA's State of the Watershed Report⁵ and extensive public engagement. These priorities are outlined in the figure below.

Policy advice and implementation guidelines will be developed for each of these priority areas. These documents will comprise the Watershed Management Plan for the Battle River and Sounding Creek watersheds in Alberta.

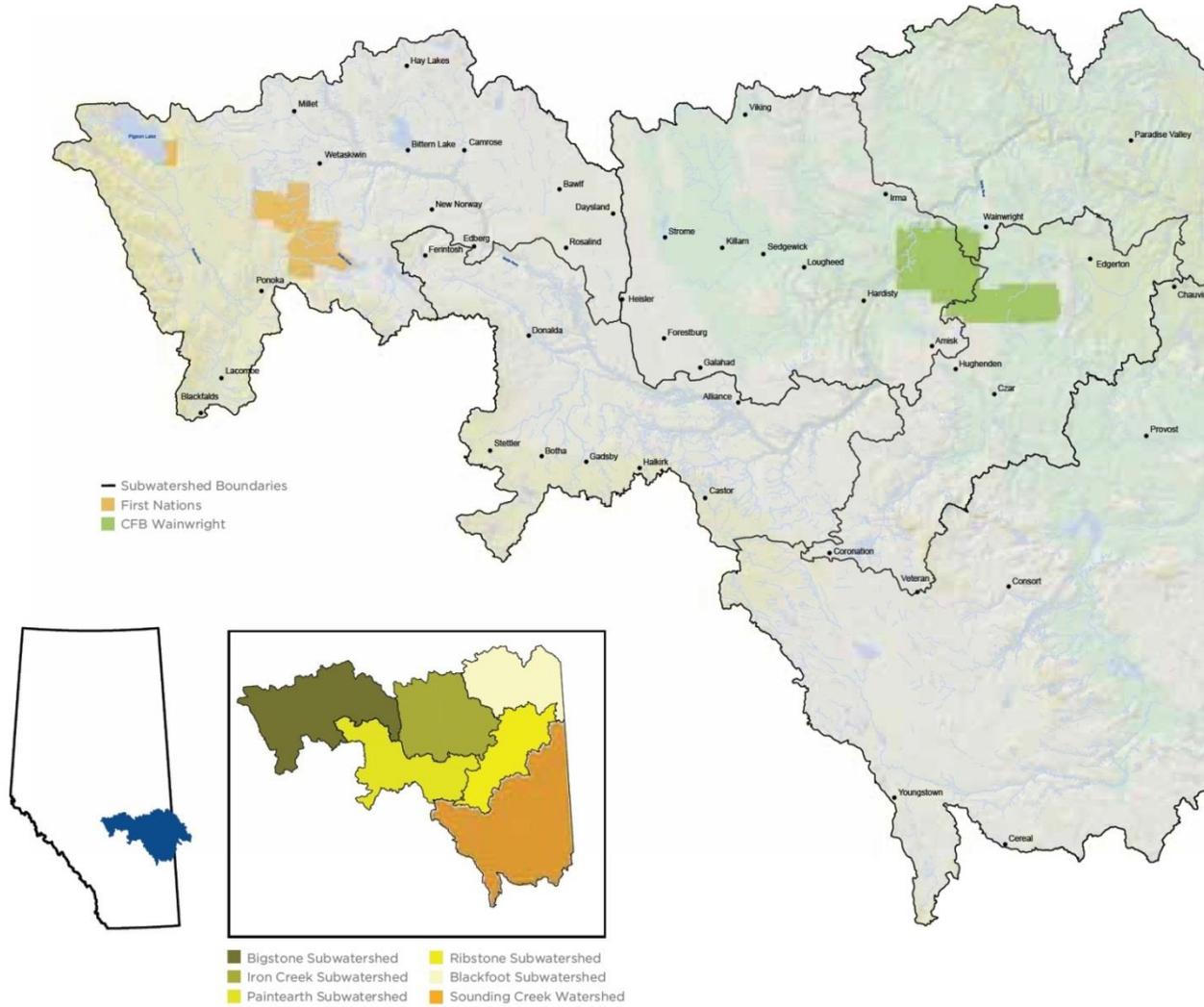
⁴ Battle River Watershed Alliance (BRWA). 2012. *Battle River Watershed Management Planning Process Phase Two Terms of Reference*. Battle River Watershed Alliance Watershed Planning Report. Available from <http://www.battleriverwatershed.ca/publications/161/view>

⁵ Battle River Watershed Alliance (BRWA). 2011. *State of the Battle River and Sounding Creek Watersheds Report 2011*. Battle River Watershed Alliance. Available from <http://www.battleriverwatershed.ca/content/state-watershed-report>



Key components of the BRWA's Watershed Management Planning Process

Battle River and Sounding Creek Watersheds within Alberta



This is our battle: the watershed we all share, and the fight to maintain a healthy environment, vibrant communities, and a stable economy.

Battle River Watershed Alliance

Gateway Centre (2nd Floor)

4825 51 Street

Camrose Alberta

T4V 1R9

1 888 672 0276

www.battleriverwatershed.ca

Connecting People to Place for Action

