



GHGT-11

The Saskatchewan Environmental Code: A Provincial Approach for Managing GHGs Emissions

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Abstract

This paper provides a broad description of the Saskatchewan Environmental Code (SEC), its purposes, and potential implications for the provincial energy and environmental sectors.

We start with an introduction to the framework of the Saskatchewan Environmental Code, followed by a discussion of the Results-Based Regulations (RBR) and the differences between RBR and the more traditional Prescriptive-Based Regulations (PBR). Next, we summarize the 19 chapters grouped in the five divisions of the SEC and finish with a brief description of the public review and future tasks for the full development of the SEC.

The new Saskatchewan Environmental Code is a key component of the Ministry's move to a Results-Based Regulatory model which will enhance environmental protection while encouraging innovation. The new model represents a significant shift away from prescriptive legislation and regulations to a focus on holding proponents accountable for achieving desirable environmental outcomes.

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Selection and/or peer-review under responsibility of GHGT

Keywords: Saskatchewan Environment Code; Results-based Regulations; Regulated Emitters; GHG emissions;

1. Introduction

In Canada, the division of powers between federal and provincial governments was set out in the Constitution Act, 1867. Generally, the federal government has jurisdiction over matters of regional (multiple provinces), national and international scope while the provinces have jurisdiction over matters of a local or private nature. Some matters were not contemplated in 1867 when Canada was formed and therefore are not assigned to either level of government. An example is environmental management.

Saskatchewan's current regulatory regime was developed in the 1970s, to address industrial point source pollution and unregulated resource harvest. During the summer of 2008, the Saskatchewan Ministry of Environment began a review of its environmental management model which resulted in

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recommendations to develop a results-based approach for environmental management. The ministry decided to move toward the results-based regulatory (RBR) model including modernizing several key pieces of legislation in 2010.

Although the Saskatchewan Environmental Code (SEC) is the first of its kind in Canada, the concept of the code is common in other sectors. For example the 2010 National Building Code of Canada (NBC) is in an objective-based code format in which all requirements are linked to specific objectives [1]. At the international level, the Swedish Environment Code is another good example [2].

One of the goals of this new regulatory model is promote innovation and efficiency for both government and industry [3]. Development of this Code required the involvement of more than 200 experts and industry leaders from companies, associations, government agencies, environmental organizations, municipalities, First Nations and Métis communities, academia and private individuals.

The code is a critical element of the results based approach, which includes increased transparency and stronger accountability tools, more attention to high-risk areas, improved client service and ultimately, enhanced environmental management. The Code will have the same legal standing as a regulation.

2. Results-Based Regulations

The results-based regulation (RBR) focuses on required environmental outcomes and encourages innovation by making the proponent accountable to find the best way to achieve or exceed the required outcomes. It focuses on producing the desired environmental outcomes, not on producing more rules and it is up to industry (public and private) to decide how to achieve them. While the proponent is accountable for compliance, the role of the regulator (Saskatchewan Ministry of Environment) is to assure the public that compliance is being achieved. The elements of the results-based reform include (Figure 1):

- Legislative Updates
- The Saskatchewan Environmental Code
- Modernized information technology and management
- Process mapping of value streams
- New compliance framework
- New Client Service Office
- Organizational changes
- Change management and cultural change

The core principles that govern the Saskatchewan's Results-Based system include:

- Legally enforceable, demanding standards that place pressure on industry for continuous improvement;
- Active enforcement to hold industry accountable for meeting the standards; and,
- Transparency, particularly publishing of information to promote environmental progress.

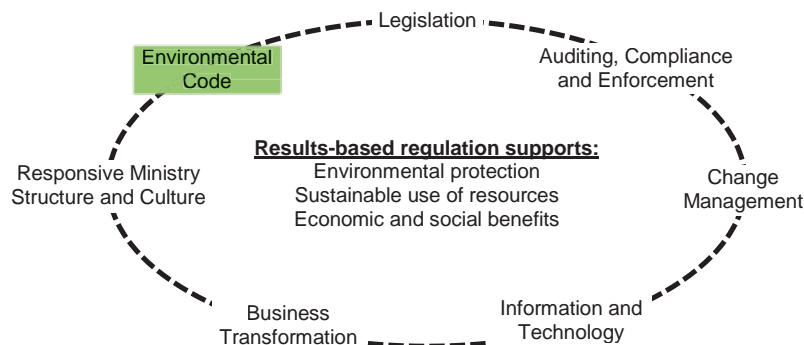


Figure 1: Code – One component of RBR (Source: after [4])

To support the new results-based approach, several key pieces of enabling legislation were modernized and introduced in the fall 2009 legislative session and passed by the legislature in spring 2010. The legislative amendments included establishing the authority to create the Saskatchewan Environmental Code, which is comparable to the National Building Code of Canada, in that it will provide guidance to regulated persons (proponents) on the design of environmental systems and facilities, with chapters that describe the acceptable results and standards for particular activities associated with development.

Prescriptive-based regulations (current) lend themselves to rigid permits creating the “how”. This is a barrier to economic growth and innovation and it is hardly sustainable. Results-based regulations focus on “what” environmental outcome is required and leaves the “how” to the proponent where appropriate. The government is less involved in dictating what the operator does and focuses more on monitoring and enforcing performance. The operator/proponent (owner) is accountable for performance while the Ministry of Environment is accountable to the public.

Figures 2 and 3 illustrate the differences between the prescriptive-based regulations (PBR) and the results-based regulations (RBR) [5]

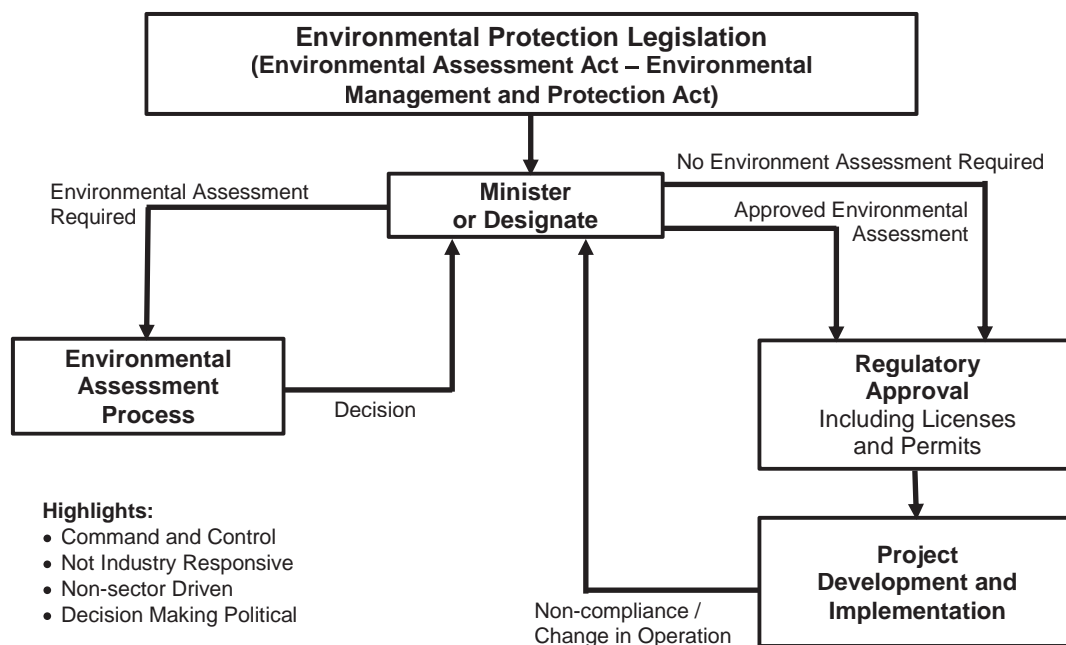


Figure 2: Saskatchewan Environmental Regulatory under the PBR model as in 2008-2009

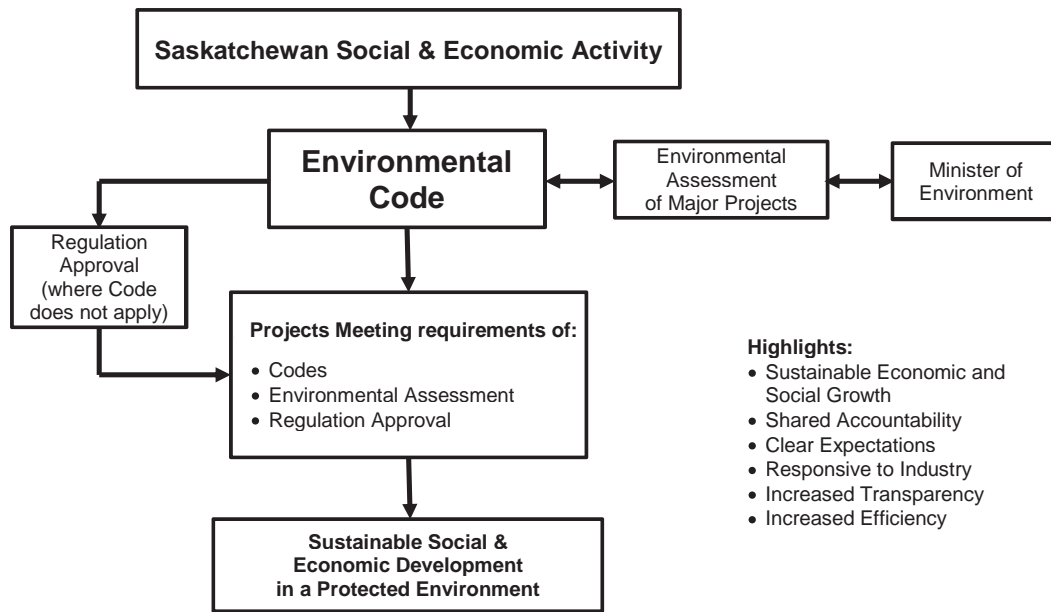


Figure 3: Saskatchewan Environmental Regulatory under the RBR model as in 2012

3. Structure of the Saskatchewan Environmental Code

The Saskatchewan Environmental Code is a set of 19 legally binding requirements (chapters) to be followed by anyone conducting activities regulated by four main acts:

- The Environmental Management and Protection Act (EMPA)
- The Forest Resources Management Act (FRMA)
- The Management and Reduction of Greenhouse Gases Act (MRGGA)
- The Environmental Assessment Act

Each of the 19 chapters has a general format consisting of three parts:

- General requirements that apply regardless of choosing an alternative or acceptable solution
- Alternative Solution is a plan developed by the proponents that is designed to meet the results-based objectives and is certified by a qualified person
- Acceptable solution to predefine a process or plan that is designed to meet the minimum level of performance to satisfy the results-based objectives

Some of these chapters require a “qualified person” to provide certificates or opinions as to whether or not any activity conforms to the requirements in the chapter. A “Qualified Person” is a professional with expertise in the protection of environment and public health. The qualified persons are either members of a class of persons set out in the SEC or an individual designated by the minister for one or more purposes or activities that are governed by legislation that references the SEC. A Qualified Persons Advisory Committee assists in the selection of qualified persons for particular activities. If a “Qualified Person” fails to provide adequate performance, the minister can apply six tools for enforcement and compliance. These tools could go from conducting an investigation through to prosecution.

Under the SEC, the regulated community has two options for achieving compliance:

- Follow acceptable solutions as defined in the SEC and developed by technical committees
- Develop an alternative solution that must be signed off by a qualified person and accepted by the Minister of Environment.

Acceptable Solution is a practice that has been assessed to achieve an environmental outcome. Alternative solution is a practice that needs to be certified by a qualified person to achieve a desired environmental outcome.

Each chapter with an alternative solution includes the results-based objectives describing in broad terms the overall outcomes, or results, that the ministry expects the regulated person to achieve. The wording of the results-based objectives includes several key phrases:

- “Limit the probability” is used to acknowledge that the chapters cannot entirely prevent those undesirable situations from happening.
- “Unacceptable adverse effects” and “unacceptable impairment or damage” acknowledge that the chapters cannot eliminate all adverse effects, impairment or damage.

The first version of the SEC has 19 chapters grouped in five divisions [6]:

Chapter	Content
Division A - Air Management and Protection	
A.1.1 Baseline Emission Level (BEL) and Annual Return	<ul style="list-style-type: none"> Establishes measurement, reporting and verification requirements for calculating annual inventories of GHG emissions at regulated facilities whose emissions are greater than 50,000 tonnes of CO₂ per year. The BEL is based on 2006 emissions or 3 year averages. There are 29 regulated emitters in SK These emitters will be required to pay carbon compliance payments to the province if reduction targets are not met.
A.2.1 Halocarbon	<ul style="list-style-type: none"> Eliminate halocarbon emissions originating from chillers, refrigeration, air conditioning systems and other equipment Individual wallet sized certification cards and wall certificates to be issued by the Heating Refrigeration and Air Condition Institute of Canada (HRAI) Reporting of accidental releases of halocarbons greater than 100 kg is required in accordance with the Discharge Discovery and Reporting Chapter
A.2.2 Industrial Air Source	<ul style="list-style-type: none"> Applies to larger facilities that annually emit a specified amount of air contaminants (> 10 tonnes of one criteria air contaminant or > 25 tonnes of combined criteria air contaminants). Existing facilities can continue until June 30, 2017. Before June 30, 2017 facilities must provide report on progress to switch to the Environment Protection Plan (EPP) and on July 1, 2017 facilities must operate under approved EPP
Division B - Land Management and Protection	
B.1.1 Discharge and Discovery Reporting	<ul style="list-style-type: none"> Applies to persons who discharge or discover a historical discharge of substances while doing work Classes of substances as defined in the federal Transportation of Dangerous Goods legislation is used
B.1.2 Site Assessment	<ul style="list-style-type: none"> Applies to persons that are required by the minister to characterize and/or delineate the concentrations or quantities of impacts at a site and compare those levels to specific land use criteria. Site assessments required to be signed off by a qualified person All site assessment received by the ministry will be filed in the ministry’s electronic registry and it is anticipated at some future point they will, with some restrictions, be publicly accessible.

B.1.3 Corrective Action Plan and Corrective Actions	<ul style="list-style-type: none"> • Applies to persons required to conduct site assessment where the site assessment discloses that the site is an environmentally impacted site • Corrective action plans are required to be signed off by a qualified person as well as all chemical analysis conducted to support a Closure Report • All acceptable corrective action plans received by the ministry will be filed in the ministry's electronic registry and it is anticipated at some future point they will, with some restrictions, be publicly accessible
B.1.4 Transfer of Responsibility for an Environmentally Impacted Site	<ul style="list-style-type: none"> • Persons can legally transfer responsibility of an environmentally impacted area in order to facilitate redevelopment • The minister can take action against the new responsible party • This process helps to ensure that the seller and the purchaser are aware of the impacts at the site and that financial assurances are in place to remediate the site
B.1.5 Substance Designation	<ul style="list-style-type: none"> • Applies to a person classifying hazardous substances, hazardous waste or industrial waste • Characterization will now include a quantity limit (previously no quantity limit was included which means any amount of a defined substance was recorded) • Using the federal classification systems provides for consistency with other jurisdictions
Division C - Water Management and Protection	
C.1.1 Water Main	<ul style="list-style-type: none"> • Applies to the siting, design, construction and commissioning of water mains supplying water for human consumptive use at municipalities with population of 5,000 persons or greater • The chapter will reduce approximately 50 permits a year out of 350 total
C.2.1 Sewage Main	<ul style="list-style-type: none"> • Applies to the siting, construction, altering, extending and commissioning sewage mains used or intended for use at a municipality with a population of 5,000 persons or greater • The chapter will reduce approximately 44 permits a year out of 350 total
C.3.1 Hydrostatic Testing	<ul style="list-style-type: none"> • Applies to persons who use water for pressure testing a pipeline to determine if there are any leaks. • The Environmental Management and Protection Act, 2010 prohibition on discharge into water; makes it an offence to alter bed, bank, boundary without authorization
Division D - Natural Resource Management and Environment Protection	
D.1.1 Forest Regeneration Assessment	<ul style="list-style-type: none"> • Applies to temporary disturbances licensed pursuant to The Forest Resources Management Act that are equal or greater than two hectares in size • Allows for the incorporation of direction from the most recent scientifically supported techniques currently available
D.1.2 Forest Data Submission	<ul style="list-style-type: none"> • Applies to persons operating a facility that accepts and processes timber, wood residue or woodchips originating from Crown land, persons who are party to a forest management fund and persons who conduct forest management activities • An adjustment period will be necessary to accommodate the transition from submitting electronic data. The transition will ensure the ministry has the capacity to accept and analyze the data; industry has the capacity to generate the data; and if required, stakeholders can upgrade their GIS systems

D.1.3 Forest Operating Plan	<ul style="list-style-type: none"> • Applies to the holders of licenses granted the authority to harvest forest products pursuant to the Forest Resources Management Act. • Licensees include the holders of forest management agreements, term supply licenses, forest product permits and parties to a forest management fund who are proposing to conduct forest management activities • This chapter will result in a more efficient and cost effective process to capture proposed annual forest management activities
D.1.4 Forest Products Scaling	<ul style="list-style-type: none"> • Applies to persons granted a license authorizing them to harvest forest products on Crown forest land and who, in accordance with that license and The Forest Resource Management Act, are obligated to measure or scale the forest products
D.1.5 Forest Management Planning	<ul style="list-style-type: none"> • Applies to persons granted a license authorizing them to harvest Crown timber on provincial forest lands and who, in accordance with that license and the Forest Resources Management Act are obligated to prepare or revise a forest management plan. The chapter adopts the existing forest management planning document as a standard
Division E - Waste Management	
E.1.1 Landfill	<ul style="list-style-type: none"> • Applies to landfills owned by municipalities, non-profit (e.g. regional waste authorities) and private entities for the permanent disposal of solid, non-hazardous waste • Financial assurances will be required for landfills that are not owned by a municipality to ensure long term monitoring and management of the landfill is available. • Financial assurances are not required for municipal landfills as some form of government will be available to ensure long-term care
E.1.2 Transfer Station	<ul style="list-style-type: none"> • Applies to transfer stations owned by municipalities, non-profit (e.g. regional waste authorities) and private entities for the temporal disposal of solid, non-hazardous waste • An environmental monitoring plan will be required • The environmental monitoring plan will require some associated costs with respect to monitoring, or costs to conduct technical assessment to confirm an environmental monitoring plan is not required • The costs associated with conducting the monitoring plan will be dependent upon site geology, and hydrology, waste stored, disposal practices and existing environmental data
E.1.3 Liquid Domestic Waste Disposal	<ul style="list-style-type: none"> • Applies to septic carriers that dispose of liquid domestic waste from septic tanks, typically collected from municipal subdivisions, resort communities and other areas not served by a communal wastewater system. Carriers typically dispose the liquid domestic waste directly to a lagoon, or where a lagoon is not feasible, by spreading on agricultural land • Proponents would still be allowed to submit innovative approaches as an solution, and some may propose land spreading as an alternative • It is anticipated that approximately 20 new small lagoons with a total estimated cost of 14 to 22 million dollars will be required with the banning of land spreading

4. Next steps

For the development of the SEC, the Code Development Council (CDC) established the Code Secretariat, comprised of ministries of Environment and Justice Staff. The Code Secretariat acts as project manager and provides administrative support to the Content Committees. The SEC is a living document and may be reviewed and revised as needed.

During the review, more than 800 people attended 20 meetings. There has been some opposition for the SEC, mainly coming from the Saskatchewan New Democratic Caucus [7] and the Federation of Saskatchewan Indian Nations (FSIN) [8]. The Ministry of Environment also received more than 80 written comments on various aspects of the code. When the first phase of the code is completed later this year, the associated acts and regulations can be proclaimed.

The immediate tasks for the SEC include:

- Code proclamation
 - o 5 new regulations
 - o Minor amendments to the Water Regulations, 2002
 - o Develop a process for the minister to designate QPs
- Implementation
- Future code chapters

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