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# Discussion Paper: Environmental Reserve in Alberta

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# About this Paper

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## Introduction

Miistakis has developed this discussion paper to outline the intent of Environmental Reserve as per the Municipal Government Act (MGA), how it is applied across Alberta, and to provide observations on the implications of how the new Conservation Reserve tool may affect Environmental Reserve application by municipalities.

## Background

It has been argued that traditionally, Alberta municipalities have not been directly empowered to regulate or protect the environment because they are created by and derive their powers primarily from the MGA. Under the MGA, municipalities can only exercise their powers for municipal purposes which are broadly stated in the Act. Up until recent amendments to the MGA, municipal purpose was: to govern effectively, provide public services and infrastructure, and develop and maintain healthy communities. Generally speaking, municipalities were not directly empowered to regulate or protect the environment (Mallet, 2005).

In 2016, the Alberta legislature approved amendments to the MGA which included an addition to the municipal purpose: “to work collaboratively with neighbouring municipalities to plan, deliver and fund intermunicipal services” (Province of Alberta, 2016). Still no mention or recognition of the role municipalities have in protecting or stewarding the environment.

After the 2016 amendments were approved, the Province hosted another round of discussions to address gaps identified in the 2016 amendments. Currently the Alberta Government is considering adding another municipal purpose to guide the actions of municipalities - “environmental well-being” (Province of Alberta, 2017). While it is unclear what environmental well-being means, it is the first recognition in the MGA that one of the municipal purposes relates to the environment. Municipalities have traditionally taken on the responsibility as environmental stewards in their communities regardless of whether or not it was specified as a municipal purpose in the MGA. One of the tools that has been used indirectly to help achieve environmental stewardship (or, as is now being termed environmental well-being), is Environmental Reserve dedication.

The author's research revealed municipalities have applied Environmental Reserve in ways that either indirectly or at times directly benefit the environment, though the intent in the MGA is to avoid development on hazardous lands, prevent pollution, preserve natural drainage courses and ensure access to water bodies.

## Methodology

The Miistakis Institute developed a survey and completed six interviews with municipal staff to seek information from municipalities regarding how they currently use existing and newly proposed environmental conservation tools, and what resources would best support improved use of these tools. Tools included in the survey were environmental reserves, environmental reserve easements, conservation easements, and the newly proposed Conservation Reserves. The survey was distributed in March and April, 2017 by the Alberta Urban Municipalities Association (AUMA), the Alberta Association of Municipal Districts and Counties (AAMDC), and the Alberta Professional Planning Institute (APPI). There were 35 respondents, and completion or participation in the questions varied from section to section. The respondents represented jurisdictions in all areas of Alberta and included those working for both urban and rural jurisdictions. This survey was not statistically representative due to the small number of respondents and completion rates, however it did provide insights into how Environmental Reserve is being applied in some municipalities.

The survey provided a starting point for the project and supplemental research was completed to analyze the intent of Environmental Reserve policy in the MGA, as well as its use by Alberta municipalities in land use planning.

## Legislative Intent of Environmental Reserve

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Division 8 of the MGA (Province of Alberta, 2000) gives subdivision authorities the power to require a subdivision applicant to dedicate land for specified municipal purposes. Where land is taken as reserve, the municipality takes title to the land. Municipal and Environmental Reserves can be required to preserve natural features and open spaces. However, the Act restricts the amount and type of land that can be required, limiting the usefulness of reserves for ecosystem protection (Mallet, 2005).

Frederick A. Laux, Q.C. in his text *Planning Law and Practice in Alberta* describes the purpose of Environmental Reserves as:

*“For the purpose of preventing environmental degradation that might result from development, and to guarantee against private development occurring on hazardous land that might result in damage to persons or property, the Act permits a subdivision authority to require the dedication of potentially problematic land encompassed in the subdivision application. Such land is to be dedicated as an “Environmental Reserve”. More specifically, land that consists of a swamp, gully, ravine or coulee, or which is a natural drainage course, as well as land that is subject to flooding or is, in the opinion of the subdivision authority, unstable, may be required to be dedicated regardless of how much of the subject land falls within those descriptions. In addition, as a means of preventing pollution or to provide public access, a subdivision authority can require an owner to dedicate a strip of land of not less than six metres in width abutting the bed and shore of any lake, river, stream or other body of water as an Environmental Reserve” (Frederick A. Laux, 2013).*

Laux goes on to clarify that while a subdivision officer has discretionary authority for taking Environmental Reserve, this must be exercised within the confines of established legal principles. The objective of section 664 of the MGA is to secure the physical integrity of a proposed subdivision to guard against developments that might endanger persons or property. Therefore, according to Laux, in theory, Environmental Reserve

MGA sections informing  
Environmental Reserve

- s. 664** Environmental reserve
- s. 671** Use and disposal of reserve land
- s. 676(1)** Changes to environmental reserve's use of boundaries
- s. 677** Road, etc., over reserve land

is not to be used to secure ‘pleasing’ natural areas or to provide permanent wildlife habitat (Frederick A. Laux, 2013). This is demonstrated in a City of Calgary report to their Utilities and Environment Committee in 2007. The report states:

*“The definition of Environmental Reserve (ER) allows for a fairly narrow interpretation of the conditions under which a setback of six metres or more would be permitted. Specifically, it would be necessary to demonstrate that such a setback will prevent pollution or is needed to ensure public access. Additional setback widths to provide for buffering, habitat protection, wildlife corridors, general open space or other potentially desirable attributes cannot be provided by means of Environmental Reserve” (City of Calgary Utilities and Environmental Protection, 2007).*

There are three other sections in the MGA that affect Environmental Reserves. Section 671(1) of the MGA allows Environmental Reserve to be used as a public park or, if not used as a park, it must be left in its natural state. Public park in this case does not involve intensive recreational uses that require substantial improvements, rather public park refers to allowing public access to the environmental reserve for passive recreational use. (Frederick A. Laux, 2013)

Although section 671 restricts the use of land designated as Environmental Reserve, there is a mechanism for expanding the uses. A council may pass a bylaw to authorize the use of Environmental Reserve for other purposes after advertising the proposed bylaw (s.606) and holding a public hearing. The MGA is not explicit in what uses a council may authorize, but Laux infers that such uses would likely be those that are consistent with the purposes for taking the land as Environmental Reserve:

*"It would seem quite illogical to allow a municipality to take Environmental Reserve only to use it as a site for something like a fire hall".* (Frederick A. Laux, 2013)

Environmental Reserve may also be used for the construction, installation and maintenance of a public or private utility within, on, over or under the reserve land, or to maintain and protect other reserve land as long as it does not adversely affect the public interest (s.677).

Laux observes that subdivision planning is a negotiation and at times a developer may strategically provide an area to the municipality that may go beyond the objectives outlined in s. 664 of the MGA in order to gain other advantages during the

#### Division 9

#### Use and Disposal of Reserve Land

#### **Use of reserve land, money**

671(1) Subject to section 676(1), environmental reserve must be left in its natural state or be used as a public park. (Province of Alberta, 2000)

Road, etc., over reserve land

**677** Despite section 671, a municipality or a municipality and a school board may authorize

(a) the construction, installation and maintenance, or any of them, of a roadway, public utility, pipeline as defined in the *Oil and Gas Conservation Act* or transmission line as defined in the *Hydro and Electric Energy Act* on, in, over or under reserve land, or

(b) the maintenance and protection of reserve land,

if the interests of the public will not be adversely affected. (Province of Alberta, 2000)

subdivision application process. (Frederick A. Laux, 2013). To some the MGA has clear intentions regarding Environmental Reserve dedication, but because planning is a complexity of systems coming together on the landscape, implementation is not so cut and dry. This paper will provide some examples of Environmental Reserve *intent* versus Environmental Reserve *application*.

## Application of Environmental Reserve

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### Conservation Tools Survey Results

To understand how municipalities were using the conservation tools available to them, Miistakis developed the Conservation Tools Survey for Municipalities in early 2017 and completed six one-on-one interviews prior to wide distribution. The survey was designed to understand municipal awareness of existing conservation tools, whether the tools are used, and if they are used, how. We also wanted to understand if the tools are not used, what are the barriers to using them. In March and April, the Miistakis survey was distributed through the Alberta Urban Municipal Association (AUMA), Alberta Association of Municipal Districts and Counties (AAMDC) and Alberta Professional Planners Institute (APPI) to their membership. In total, 35 individuals representing 21 municipalities, 1 non-profit, 1 provincial department, and 2 utility corporations participated in the survey (3 participants did not indicate an affiliation). Due to the participation rates, the results are not to be considered statistically representative however they do offer insight into how Environmental Reserve is used by some municipalities.

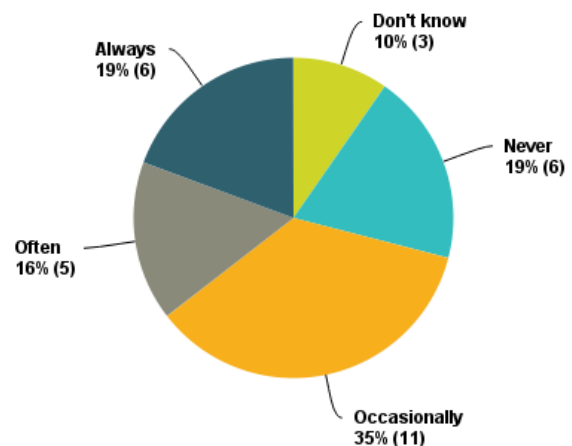
#### Q1. DOES YOUR MUNICIPALITY USE ENVIRONMENTAL RESERVES?

##### Results

Nineteen percent of respondents said they *never* use Environmental Reserve while an equal number of respondents said they *always* use the tool. The highest percentage of respondents stated it is a tool they either occasionally use or often use (35% and 16% respectively).

##### Comment

As part of this project, Miistakis also completed several one-on-one interviews using the same questions. One





interviewee stated that Environmental Reserve is used wherever possible and is one of the main tools for municipalities. However, it was cautioned that use of it was monitored closely because their jurisdiction had been advised they must stay within the parameters of the definition (in the MGA) and conservation is not part of it. Despite this interpretation of Environmental Reserve both by the person being interviewed and the research in the section above, Q2 below indicates that some municipalities identify environmentally significant lands, ecological value or green space as circumstances in which Environmental Reserve is used.

Q2. IF YES, IN WHAT CIRCUMSTANCES DO YOU USE ER?

#### Results

Of the 17 responses to this question, seven identified environmentally significant or sensitive lands, ecological value, or provision of green space as the circumstance where the Environmental Reserve designation is used.

#### Comment

Some responses indicated that the Environmental Reserve tool may be underutilized in some areas (e.g., “we use it only next to creeks”). Others may stretch the intent of the tool, using it for what they deem as at risk habitat or community wellness.

The survey results indicate some municipalities may have been creative with their application and interpretation of how Environmental Reserve is to be used at the time of subdivision. This might be a result of municipalities thinking they have limited tools in their toolbox to protect the environment, possibly because they view the MGA as the only regulatory guidance for protecting the environment (e.g., the Alberta Land Stewardship Act enables conservation tools available to municipalities).

If a municipality identifies an area critical to protecting the environment, there has been no tool in the MGA that gives the municipality direct power to do so. Other tools in the MGA include Environmental Reserve Easements (s.664.2) but this must be negotiated with the land owner and is a voluntary option. Environmental

#### MGA Environmental Reserve Easements

664(2) If the owner of a parcel of land that is the subject of a proposed subdivision and the municipality agree that any or all of the land that is to be taken as environmental reserve is instead to be the subject of an environmental reserve easement for the protection and enhancement of the environment, an easement may be registered against the land in favour of the municipality at a land titles office (Province of Alberta, 2000).

Reserve Easements are not limited to the same purposes as Environmental Reserves. However, if the land owner does not want to put the land into an Environmental Reserve Easement, even though it is extremely important to the overall environmental integrity or context of the municipality, it is not a possibility to put an Environmental Reserve Easement on the parcel.

### Q3. WHAT IS YOUR CRITERIA FOR USING ENVIRONMENTAL RESERVE?

#### Results

Of the 17 responses, four participants indicated that ecological value, environmentally significant features or natural landscapes were part of the criteria. Over half of the respondents (9) reference the MGA criteria or specified one or more of the following: wetlands, water bodies, escarpments, flood fringe areas, riparian areas, ravines, steep slopes, natural drainage courses.

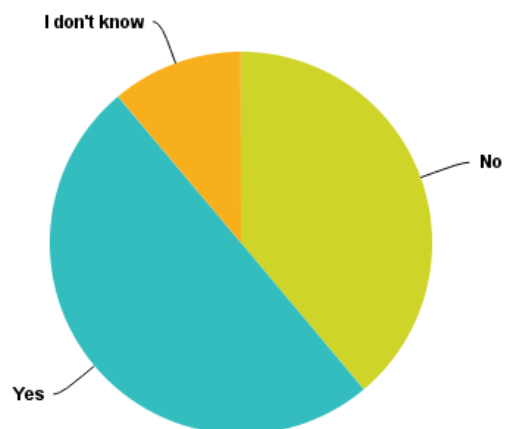
#### Comment

Most respondents followed criteria for Environmental Reserve as provided for in the MGA demonstrating alignment with the Provincial policy. The four respondents that included environmentally significant lands as part of the criteria for dedicating Environmental Reserve may have an expanded interpretation of the criteria or recognize the inherent results when certain unstable, undevelopable lands are preserved.

### Q4. DO YOU HAVE A POLICY OR GUIDELINE FOR USING ENVIRONMENTAL RESERVE?

#### Results

Half of the 18 respondents said they do have an Environmental Reserve policy or guideline. Three of the respondents indicated their Environmental Reserve policy was included in their MDPs and one in their Land Use Bylaw.



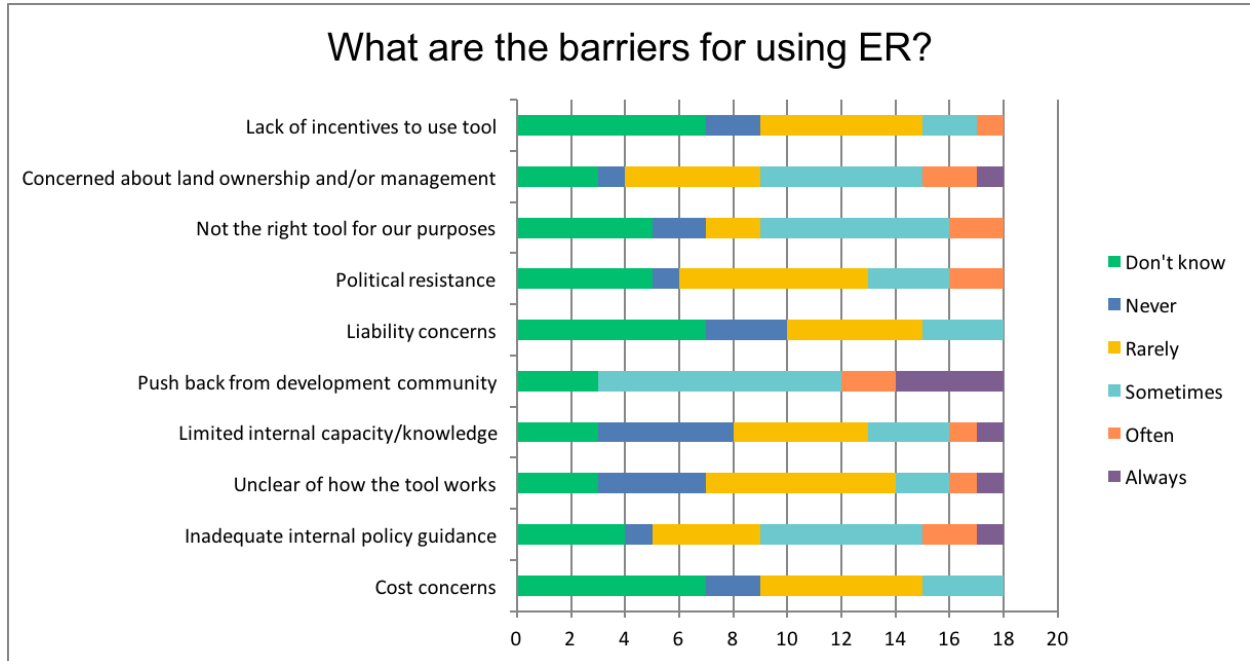
#### Comment

Nine respondents indicated they had a municipal Environmental Reserve policy stated it was included in open space plans or neighbourhood design guidelines which are typically non-statutory plans. It is possible the Environmental Reserve policy or guidelines are not in statutory documents because they are included in the MGA.

## Q8. WHAT ARE THE BARRIERS FOR USING ENVIRONMENTAL RESERVE?

### Results

This question listed options for participants to rate in terms of frequency of concern.



### Comment

Of the 18 respondents that answered this question, the barrier 'push back from the development community' had responses ranging from *sometimes*, *often* and *always* but no one indicated they *never* or *rarely* get push back from the development community which indicates this barrier is the most common challenge to survey participants. Respondents felt somewhat confident in their organization's internal capacity and knowledge related to applying Environmental Reserve. Liability and cost concerns did not rank high in terms of barriers to using Environmental Reserve. As well, management or ownership of Environmental Reserve lands did not appear to be a large barrier. Barriers to the Environmental Reserve tool do not seem to be causing high concern for those that responded to the survey.

## SURVEY SUMMARY

The survey revealed there may be circumstances where Environmental Reserve may be applied in areas beyond the objectives set out in the MGA. This indicates that municipalities are struggling to find ways to protect ecological or environmentally significant areas in their communities and in part be due to the limited number of direct conservation tools available for a municipality. The only option available under the previous MGA for municipalities to protect and conserve

environmentally significant land within their jurisdiction is when the landowner voluntarily enters into an agreement with the municipality (Environmental Reserve Easement), or if a municipality has the means to purchase the parcel from the landowner.

Other conservation tools have been available under the Alberta Land Stewardship Act (Province of Alberta, 2009), however they require the municipality to enter into partnerships with other organizations (land trusts, etc.) and/or develop programs to implement the conservation schemes. If municipalities do not have the experience or resources to develop these conservation tools and programs, they may seem more cumbersome than dedicating Environmental Reserve. Miistakis developed *ALSA's Conservation Tools for Municipalities: A Webinar Series* as a resource for municipalities looking for ways to conserve ecological lands in their jurisdiction. To access the webinars visit [www.rockies.ca](http://www.rockies.ca).

## Examples of Environmental Reserve Use

The following section provides examples of municipal Environmental Reserve policies or guidelines that may be of interest to other jurisdictions. Many of the policies or guidelines provided reference the provincial document, *Stepping Back from the Water: A Beneficial Management Practices Guide for New Development Near Water Bodies in Alberta's Settled Region*. This document was developed to provide guidance on what minimum setbacks are needed to protect aquatic ecosystems from development such as buildings, roads and other permanent structures. It is intended to be used as a handbook and provides decision makers with information for determining setback widths and designing effective buffers adjacent to water bodies (Alberta Environment and Sustainable Resource Development, 2012).

### STRATHCONA COUNTY

*Municipal Policy Handbook: Dedication of Municipal Reserve, Environmental Reserve and Environmental Reserve Easement*

Strathcona County developed a policy handbook to guide the dedication of Municipal Reserve, Environmental Reserve, and Environmental Reserve Easements during subdivision as authorized under the MGA. The handbook states that when proposed subdivisions involve environmentally sensitive lands, the subdivision authority will use the appropriate MGA policies to incorporate reserve land into the County's green infrastructure inventory for public benefit and long term sustainability of the natural landscape.

Environmentally Sensitive Lands include a range of potential areas for things such as wildlife movement, aquifer recharge, unique habitat, and biodiversity. Typically ER would not be used for conserving environmentally sensitive lands as described in the handbook, but the County does specify ER will be used for protecting riparian lands, which would contribute to the overall green infrastructure in the County. (Strathcona County, 2016)

## MUNICIPAL DISTRICT OF FOOTHILLS

### *Municipal Development Plan (MDP)*

The MD of Foothills provides a definition of Environmental Reserve in the Glossary section of their MDP:

*“Environmental Reserve: In accordance with Section 664 of the Municipal Government Act, lands are undevelopable because of its natural features or location, such as unstable slopes or flood prone; environmentally sensitive such as a gully, ravine or coulee; or a strip of land abutting the bed and shore of a body of water or water course, that a developer may be required to dedicate at the time of subdivision. Environmental Reserve must be maintained in its natural state or used as a park” (Municipal District of Foothills, 2010).*

Another resource provided by the MD of Foothills to help determine the use of Environmental Reserve is the *Developer’s Guide to the Riparian Setback Matrix Model* (Haag, Logan, White, & Stewart, 2010).

Aquality Environmental developed the Riparian Setback Matrix Model for the MD of Foothills in 2010. The Guide states the model is scientifically-based, legally defensible and is in alignment with the MGA sections 663 and 664, specifically addressing the ability for municipalities to dedicate Environmental Reserve lands abutting the bed and shore of any lake, river, stream or other body of water for the purpose of preventing pollution (see text box to the right). By having a model

**“Pollution”** means any non-point source impacts on the environment from substances such as sediments, nutrients, pesticides, bacteria, parasites or toxic chemicals that reach a watercourse by surface or subsurface flow through adjacent land, and the unauthorized release of any “deleterious substance” as defined in the Fisheries Act (Canada), or the unauthorized release of any substance whether non-point or otherwise that may cause an adverse effect under provisions of the Environmental Protection and Enhancement Act. (Haag et al., 2010)

adopted and in place, the MD has set expectations for developers, which may decrease reactive negotiations regarding Environmental Reserve dedication once a development proposal is submitted.

The Guide is organized as a “Frequently Asked Questions” document and answers questions such as:

- What is an Environmental Reserve?
- When do I need to dedicate reserve lands?
- What is the purpose of an Environmental Reserve?
- How much land will be taken as an Environmental Reserve?

The Guide then provides instructions on how the riparian setback is calculated. It is interesting to note that while the previous MGA (Province of Alberta, 2000) provided a *minimum* six meter setback, the Foothills Guide indicates the Environmental Reserve dedicated setback will range between 15 and 75 meters<sup>1</sup>.

#### CITY OF GRANDE PRAIRIE

##### *Mapping of Environmental Reserve (ER) and Science Based Setbacks for ER*

The purpose of this study was to map riparian corridors, wetlands and other environmentally significant areas and establish science-based setbacks for Environmental Reserves. This project also used the riparian setback matrix developed for the MD of Foothills. The difference is this project mapped and prioritized areas for protection (City of Grand Prairie, 2012).

Environmentally significant areas in this case include: natural patches (large and small), connectivity and hydrological functions.

#### TOWN OF CANMORE

##### *Municipal Development Plan (2016)*

###### **Environmentally Sensitive Areas**

For the Town of Canmore, Section 4.2 of the MDP, Environmentally Sensitive Areas (ESA) are *areas of land established for the protection of sensitive natural features and ecologic functions and diversity, primarily for the protection of wildlife and*

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<sup>1</sup> Municipalities can establish additional setbacks by using a science based approach similar to that used in *Stepping Back from the Water* (Alberta Environment and Sustainable Resource Development, 2012).

*waterbodies*. One of the possible conservation tools listed in Canmore's MDP to protect these environmentally sensitive areas is the Environmental Reserve tool pursuant to the MGA.

#### Protection of Wildlife Corridors and Habitat Patches

Where it has jurisdiction, the Town states it will *work with landowners in the protection of wildlife corridor and habitat patches through land use districts, Environmental Reserve designations where appropriate, or conservation easements*.

The section on Environmental Reserve Dedication indicates the Environmental Reserve reference above in the protection of wildlife corridors and habitat patches is related to water bodies and escarpments based on them being wildlife habitat and movement features (Town of Canmore, 2016).

#### LACOMBE COUNTY

##### *Use and Management of County Reserve Lands (2006)*

This Lacombe County policy outlines the intent of Environmental Reserve and how Environmental Reserve will be used in new subdivisions.

##### Use and Management of Environmental Reserves (ER)

[Environmental Reserve] *ER lands are intended to protect the natural environment, protect people and property from hazardous conditions (e.g. flooding) and provide public access to or along lakes and rivers*.

##### New Environmental Reserves

*The County will require dedication of Environmental Reserve in new subdivisions to protect natural features such as shorelines, steep slopes and drainage courses. Dedication of new Environmental Reserve may also be required to provide public access to lakes and rivers* (Lacombe County, 2006).

#### SUMMARY

Review of various guides and policies, and interviews with municipal planners, reveals that municipalities have developed methodologies to guide using Environmental Reserve as a setback required to prevent pollution in water bodies. However, it was also found that municipalities often seek to connect Environmental Reserves to the idea of environmentally significant lands. Environmentally significant lands generally include lands that are important to wildlife movement, wildlife habitat, ecosystems and waterbodies.

The intersection between the *intent* of Environmental Reserve and the subsequent *benefits* that occur by protecting those lands makes Environmental Reserve dedication somewhat complex depending on which interests you are representing in the subdivision process.

## The Changing Definition of Environmental Reserve

The Government of Alberta has completed three rounds of amendments to the MGA. The latest amendments have been introduced to the legislature but not yet passed. Here is the link to the current MGA Review website that provides links to the three Bills and the *Discussion Guide* that informed the most recently proposed changes: <http://mgareview.alberta.ca/whats-changing>.

Summary of MGA Bills:

<b>Bill</b>	<b>Description</b>	<b>Status</b>
Bill 20	Municipal Government Amendment Act (MGAA) (Province of Alberta, 2015) First round of amendments.	Passed by the Legislature March 2015
Bill 21	Modernized Municipal Government Act (MMGA) (Province of Alberta, 2016) Second round of amendments. Included changes to ER and introduced CR.	Passed by the Legislature December 2016
Bill 8	An Act to Strengthen Municipal Government (ASMG) (Province of Alberta, 2017) Based on <i>Continuing the Conversation Discussion Guide</i> .	Introduced to the Legislature April 10, 2017

The following section outlines the changes to the Environmental Reserve policy in the MGA prior to the 2016 amendments (Province of Alberta, 2000), and the current version passed by the legislature December 2016 (Province of Alberta, 2016). The comparison is being provided so municipal planners are aware of the changes and have the opportunity to familiarize themselves with the policy changes. The regulations may provide further clarity on Environmental Reserves and are expected in the summer of 2017.



NOTE: MGA s.663 'Reserves not required' and the 'bed and shore' reference (17(3)) in the *Surveys Act* (Province of Alberta, 2013) are provided because they are referenced in Bill 21 s.664 (Province of Alberta, 2016).

### ***Municipal Government Act***

(Province of Alberta, 2000)

#### ENVIRONMENTAL RESERVE

*664(1) Subject to section 663, a subdivision authority may require the owner of a parcel of land that is the subject of a proposed subdivision to provide part of that parcel of land as environmental reserve if it consists of*

- a. a swamp, gully, ravine, coulee or natural drainage course,*
- b. land that is subject to flooding or is, in the opinion of the subdivision authority, unstable, or*
- c. a strip of land, not less than 6 metres in width, abutting the bed and shore of any lake, river, stream or other body of water for the purpose of*
  - i. preventing pollution, or*
  - ii. providing public access to and beside the bed and shore.*

*(2) If the owner of a parcel of land that is the subject of a proposed subdivision and the municipality agree that any or all of the land that is to be taken as environmental reserve is instead to be the subject of an environmental reserve easement for the protection and enhancement of the environment, an easement may be registered against the land in favour of the municipality at a land titles office.*

### ***Bill 21 Modernized Municipal Government Act***

(Province of Alberta, 2016)

Emphasis has been added to highlight the sections that have been changed or added.

#### ENVIRONMENTAL RESERVE

*664(1) Subject to section 663 **and subsection (2)**, a subdivision authority may require the owner of a parcel of land that is the subject of a proposed subdivision to provide part of that parcel of land as environmental reserve if it consists of*

- a. a swamp, gully, ravine, coulee or natural drainage course,*
- b. land that is subject to flooding or is, in the opinion of the subdivision authority, unstable, or*

- c. *a strip of land, not less than 6 metres in width, abutting the bed and shore of any lake, river, stream or other water body.*

*(1.1) A subdivision authority may require land to be provided as environmental reserve only for one or more of the following purposes:*

- a. *to preserve the natural features of land referred to in subsection (1)(a), (b) or (c) where, in the opinion of the subdivision authority, those features should be preserved;*
- b. *to prevent pollution of the land or of the bed and shore of an adjacent water body;*
- c. *to ensure public access to and beside the bed and shore of a water body lying on or adjacent to the land;*
- d. *to prevent development of the land where, in the opinion of the subdivision authority, the natural features of the land would present a significant risk of personal injury or property damage occurring during development or use of the land.*

*(1.2) For the purposes of subsection (1.1)(b) and (c), “bed and shore” means the natural bed and shore as determined under the Surveys Act.*

*(2) If the owner of a parcel of land that is the subject of a proposed subdivision and the municipality agree that any or all of the land that is to be taken as environmental reserve is instead to be the subject of an environmental reserve easement for the protection and enhancement of the environment, an easement may be registered against the land in favour of the municipality at a land titles office.*

### **Reserves not required**

#### MUNICIPAL GOVERNMENT ACT

**663** *A subdivision authority may not require the owner of a parcel of land that is the subject of a proposed subdivision to provide reserve land or money in place of reserve land if*

- (a) one lot is to be created from a quarter section of land,*
- (b) land is to be subdivided into lots of 16.0 hectares or more and is to be used only for agricultural purposes,*
- (c) the land to be subdivided is 0.8 hectares or less, or*
- (d) reserve land, environmental reserve easement or money in place of it was provided in respect of the land that is the subject of the proposed subdivision under this Part or the former Act.*

## **Natural boundary**

### SURVEYS ACT

*17(1) A surveyor who needs to determine the position of a natural boundary when performing a survey under this Act may do so by any survey method that has the effect of accurately determining its location at the time of survey, relative to the surveyed boundaries of the affected parcel.*

*(2) When surveying a natural boundary that is a body of water, the surveyor shall determine the position of the line where the bed and shore of the body of water cease and the line is to be referred to as the bank of the body of water.*

*(3) For the purposes of this section, the bed and shore of a body of water shall be the land covered so long by water as to wrest it from vegetation or as to mark a distinct character on the vegetation where it extends into the water or on the soil itself.*

The most recent version (Bill 21) of the Environmental Reserve policy does not seem to change the intent of Environmental Reserve. The largest change is the purpose of Environmental Reserve is now addressed in a new section 664(1.1) and clarifies the preservation of the *natural* features of a swamp, gully, ravine, coulee or natural drainage course, land that is subject to flooding, land that is unstable, or a strip of land abutting a water body. Regulations are expected in 2017 and may further clarify the changes to the Environmental Reserve policy.

## Observations on Intent and Use of Environmental Reserve

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Environmental Reserves are intended to prevent pollution to the land next to water bodies, allow access to water bodies, avoid natural drainage courses (swamp, gully, ravine, coulee), prevent development on unstable or unsuitable lands (flood plains, steep slopes, etc.), and avoid hazards to humans or the built environment as a result of development.

Cursory review of policies and guidelines may lead one to think Environmental Reserve is being used beyond the initial intent of the MGA policy. However, many municipalities use a systems perspective regarding pollution prevention, broadly interpreting the controls needed to prevent pollution of the land adjacent to water bodies.

For example, The City of Grande Prairie’s rationale is a representative example. They state the aim of using scientifically-based riparian setbacks is to remove a certain percentage of pollutants from runoff, and one of the most effective ways to protect aquatic ecosystems and prevent pollution is to ensure riparian areas are intact, healthy and functional (City of Grand Prairie, 2012). Actions taken to prevent pollution of land next to water bodies has numerous co-benefits that result in protection of environmentally sensitive areas. Pollution prevention done well is done at a systems scale. The table below demonstrates how the application of the intent of Environmental Reserve produces several co-benefits.

Figure 1 Sample of Environmental Reserve Benefits and Co-benefits

<b>ER Intent</b>	<b>System elements that are considered when aim is to prevent pollution</b>	<b>Sample co-benefits of pollution prevention</b>
<ul style="list-style-type: none"> <li>▪ Pollution prevention of wetlands, lakes, rivers, streams</li> <li>▪ Prevention of development on hazardous lands (steep slopes, floodways, etc.)</li> <li>▪ Avoidance of natural drainage features</li> </ul>	<ul style="list-style-type: none"> <li>▪ Riparian corridors</li> <li>▪ Slope and height of bank</li> <li>▪ Vegetation cover (includes grasslands, forest, shrubs)</li> <li>▪ Soil texture and type</li> </ul>	<ul style="list-style-type: none"> <li>▪ Wildlife habitat</li> <li>▪ Wildlife connectivity</li> <li>▪ Scenic corridors/vistas</li> <li>▪ Public access</li> <li>▪ Hydrologic function</li> <li>▪ Biodiversity</li> <li>▪ Green infrastructure function</li> </ul>

(City of Grand Prairie, 2012)

These co-benefits may be triggering the push back from the development community indicated in the Miistakis Conservation Tools Survey. In order for municipalities to comply with preventing pollution of water bodies, land that is more than the minimum six meters from the bed and shore must be protected and those lands often provide environmental benefits other than just pollution prevention or hazardous lands.

## Environmental Reserves and Conservation Reserves

A new tool included in Bill 21, the Modernized Municipal Government Act (Province of Alberta, 2016) is the Conservation Reserve tool that enables a municipality to purchase a parcel of environmentally significant lands (as deemed by the subdivision authority and as guided by the Municipal Development Plan) for fair market value at the time of subdivision. This new policy is provided as a tool to

municipalities to preserve ecologically significant lands, and may have impacts on the use of Environmental Reserve.

## Conservation Reserve

**664.2(1)** *A subdivision authority may require the owner of a parcel of land that is the subject of a proposed subdivision to provide part of that parcel of land to the municipality as Conservation Reserve if*

- (a) in the opinion of the subdivision authority, the land has environmentally significant features,*
- (b) the land is not land that could be required to be provided as Environmental Reserve,*
- (c) the purpose of taking the Conservation Reserve is to enable the municipality to protect and conserve the land, and*
- (d) the taking of the land as Conservation Reserve is consistent with the municipality's municipal development plan.*

**(2)** *Within 30 days after the Registrar issues a new certificate of title under section 665(2) for a Conservation Reserve, the municipality must pay compensation to the landowner in an amount equal to the market value of the land at the time the application for subdivision approval was received by the subdivision authority.*

**(3)** *If the municipality and the landowner disagree on the market value of the land, the matter must be determined by the Land Compensation Board.*

Figure 2 Comparison of Conservation Reserve and Environmental Reserve

	<b>Purpose</b>	<b>Timing</b>	<b>Requirements</b>
<b>Conservation Reserve</b>	To protect environmentally significant areas as determined by the subdivision authority	At subdivision	<ul style="list-style-type: none"> <li>• Fair market value required.</li> <li>• The subdivision authority must deem it environmentally significant lands, and lands must be identified in the Municipal Development Plan</li> <li>• Lands not to be required as Environmental Reserve</li> </ul>
<b>Environmental Reserve</b>	To avoid development of unstable lands and to prevent pollution of	At subdivision	<ul style="list-style-type: none"> <li>• No compensation required.</li> <li>• Scientifically defensible re: setbacks to prevent pollution</li> </ul>

	land adjacent to water bodies as set out in the MGA Prevention of development on hazardous lands (steep slopes, floodways, etc.) Avoidance of natural drainage features		<ul style="list-style-type: none"> <li>• Engineering report concluding unstable/hazardous lands.</li> <li>• Determine lands are a natural drainage course</li> <li>• Determine lands are subject to flooding</li> </ul> NOTE: Requirements that have provincial guidelines are setbacks from water (Stepping Back) and flood mapping (although not comprehensive Province wide).
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During interviews with municipal staff for the Conservation Tools Survey, several questions were asked about the new Conservation Reserves tool:

- Will Conservation Reserves affect the application of Environmental Reserves?
- What role will Conservation Reserves play in how municipalities dedicate Environmental Reserve?
- Will there be challenges to dedicating lands as Environmental Reserve when they might fit similar criteria as Conservation Reserve?
- What will take precedence? Compensation vs conservation.

It is hopeful the regulations for Conservation Reserves will answer some of these questions. In the meantime, the following section provides discussion points related to the questions above.

It is well known that municipalities have limited budget to allocate towards conservation overall. This policy seems to indicate municipalities must purchase lands to conserve or protect the environment. However, it is important to note section 664.2(1)(b) *the land is not land that could be required to be provided as Environmental Reserve*. This indicates that if a municipality can justify Environmental Reserve dedication, negotiations should not need to take place with the landowner or developer for compensation to designate the lands as Conservation Reserve.

It is predicted that confusion and push back from the development community will occur between dedications of Environmental Reserve and Conservation Reserve because of the co-benefits achieved through pollution prevention of lands adjacent to water bodies. It is recommended municipalities proactively create criteria to guide and clarify what qualifies as Environmental Reserve lands. This could be completed during a Municipal Development Plan update or created as a stand alone policy document to guide municipal decision makers. For municipalities that

have the internal capacity or resources, the criteria could then be applied to **conceptually** identify and map potential Environmental Reserve lands. “Conceptually” is highlighted because as municipal planners understand, the details are not typically known until an application for subdivision is made.

By doing this, municipalities will be able to provide developers with criteria for Environmental Reserve lands prior to the application for subdivision being submitted.

## Conclusion and Next Steps

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The Conservation Tools Survey results revealed the level of familiarity for Environmental Reserve as a land use tool is high across municipalities in Alberta, however the legislative intent of Environmental Reserve may not always align with how it is applied.

Municipalities that have created criteria or completed inventories and modelling of riparian setbacks in order to support the designation of Environmental Reserves may be better guarded against the push to instead use Conservation Reserves (and therefore compensation) to protect those lands. For those municipalities that have not had the resources to complete riparian setback models, they will require support and tools to do this to avoid potentially losing important lands to development that otherwise would prevent degradation of water quality or paying compensation to developers to protect lands that they did not have the capacity or resources to prove were eligible for Environmental Reserve dedication.

An important next step for this document is to follow up on regulations that should be released by Municipal Affairs later in 2017. These regulations will hopefully clarify what the Province means by environmental well-being (as proposed in the MGA Discussion Guide for municipal purpose) and the many questions related to Conservation Reserves. If municipalities are already defining environmentally significant areas in relation to Environmental Reserve lands, how will that differ from environmentally significant features under the Conservation Reserve policy?

Another next step could be for the Province to develop a guide for defining swamp, gully, ravine, coulee or natural drainage course as per MGA s.664.1(a). This would be a helpful tool for municipalities, providing guidance akin to *Stepping Back from the Water*.

And finally, municipalities striving to conserve environmentally significant lands that may not qualify as Environmental Reserve do have other conservation tools available to them under the Alberta Land Stewardship Act as well as supporting resources such as the webinars available through the websites of Community Conserve ([www.communityconserve.ca](http://www.communityconserve.ca)) or the Miistakis Institute ([www.rockies.ca](http://www.rockies.ca)).



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