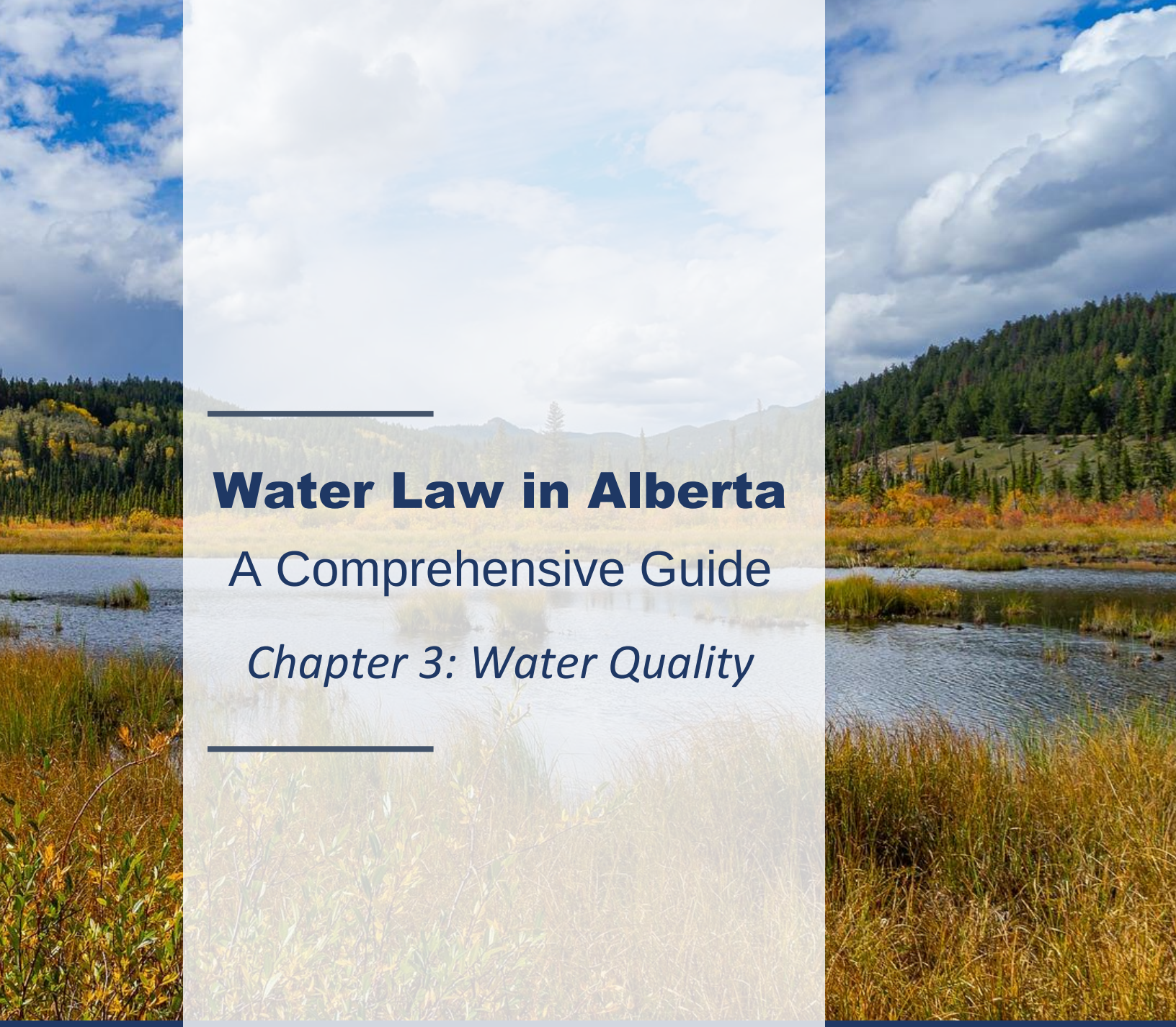

Water Law in Alberta

A Comprehensive Guide

Chapter 3: Water Quality

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THE ENVIRONMENTAL LAW CENTRE (ALBERTA) SOCIETY

The Environmental Law Centre (ELC) has been seeking strong and effective environmental laws since it was founded in 1982. The ELC is dedicated to providing credible, comprehensive and objective legal information regarding natural resources, energy, and environmental law, policy, and regulation in the Province of Alberta. The mission of the Environmental Law Centre is to advocate for laws that will sustain ecosystems and ensure a healthy environment and to engage citizens in the laws' creation and enforcement. Our vision is a society where our laws secure an environment that sustains current and future generations and supports ecosystem health.

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CHAPTER THREE: WATER QUALITY

In this chapter, we will cover one of the most important issues relating to water: its quality. In Alberta, there are a number of different regulatory schemes that operate to protect the quality of water in the province, to ensure both a healthy population and a healthy environment. In this chapter, we will focus our discussion on those regulatory schemes.

To approach this discussion of water quality, this chapter will be divided into five parts. The first part will deal with the planning tools the different levels of government use to manage water quality, including the legislation that allows the provincial, federal, and municipal governments to plan for and manage water quality throughout the province.

The second part of this chapter will provide an overview of the approvals process used by the provincial government to authorize industrial and commercial activities that are likely to have an impact on water quality. This discussion will also include a description of the environmental assessment legislation that both the provincial and federal governments use to assess the impact of major development projects, including the impact on water quality.

Subsequently, the third part of this chapter will provide an overview of the legislation that regulates the release of potentially harmful substances into water, including both the general prohibitions against releasing harmful substances and the specific prohibitions intended to protect fish and migratory birds, as well as their habitats.

Finally, the fourth part of this chapter will discuss the legal quality controls that apply to drinking water in Alberta. It will also cover the legislation that regulates the design, construction, and operation of sewage and storm drainage systems in the province, with a focus on how it relates to water quality.

I. MANAGEMENT AND PLANNING

In Alberta, all three levels of government—that is, federal, provincial, and municipal—have tools to plan for and manage the water quality in the province. In this section, we will discuss these tools, with the goal of providing an overview of how water quality is managed in Alberta.

To do this, we will take a look at the tools available to each of the three levels of government in turn. We will start with a discussion of the federal government and its power to enter into agreements with other governments to manage water quality. Then, we will discuss the powers of the provincial government to manage water quality, dealing specifically with the provincial land use planning regime and the province's ability to create water management plans. Finally, we will provide an overview of the legal tools that municipal governments can use to manage water quality, including waterbody management bylaws, development restrictions, environmental reserves, and environmental reserve easements.

i. Federal Management Tools

The federal government has the power to enter into agreements with other governments to manage water quality, including the water quality in Alberta. In this section, we will take a look at the agreements that the federal government has entered into to manage the water quality in Alberta, starting with the international treaty with the United States and then turning to the federal-provincial agreements that specifically affect Alberta.

As you review the following sections, take note that each of these agreements also includes provisions that govern the use and flow of water in Alberta. For more information about those provisions and what they do, take a look at the discussion on water management in the chapter on water use and flow.

a. International Agreements

In 1909, the Government of Canada entered into the *Boundary Waters Treaty* with the United States to manage the water along the borders between the two nations.[1] In terms of water quality, the *Treaty* includes a commitment that neither country would pollute these waters so as to cause injury to health or property in the other country.[2]

In the *Boundary Waters Treaty*, there are no binding legal mechanisms to enforce the commitment to maintain water quality. However, the signatory nations are able to refer any disputes over this commitment, or any other commitment under the *Treaty*, to a body called the International Joint Commission, which is responsible for making sure each country is complying with the *Treaty* and for resolving any disputes that may arise.[3]

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[1] See *International Boundary Waters Treaty Act*, RSC 1985, c I-17.

[2] *Ibid*, Schedule 1, Article IV.

[3] *Ibid*, Schedule 1, Articles VII-X. See also "Water Quality" (2020), online: International Joint Commission https://ijc.org/en/what/water-quality.

b. Federal-Provincial Partnerships

Under the *Canada Water Act*[4], the federal government is able to enter into agreements with the provinces to create and implement water quality management programs and policies. Specifically, under the *Act*, the federal government may enter into agreements with the provinces:

- to establish intergovernmental committees to coordinate programs and policies relating to water;[5]
- to co-manage any waters where there is a significant federal interest, through management plans, conservation projects, and data collection;[6] and
- to co-manage water quality where it has become a matter of urgent national concern, through assessments of the kind and amount of contaminants present in the water, recommendations for water quality standards, restrictions on substances that may be disposed of in the waters, and treatment of any contaminants.[7]

Using its powers under the *Canada Water Act*, the federal government has entered into three agreements with the Alberta government to manage water quality in the province: the *Master Agreement on Apportionment*, the *Joint Canada-Alberta Implementation Plan for Oil Sands Monitoring*, and the *Mackenzie River Basin Transboundary Waters Master Agreement*. In the following sections, we will discuss each of these agreements in turn.

[4] *Canada Water Act*, RSC 1985, c C-11.

[5] *Ibid*, s 4.

[6] *Ibid*, s 5.

[7] *Ibid*, ss 11, 15.

Master Agreement on Apportionment

The *Master Agreement on Apportionment* is an agreement between the governments of Alberta, Saskatchewan, and Manitoba, and the federal government. It sets out a framework for managing the rivers that travel eastward from Alberta into the other prairie provinces, including the Cold River, Beaver River, North Saskatchewan River, South Saskatchewan River, and Battle River.[8]

Schedule E of the *Master Agreement on Apportionment* sets out water quality objectives for the rivers covered by the *Agreement*. If the concentration of a contaminant exceeds the limits set out in the objectives because of human activities, the province where the contaminant originated must take reasonable measures to meet the levels set out in the objectives.[9] The Prairie Provinces Water Board, which was created under the *Agreement*, is responsible for monitoring the quality of the rivers covered by the *Agreement* and for providing each of the signatory provinces with an annual written report.[10]

Joint Canada-Alberta Implementation Plan for Oil Sands Monitoring

In 2012, the Government of Canada and the Government of Alberta adopted the *Joint Canada-Alberta Implementation Plan for Oil Sands Monitoring*[11], which sets out a plan for the two levels of government to work together to establish monitoring programs for the oil sands. The plan includes a comprehensive approach to monitoring water quality in the oil sands area and, specifically, the Athabasca River system.[12]

Notably, the Government of Alberta funds the program by charging a fee to everyone who holds an approval or makes an application for an approval under the *Environmental Protection and*

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[8] "Master Agreement on Apportionment" (2021), online: Government of Alberta https://www.alberta.ca/master-agreement-on-apportionment.aspx. See also *The 1969 Master Agreement on Apportionment and Bylaws, Rules and Procedures* (July 2015), online: Prairie Provinces Water Board https://www.ppwb.ca/uploads/media/5cad077eeae53/master-agreement.pdf?v1.

[9] *Ibid* at 32.

[10] *Ibid* at 33.

[11] *Joint Canada-Alberta Implementation Plan for Oil Sands Monitoring* (2012), online: Government of Canada http://publications.gc.ca/collections/collection_2013/ec/En84-89-2013-eng.pdf.

[12] *Ibid* at 10.

Enhancement Act[13] for a project related to the oil sands.[14] Generally speaking, more information about project approvals under the *Environmental Protection and Enhancement Act* can be found in the section of this chapter on *Environmental Protection and Enhancement Act* approvals.

Mackenzie River Basin Transboundary Waters Master Agreement

The *Mackenzie River Basin Transboundary Waters Master Agreement* is an agreement between Alberta, British Columbia, Saskatchewan, Yukon, and the Northwest Territories to facilitate cooperative management of the Mackenzie River Basin, which runs through each of these jurisdictions.[15]

The *Master Agreement* sets out a general framework and a dispute resolution process to manage any disputes that arise between the signatory jurisdictions. Under the *Master Agreement*, each jurisdiction is committed to entering into a bilateral agreement with each of its neighbouring jurisdictions to set out their detailed obligations for managing the Mackenzie River Basin.[16]

In 2015, Alberta entered into its first bilateral agreement with the Northwest Territories.[17] Under that agreement, Alberta committed to ongoing water quality monitoring of the river basin.[18] It also committed to a number of water quality objectives, including the goal of completely eliminating the most harmful contaminants from the basin.[19] Currently, Alberta is in the process of developing bilateral agreements with Saskatchewan and British Columbia.[20]

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[13] *Environmental Protection and Enhancement Act*, RSA 2000, c E-12.

[14] *Oil Sands Environmental Monitoring Program Regulation*, Alta Reg 226/2013, ss 1(c), 3.

[15] *Mackenzie River Basin Transboundary Waters Master Agreement* (24 July 1997), online: Government of Alberta https://open.alberta.ca/publications/mackenzie-river-basin-transboundary-waters-master-agreement.

[16] See "Mackenzie River Basin" (2021), online: Government of Alberta https://www.alberta.ca/mackenzie-river-basin.aspx.

[17] *Mackenzie River Basin Bilateral Water Management Agreement Between the Government of Alberta and the Government of the Northwest Territories* (23 February 2015), online: Government of Alberta https://open.alberta.ca/publications/mackenzie-river-basin-transboundary-waters-master-agreement.

[18] *Ibid* at 7-8.

[19] See *Appendices: Mackenzie River Basin Bilateral Water Management Agreement* (24 February 2015), online: Government of Alberta https://open.alberta.ca/publications/mackenzie-river-basin-transboundary-waters-master-agreement at 18-38.

[20] "Mackenzie River Basin" (2021), online: Government of Alberta https://www.alberta.ca/mackenzie-river-basin.aspx.

ii. Provincial Management Tools

The Government of Alberta is able to manage water quality within the province using two legal planning mechanisms: regional land use planning and water management planning. In the following sections, we will discuss each of these planning tools in turn.

As you review the following sections, take note that both of these planning mechanisms can also be used to manage the amount and flow of water in Alberta. For more information about that side of the province's water planning tools, take a look at the discussion on water management in the chapter on water use and flow.

a. Regional Land Use Planning

In 2008, Alberta developed a *Land-Use Framework* to guide long term planning for the use of the province's land and natural resources.[21] The *Framework* divides the province into seven regions, with the goal of developing a land use plan for each region, including a plan for managing the water quality in each region.[22] In 2009, the provincial government passed the *Alberta Land Stewardship Act*[23], which provides the legal tools for developing and implementing regional land use plans.

Currently, only two of the seven regional plans have been finalized: the Lower Athabasca Regional Plan and the South Saskatchewan Regional Plan.[24] The North Saskatchewan Regional Plan is currently being developed, and the other plans will be worked on once that is completed.[25] In the following sections, we will discuss each of the two completed plans in turn.

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[21] *Land-Use Framework* (December 2008), online: Government of Alberta https://landuse.alberta.ca/LandUse%20Documents/Land-use%20Framework%20-%202008-12.pdf.

[22] *Ibid*.

[23] *Alberta Land Stewardship Act*, SA 2009, c A-26.8.

[24] See "Regional plans" (2016), online: Government of Alberta https://landuse.alberta.ca/RegionalPlans/Pages/default.aspx.

[25] *Ibid*.

Lower Athabasca Regional Plan

The *Lower Athabasca Regional Plan*[26] covers an area in the northeast of Alberta, spanning from the northern border of the province to the southern edge of the Municipal District of Bonnyville.[27] It includes the municipalities of Fort McMurray, Cold Lake, and Lac La Biche.[28] As it relates to water quality, the *Lower Athabasca Regional Plan* is primarily concerned with balancing the use of water for oil sands operations with other provincial priorities, including human health, environmental conservation, recreational opportunities, and Indigenous perspectives.

To accomplish this balance, the *Lower Athabasca Regional Plan* establishes three water quality management frameworks. The first is the *Surface Water Quality Management Framework for the Lower Athabasca River*.[29] This framework sets limits for the amounts of contaminants that may be present in the lower Athabasca River, which is the portion of the Athabasca River that runs from approximately the Grand Rapids to the Athabasca River Delta.[30] In addition, the *Framework* establishes systems to monitor contaminant levels in surface waters, identifies indicators of increased contaminant levels, and sets out a management process for how to deal with unacceptably high levels of contaminants, including by increasing monitoring requirements and amending existing project approvals, for example, to increase wastewater treatment standards.[31]

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[26] *Lower Athabasca Regional Plan, 2012-2022* (August 2012), online: Government of Alberta https://landuse.alberta.ca/LandUse%20Documents/Lower%20Athabasca%20Regional%20Plan%202012-2022%20Approved%202012-08.pdf.

[27] See "Regional plans" (2016), online: Government of Alberta https://landuse.alberta.ca/RegionalPlans/Pages/default.aspx.

[28] *Ibid*.

[29] *Surface Water Quality Management Framework for the Lower Athabasca River* (1 August 2012), online: Government of Alberta https://open.alberta.ca/publications/9781460105306.

[30] *Lower Athabasca Regional Plan, 2012-2022* (August 2012), online: Government of Alberta at 51-52 https://landuse.alberta.ca/LandUse%20Documents/Lower%20Athabasca%20Regional%20Plan%202012-2022%20Approved%202012-08.pdf; *Surface Water Quality Management Framework for the Lower Athabasca River* (1 August 2012), online: Government of Alberta at 4, 22-24 https://open.alberta.ca/publications/9781460105306.

[31] *Ibid* at 31, 33.

The second framework established by the *Lower Athabasca Regional Plan* is the *Lower Athabasca Region Groundwater Management Framework*[32]. That framework covers three groundwater management areas within the Lower Athabasca Region: the north Athabasca oil sands, the south Athabasca oil sands, and the Cold Lake-Beaver River area.[33] Eventually, the *Framework* will include a management system for the groundwater quality in each of these areas, like the *Surface Water Quantity Management Framework.* However, the specific parameters are still under development.[34]

In the meantime, the groundwater framework includes a set of interim contaminant levels that trigger a management response, while more precise measures for contaminants are still being developed.[35] As well, in lieu of a regional framework, the provincial government is able to require site-specific groundwater management plans for any facility that uses groundwater.[36] This means a groundwater management framework that is specific to the site or facility in question, including site-specific groundwater monitoring systems and indicators for potential problems with groundwater quality.[37]

Finally, the third water quality framework established by the *Lower Athabasca Regional Plan* is the *Lower Athabasca Region Tailings Management Framework for the Mineable Athabasca Oil Sands*.[38]

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[32] *Lower Athabasca Region Groundwater Management Framework* (1 August 2012), online: Government of Alberta https://open.alberta.ca/publications/9781460105344.

[33] *Lower Athabasca Regional Plan, 2012-2022* (August 2012), online: Government of Alberta at 55 https://landuse.alberta.ca/LandUse%20Documents/Lower%20Athabasca%20Regional%20Plan%202012-2022%20Approved%202012-08.pdf.

[34] *Ibid*; *Lower Athabasca Region Groundwater Management Framework* (1 August 2012), online: Government of Alberta at 26-27 https://open.alberta.ca/publications/9781460105344.

[35] *Ibid* at 26-29.

[36] *Lower Athabasca Regional Plan, 2012-2022* (August 2012), online: Government of Alberta at 57 https://landuse.alberta.ca/LandUse%20Documents/Lower%20Athabasca%20Regional%20Plan%202012-2022%20Approved%202012-08.pdf.

[37] *Lower Athabasca Region Groundwater Management Framework* (1 August 2012), online: Government of Alberta at 35-36 https://open.alberta.ca/publications/9781460105344.

[38] *Lower Athabasca Region Tailings Management Framework for the Mineable Athabasca Oil Sands* (1 March 2015), online: Government of Alberta https://open.alberta.ca/publications/9781460121740.

This framework sets limits for the allowable volume of oil sands tailings ponds to ensure they can be reclaimed by the end of each oil sands project. To do this, the *Framework* establishes systems to monitor tailings pond fluid volume levels, identifies project-specific thresholds for acceptable volume levels, and sets out a management process for how to deal with unacceptably high tailing pond volumes, including curtailing bitumen production and requiring the operator of the project to post security.[39]

South Saskatchewan Regional Plan

The *South Saskatchewan Regional Plan*[40] covers the southernmost part of the province, spanning from the Rocky Mountains in the west to the Saskatchewan border in the east.[41] It extends as far north as the northernmost point of the Municipal District of Bighorn, and it includes Calgary and the surrounding communities, as well as Lethbridge and Medicine Hat.[42]

To manage water quality, the *South Saskatchewan Regional Plan* establishes a surface water quality management framework, called the *South Saskatchewan Region Surface Water Quality Management Framework*.[43] This framework focuses on the main reaches of the Bow, Milk, Oldman, and South Saskatchewan Rivers, and it sets limits for the amounts of contaminants that may be present in each of those watercourses.[44] In addition, the *Framework* establishes systems to monitor contaminant levels in each river, identifies indicators of increased levels of contaminants, and sets out a management

[39] See *ibid* at 29-31.

[40] *South Saskatchewan Regional Plan 2014-2024* (1 May 2018), online: Government of Alberta https://open.alberta.ca/publications/9781460139417.

[41] See "Regional plans" (2016), online: Government of Alberta https://landuse.alberta.ca/RegionalPlans/Pages/default.aspx.

[42] *Ibid*.

[43] *South Saskatchewan Region Surface Water Quality Management Framework* (1 July 2014), online: Government of Alberta https://open.alberta.ca/publications/9781460118603.

[44] *Ibid* at 1.

process for how to deal with unacceptably high levels of contaminants, including by increasing monitoring requirements and wastewater treatment standards.[45]

Alongside the surface water quality management framework, the *South Saskatchewan Regional Plan* sets the goal of developing a comprehensive approach for groundwater management in the area.[46] Take note that this part of the *Plan* expresses a broad strategic goal rather than a binding legal requirement, so there is no strict legal obligation for the government to follow through with this goal.

b. Water Management Plans

Under the *Water Act*[47], the provincial government has the power to develop water management plans, which are really just plans for how water will be used in a given region of the province.[48] A single water management plan usually covers an entire watershed, which is an area in which all water flows to a common location.[49] Note that a watershed may be as large as an entire river basin or as small as the area feeding into a creek, so there is a wide range in the possible geographic scope of water management plans.

When it comes to water quality, a water management plan will generally include high level planning goals. It may also include management planning for riparian areas, which are lands immediately adjacent to waterbodies and watercourses that can have a significant impact on water quality.[50] Notably, these planning mechanisms are not legally binding, which means they cannot be

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[45] *Ibid* at 37-46.

[46] *South Saskatchewan Regional Plan 2014-2024* (1 May 2018), online: Government of Alberta at 84 https://open.alberta.ca/publications/9781460139417.

[47] *Water Act*, RSA 2000, c W-3.

[48] See *ibid*, Part 2, Division 1.

[49] *Framework for Water Management Planning* (1 January 2001), online: Government of Alberta at 10 https://open.alberta.ca/publications/0778517381.

[50] See *ibid* at 25-26.

directly enforced. However, they do allow the provincial government to set out its intentions for how it will deal with issues relating to water quality, and the government will normally consider water management plans when making day to day decisions that affect water quality, even if the plans do not impose binding legal requirements.[51]

In some circumstances, the government can approve water management plans, which makes some parts of the plans legally binding. Most importantly, an approved water management plan can set out factors that must be considered when deciding whether to issue an authorization under the *Water Act.*[52] Usually, these factors relate to the flow and use of water; however, the government may also include some factors that relate to water quality.

Generally speaking, for more information about *Water Act* authorizations, as well as the government's ability to approve water management plans, take a look at the discussions in the chapter on water use and flow.

iii. Municipal Management Tools

Under the *Municipal Government Act*[53], municipalities have legal tools that allow them to manage water quality within their boundaries. In particular, they are able to pass bylaws to manage waterbodies within the municipality, to restrict development next to waterbodies, and to create environmental reserves and environmental reserve easements next to waterbodies. In the following sections, we will briefly discuss each of these legal tools in turn.

As you review these sections, keep in mind that Metis Settlement Councils and First Nations' Band Councils are governed by separate legislation and, accordingly, have different powers to manage

[51] See *ibid* at 13.

[52] See *Water Act*, *supra* note 47, s 11(3).

[53] *Municipal Government Act*, RSA 2000, c M-26.

water quality within their communities. For more information about how water quality is managed in Indigenous communities in Alberta, take a look at the chapter on water in Indigenous communities.

a. Waterbody Management

Under the *Municipal Government Act*, municipalities have the direction, control, and management of the waterbodies within the municipality, subject to any other enactment.[54] This means that municipalities are able to enact bylaws that affect water quality within the municipality, but only so long as those bylaws do not conflict with any other law passed by the provincial or the federal government.

Any municipal bylaws that impact water quality will vary from municipality to municipality. Accordingly, for more information about any water quality bylaws, you should contact your local municipality.

b. Development Restrictions

Under the *Municipal Government Act*, municipalities have significant powers to control the rules for development within the municipality, including the rules for what sort of development can take place on the lands next to waterbodies. This is important, because the lands next to waterbodies can have a significant effect on water quality, both in terms of contamination and the potential for erosion.

To facilitate rules for development, the *Municipal Government Act* requires every municipality to pass a land use bylaw to regulate the use and development of land within the municipality.[55] As part of the land use bylaw, municipalities must divide the municipality into districts and identify the acceptable land uses of land within each district.[56] The municipality may also choose to specify

[54] *Ibid*, ss 60, 1(1.2).

[55] *Ibid*, s 640.

[56] *Ibid*, s 640(2).

standards for a given district, including standards for density, as wells as building and landscaping design standards.[57]

Municipal land use bylaws and any restrictions they place on developing the lands next to water will vary from municipality to municipality, so the details will not be discussed here. For more information about the rules in a land use bylaw, you should contact your local municipality.

C. Environmental Reserves

Under the *Municipal Government Act*, municipalities are able to protect water quality within the municipality by creating environmental reserves, which are parcels of land that are set aside as parks or natural areas.[58] A municipality can create an environmental reserve on lands that are likely to impact water quality, including land that contains a natural drainage course, land that is subject to flooding, and land that is adjacent to a waterbody.[59]

To create an environmental reserve, a municipality, through its subdivision authority, can require the owner of a piece of land being subdivided to provide part of that land for an environmental reserve.[60] When this happens, the owner of the land being subdivided must transfer the land to the municipality without compensation. Alternatively, the municipal government can create an environmental reserve by designating land the municipality already owns or is in the process of acquiring as an environmental reserve.[61]

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[57] *Ibid*, s 640(1.1). But see *ibid*, s 619.

[58] *Ibid*, ss 664, 665, 671(1).

[59] See *ibid*, s 664(1), (1.1).

[60] *Ibid*, s 664(1).

[61] *Ibid*, s 665.

To determine if there is an environmental reserve in your area, you should consult the subdivision plan for the area. To do so, you can request a copy of the subdivision plan from the Land Titles Office.[62]

d. Environmental Reserve Easements

As an alternative to an environmental reserve, municipalities can enter into an agreement with the owner of a piece of land being subdivided to create an environmental reserve easement.[63] An environmental reserve easement is similar to an environmental reserve, since it requires the owner of the land to maintain the land in a natural state.[64] However, unlike an environmental reserve, an environmental reserve easement allows the property owner to retain ownership of the land instead of transferring it to the municipality.

To determine if your property is subject to an environmental reserve easement, you should look at your land title certificate, which would list an environmental reserve easement as a registered instrument.[65] To do so, you can obtain a copy of your land title certificate, as well as any instrument registered against it, from the Land Titles Office.[66]

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[62] "Find land titles, documents or plans" (2021), online: Government of Alberta https://www.alberta.ca/find-land-titles-documents-plans.aspx.

[63] *Ibid*, s 664(2).

[64] *Ibid*, s 664(3)(b).

[65] *Ibid*, s 664(5).

[66] "Find land titles, documents or plans" (2021), online: Government of Alberta https://www.alberta.ca/find-land-titles-documents-plans.aspx.

II. PROJECT APPROVALS AND IMPACT ASSESSMENTS

It is no secret that industrial and other large-scale projects can have an enormous impact on water quality. For that reason, there is a significant body of legislation at both the provincial and federal level to oversee projects that are likely to impact water quality, including waste management systems, manufacturing plants, and major natural resource development projects.

In this section, we will provide an overview of the approvals processes for large scale projects that might affect water quality. As part of this discussion, we will look at the provincial approvals scheme for this type of project under the *Environmental Protection and Enhancement Act*. Then, we will examine the provincial and federal environmental impact assessment processes, with a focus on how the public can participate in those processes.

As you review this section, be aware that, in addition to the legislation discussed here, there is also a great deal of provincial and federal legislation setting out water quality requirements for specific industries that are likely to have an impact on water quality, including agriculture, forestry, and oil and gas development. This legislation tends to be quite detailed and particular to each industry and, accordingly, will not be dealt with in this publication.

As well, as you read this section, keep in mind that the rules being discussed are specifically the rules for approving large scale projects that are likely to impact water quality. In addition to the approvals that are discussed in this section, any project that affects water quality will likely require additional approvals under the federal and provincial legislation that governs the other aspects of water.

Notably, if a large-scale project is likely to release contaminants into the aquatic environment, then it will need to comply with the rules set out under the provincial and federal legislation governing substance releases, including the legislation that specifically protects aquatic habitat from substance releases. These rules are discussed in more detail in the section of this chapter on prohibitions against substance releases.

Additionally, depending on the activity being carried out, a large-scale project may need government approvals to use crown-owned beds and shores, which are, roughly speaking, the lands covered by water that are owned by the provincial government. For more information about what this means, as well as the authorizations you might need to carry out activities on both crown-owned and privately owned beds and shores, take a look at the chapter on land ownership and use.

Finally, under the *Water Act*, a large-scale project may require a water licence or other water use authorization if the project requires the use of water. Similarly, under the *Water Act*, any activity that affects the flow, location, or level of water will require an additional approval from the provincial government. More information about water use authorizations and approvals issued under the *Water Act* can be found in the chapter on water use and flow.

i. *Environmental Protection and Enhancement Act* Approvals

Under the *Environmental Protection and Enhancement Act*, project proponents must get authorization from the provincial government for any activity that has the potential for significant effects on the environment, including significant effects on water quality.[67] In particular, a project proponent must obtain either a registration or an approval from the provincial government or, in some circumstances, notify the government that it will carry out an activity before carrying it out. [68]

Whether an activity requires an approval, a registration, or notice to the government depends on the scale and potential impact of the activity. The more significant activities require approvals, the less significant activities require registrations, and the least significant activities require notice to the government.

In terms of administrative requirements, both approvals and registrations follow the same application process. The main difference between the two types of authorization is that approvals come with terms and conditions, which means a greater deal of government oversight for how the project is carried out.[69] By contrast, a registration functions more like a stamp of approval: once it has been granted, the project is able to proceed, without any terms or conditions being imposed.[70]

In the following sections, we will give an overview of which activities require each of the different types of authorization under the *Environmental Protection and Enhancement Act*. Then, we will provide a brief description of the application process for approvals and registrations, as well as an explanation of the opportunities for public participation in that process.

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[67] See *Environmental Protection and Enhancement Act*, *supra* note 13, ss 60-61.

[68] *Ibid*. See also *ibid*, ss 87-89.

[69] *Ibid*, s 68(2).

[70] *Ibid*, s 68.

Activities Requiring Authorization

The *Activities Designation Regulation*[71] provides a list of the activities that require an approval, the activities that require a registration, and the activities that require the proponent to give advance notice to the government.[72]

Schedule 1 of the *Activities Designation Regulation* lists the activities that require an approval. Notably, these include the construction, operation, or reclamation of:

- Large scale waste management facilities;
- Chemical, sulphur, fertilizer, pesticide, and petrochemical manufacturing plants;
- Building products manufacturing plants, including cement and insulation plants;
- Animal and food product processing plants;
- Metal manufacturing plants, including foundries, mills, and smelters;
- Glass and lime manufacturing plants;
- Wastewater systems with treatment plants other than wastewater lagoons;[73]
- Waterworks systems using surface water or non-high-quality groundwater;[74]
- Oil and gas refineries and processing plants;
- Power plants;
- Wood and pulp and paper plants;
- Biotechnology products manufacturing plants;
- Electrical and electronic components plant;
- Mines, quarries, and oil production sites;
- Pipelines, transmission lines; and
- Peat operations.[75]

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[71] *Activities Designation Regulation*, Alta Reg 276/2003.

[72] *Ibid*, s 5.

[73] See *ibid*, Schedule 1, Division 2, Part 7 for the exceptions.

[74] See *ibid*, Schedule 1, Division 5 for the exceptions.

[75] *Ibid*, Schedule 1.

Additionally, Schedule 1 includes the application of pesticides in, on, or within 30 horizontal meters of an open body of water.[76] However, take note that an approval for applying pesticides near water is also subject to the rules set out in the *Pesticide (Ministerial) Regulation*[77], which means that it is slightly different from the approvals for the other activities. For more information about an approval specifically for applying pesticides near water, you should take a look at the Government of Alberta's website.[78]

Schedule 2 of the *Activities Designation Regulation* lists the activities that require a registration. Notably, these include the construction, operation, or reclamation of:

- Smaller waste management facilities;
- Some manufacturing plants, including asphalt, concrete, and sweet gas processing plants;
- Wastewater collections systems and wastewater systems that use wastewater lagoons;[79]
- Waterworks systems that use high quality ground water or obtain water from other waterworks systems;[80]
- Municipal storm drainage systems; and
- Pits for sand, gravel, clay, or marl that are at least 5 hectares.[81]

Additionally, Schedule 2 requires a registration to store or sell pesticides or offer a pesticide service for pesticides listed in the *Pesticide (Ministerial) Regulation*.[82] However, take note that any use or storage of a pesticide on, in, or within 30 meters of an open body of water may require a special use

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[76] *Ibid*, Schedule 1, Division 4.

[77] *Pesticide (Ministerial) Regulation*, Alta Reg 43/1997.

[78] See "Using Pesticides – Applying pesticides near water" (2021), online: Government of Alberta https://www.alberta.ca/using-pesticides-applying-pesticides-near-water.aspx.

[79] See *Activities Designation Regulation, supra* note 71, Schedule 2, Division 2 for the exceptions.

[80] See *ibid*, Schedule 2, Division 5 for the exceptions.

[81] *Ibid*, Schedule 2.

[82] *Ibid*, Schedule 2, Division 4.

approval under the *Pesticide (Ministerial) Regulation*.[83] For more information about an approval specifically for applying or storing pesticides near water, you should take a look at the Government of Alberta's website.[84]

Finally, schedule 3 of the *Activities Designation Regulation* lists the activities that require the proponent to give notice to the government. These include the construction, operation, or reclamation of a compost facility that uses a controlled bio-oxidation process, as well as a storage site for non-hazardous waste.[85] The list also includes the conduct or reclamation of an exploration operation for the presence of coal or oil sands.

Applications for Authorizations

To apply for an approval or a registration, a project proponent must submit an application to the provincial government, except for proponents of projects for energy resources, who must instead submit their applications to the Alberta Energy Regulator.[86] For more information about the Alberta Energy Regulator, take a look at that organization's website.[87]

Regardless of where an application must be submitted, the application must include information about the proposed project and its potential environmental impacts, including:

- the location, nature, and size of the project;
- any other approvals that have been obtained for the project;

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[83] *Pesticide (Ministerial) Regulation*, *supra* note 77, s 9.

[84] See "Using Pesticides – Applying pesticides near water" (2021), online: Government of Alberta https://www.alberta.ca/using-pesticides-applying-pesticides-near-water.aspx.

[85] *Activities Designation Regulation, supra* note 71, Schedule 3. See also *ibid*, s 4.

[86] *Environmental Protection and Enhancement Act*, *supra* note 13, s 66. See also "Environmental Protection and Enhancement Act approvals" (2021), online: Government of Alberta https://www.alberta.ca/apply-for-environmental-protection-and-enhancement-act-approvals.aspx. *Responsible Energy Development Act*, SA 2012, c R-17.3, ss 2, 24-25. See also *Specified Enactments (Jurisdiction) Regulation*, Alta Reg 201/2013.

[87] "Alberta Energy Regulator" (2021), online: https://www.aer.ca/.

- a description of the substances that will be released into the environment because of the project;
- a justification for the release of any substances into the environment;
- confirmation of contingency plans to deal with unforeseen substance releases;
- any information about the project obtained under a previous registration or approval;
- proposed measures to reduce waste produced by the project;
- any expected environmental impacts of the project; and
- the reclamation plan for when the project has been completed.[88]

As part of the application process, the government or the Alberta Energy Regulator may also require the proponent to provide any other relevant information about the project.[89] In addition, the government or the Regulator may request information about the proposed project from any local authority, government agency, or other level of government, or any other source the government or Regulator thinks is appropriate.[90]

In addition to requiring information about a project, the application process for an approval or registration may also require the proponent to conduct consultations with the people who might be affected by the project. Notably, if an application is for an approval, then the proponent will need to give public notice of the application. That process is discussed in more detail in the following section on public participation. As well, the government or the Alberta Energy Regulator may require the applicant for either an approval or a registration to hold public meetings to provide the public with more information about the application.[91]

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[88] *Approvals and Registrations Procedure Regulation*, Alta Reg 113/1993, s 3.

[89] See *ibid*, s 3(1)(s).

[90] *Ibid*, s 5. See also *Environmental Protection and Enhancement Act*, *supra* note 13, s 68(4).

[91] *Approvals and Registrations Procedure Regulation*, *supra* note 88, s 5(2).

Similarly, if an application for an approval or a registration has the potential to affect the rights of any Indigenous groups, then the applicant may be required to carry out consultations with those groups. For more information about the consultation process, take a look at the resources on the Government of Alberta's website.[92] As well, for more general information about Indigenous rights and the duty to consult, take a look at the chapter on Indigenous water issues.

Once the government or Alberta Energy Regulator has collected all the relevant information about a proposed project, and the necessary consultations have been carried out, then a decision must be made about whether to grant the approval or registration. To make this decision, the government or the Regulator must consider the environmental impacts of the project in light of all the information that has been provided about the application.[93] If consultations were carried out, then the government or the Regulator might also require the proponent to make changes to the proposed project to account for any concerns that were raised during the consultations.

Importantly, the government or Regulator is not permitted to issue an approval or registration if the project requires an environmental assessment and that requirement has not yet been complied with.[94] This means that if an environmental assessment is required, an approval or registration may not be granted until the assessment has been completed. For more information about the provincial environmental assessment process, take a look at the section of this chapter on provincial environmental assessments.

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[92] See "Indigenous consultations in Alberta" (2021), online: Government of Alberta https://www.alberta.ca/indigenous-consultations-in-alberta.aspx; *The Government of Alberta's Proponent Guide to First Nations and Metis Settlements Consultation Procedures* (1 December 2019), online: Government of Alberta https://open.alberta.ca/publications/goa-proponent-guide-to-first-nations-and-metis-settlements-consultation-procedures-2019#summary.

[93] *Approvals and Registrations Procedure Regulation*, *supra* note 88, s 6.

[94] *Environmental Protection and Enhancement Act*, *supra* note 13, s 63.

Public Participation

Under the *Environmental Protection and Enhancement Act*, members of the public who are affected by an application for an approval can provide input as part of the application process. Note that this opportunity to provide input only applies to applications for approvals and not for registrations.

The public participation process begins when the government or the Alberta Energy Regulator gives public notice of the application or requires the proponent to give public notice.[95] Sometimes, the government or the Regulator can waive the requirement for public notice, but only in extenuating circumstances, such as in an emergency.[96]

In the normal course, once there has been public notice of an application for an approval, any person who is directly affected by the application can submit a statement of concern to the government or the Regulator outlining the person's concerns about the proposed project.[97] Note that a statement of concern must be submitted within 30 days of the notice, unless the notice specifies a longer time period.[98]

Importantly, in order to submit a statement of concern, a person must be directly affected by the application. In a recent case, the Alberta Court of Appeal set a new standard for deciding who is directly affected by a decision and who is not.[99] Effectively, the Court broke the term "directly affected" into its two constituent parts: the decision must have a negative effect on the person[100] and the

[95] *Ibid*, s 72.

[96] *Ibid*, s 72(3).

[97] *Ibid*, s 73(1).

[98] *Ibid*, s 73(2).

[99] *Normtek Radiation Services v Alberta Environmental Appeals Board*, 2020 ABCA 456.

[100] *Ibid* at para 79-81.

negative effect must result from the decision, such that the decision and its consequences are close in both time and causation.[101]

Ultimately, submitting a statement of concern has two effects on an application for an approval. The first effect is that the government or the Regulator will consider the statement of concern when deciding whether to grant the approval and may even require the project proponent to modify the project to account for the concerns that were expressed.

The second effect is that, if a person submits a statement of concern, and the government or Regulator issues the approval, that person is entitled to appeal the government's decision.[102] To appeal a decision relating to an approval, you must file a document called a notice of appeal with an organization called the Environmental Appeals Board. You can obtain a paper copy of the notice of appeal from the Environmental Appeals Board, or you can access an online version on their website.[103]

It is important to note that the deadlines for appealing a government decision are quite short. In fact, to appeal a decision to issue an approval under the *Environmental Protection and Enhancement Act*, you must file a notice of appeal within 30 days of receiving notice of the decision.[104] If notice of the decision was given more than once, then you must appeal within 30 days of the last notice.

The Environmental Appeals Board has the power to extend this deadline, either before or after it expires.[105] However, to do so, the Board must be of the opinion that there is sufficient reason to extend the deadline, which means that there must be extenuating or special circumstances.[106] Keep in mind that the Board tends to set a fairly high bar for what constitutes extenuating circumstances: failing

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[101] *Ibid* at para 78-80.

[102] *Environmental Protection and Enhancement Act*, *supra* note 13, s 91(1)(a).

[103] "Appeal online: notice of appeal form", online: Environmental Appeals Board http://www.eab.gov.ab.ca/appeal2.aspx.

[104] *Environmental Protection and Enhancement Act*, *supra* note 13, s 91(4)(c).

[105] *Ibid*, s 93.

[106] See *O'Neill v Regional Director, Parkland Region, Alberta Environmental Protection*, re: *Town of Olds* (12 March 1999), Appeal No 98-250 (AEAB).

to pick up your mail, needing more time to collect information relating to the appeal, and misunderstanding the deadline have all been found not to qualify.[107]

Generally speaking, more information about appealing to the Environmental Appeals Board can be found on that organization's website.[108] As well, more information about the process to appeal a decision to the Environmental Appeals Board can be found in the chapter on water use and flow.

ii. Provincial Environmental Assessments

As part of the approval process under the *Environmental Protection and Enhancement Act*, the provincial government may require an environmental assessment, which is a detailed report on the potential environmental impacts of a project. The government will normally require an environmental assessment of a proposed project when the complexity and scale of the project make it difficult to figure out what the environmental effects will be or when the project may have significant adverse effects on the environment, including significant adverse effects on water quality.[109]

In the following sections, we will provide a detailed overview of the provincial environmental assessment process. To do this, we will start with a discussion of which projects require an environmental assessment, before turning to the process for preparing an environmental assessment report.

As you review the following sections, keep in mind that if a project requires an environmental assessment from both the province of Alberta and another jurisdiction, such as the federal government,

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[107] *Valleau v Director, Red Deer-North Saskatchewan Region, Alberta Environment and Parks*, re: *Town of Wainwright* (19 September 2016), Appeal No 16-009-ID1 (AEAB); *Walls et al v Director, Red Deer-North Saskatchewan Region, Alberta Environment and Parks*, re: *Aurora Cannabis Enterprises* (31 March 2016), Appeal Nos 15-022-026-ID1 (AEAB); *Olineck v Director, Red Deer-North Saskatchewan Region, Operations Division Alberta Environment and Sustainable Resource Development*, re: *Hutterian Brethren Church of Vegreville* (28 October 2014), Appeal No 14-012-D (AEAB).

[108] "Environmental Appeals Board" (2004), online: http://www.eab.gov.ab.ca/.

[109] "Environmental Assessment Process" (2021), online: Government of Alberta https://www.alberta.ca/environmental-assessment-process.aspx. See also *Environmental Protection and Enhancement Act*, *supra* note 13, s 40.

the Government of Alberta may enter into an agreement with the other jurisdiction to jointly carry out all or part of the environmental assessment process or to allow one jurisdiction to carry out the environmental assessment process on behalf of both.[110] Generally speaking, for more information about the federal environmental assessment regime, take a look at the section on federal impact assessments.

a. Projects Needing Assessment

Under the *Environmental Protection and Enhancement Act*, there are three ways a project can be required to undergo an environmental assessment:

1. The project is listed in the *Environmental Protection and Enhancement Act* as the type of activity that requires an environmental assessment;
2. The provincial government decides the project merits an environmental assessment, and it is not an exempted activity under the *Environmental Protection and Enhancement Act*; and
3. The responsible Minister decides the project requires an environmental assessment.

In the following sections, we will discuss each of these three circumstances in turn.

Listed Activities

If a project is listed in the *Environmental Assessment (Mandatory and Exempted Activities) Regulation*[111] as an activity that requires an environmental assessment, it will need to undergo an assessment. The activities listed in the *Regulation* are generally large-scale industrial activities that are likely to have a significant impact on the environment and, accordingly, there is no need to evaluate the nature of the activity before requiring an environmental assessment.

[110] *Ibid*, s 57.

[111] *Environmental Assessment (Mandatory and Exempted Activities) Regulation*, Alta Reg 111/1993.

Notably, the activities listed in the *Environmental Assessment (Mandatory and Exempted Activities) Regulation* include the construction, operation, or reclamation of:

- Large capacity pulp and paper mills;
- Large capacity quarries;
- Dams that are more than 15 meters tall;
- Large water diversion structures, canals, and reservoirs;
- Tourism facilities that attract at least 250,000 visitors per year and are next to certain natural areas;
- Large surface coal mines;
- Coal processing plants;
- Oil sands mines;
- Large commercial oil sands or heavy oil plants;
- Large thermal or hydroelectric power plants;
- Oil refineries;
- Certain chemical and petrochemical manufacturing plants;
- Pesticide and fertilizer manufacturing plants;
- Steel mills with coke ovens;
- Cement and lime plants; and
- Landfills and waste incinerators that accept hazardous waste from off-site sources.[112]

[112] *Ibid*, Schedule 1.

Government Assessment

Even if a project is not listed in the *Environmental Assessment (Mandatory and Exempted Activities) Regulation*, it will still need to undergo an environmental assessment if the provincial government or the Alberta Energy Regulator decides the potential environmental impacts of the project warrant further consideration. To make this decision, the government or the Regulator will undertake a multi-step review process.

To start with, the government review process may be initiated by any government department that received an application for the project, if that department thinks the project requires further consideration.[113] Alternatively, the government department that deals with environmental assessments or the Alberta Energy Regulator can identify a project it thinks warrants further consideration and initiate the review process itself, or the project proponent can choose to initiate the review process.[114]

In either case, the project will be referred to the department responsible for environmental assessments, and that department will undertake an initial review of the project to decide whether further assessment is necessary, having regard to the size, nature, and location of the project, any public concerns that have been expressed, and the presence of any similar activities in the area.[115] If a project is for energy development, it will be referred to and reviewed by the Alberta Energy Regulator instead of the provincial government.[116]

If the government assessment department or the Alberta Energy Regulator decides further assessment is necessary, then two additional things must happen. The first is that the project proponent must give public notice of the proposed project by publishing information about the project in at least

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[113] *Environmental Protection and Enhancement Act*, *supra* note 13, s 41.

[114] *Ibid*, ss 43, 44.

[115] *Ibid*, s 44(3).

[116] *Specified Enactments (Jurisdiction) Regulation*, *supra* note 86, s 19(4)(b.1)

one newspaper that is local to the area where the project would take place.[117] The notice must explain that any person who may be directly affected by the project can submit a written statement of concern to the government or the Regulator setting out any concerns with the project.[118]

The second thing that must happen is that the government or the Alberta Energy Regulator must prepare a screening report on the need for an environmental assessment of the project.[119] This report must include information about the nature and location of the proposed activity, any human settlement in the area, and any potential environmental issues associated with the proposed activity.[120] It must also include a summary of any statements of concern that were submitted in response to the public notice.[121] On the basis of the information gathered, the government or the Regulator must then decide whether an environmental assessment of the project is necessary.[122]

Importantly, not all activities can be subjected to an environmental assessment by the provincial government or the Alberta Energy Regulator. Instead, the *Environmental Assessment (Mandatory and Exempted Activities) Regulation* lists activities that are exempted from the assessment process, meaning the government or the Regulator may not require an environmental assessment report for these activities.[123]

Notably, the activities that are exempted under the *Environmental Assessment (Mandatory and Exempted Activities) Regulation* include the construction, operation, or reclamation of:

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[117] *Environmental Protection and Enhancement Act*, *supra* note 13, s 44(5); *Environmental Assessment Regulation*, Alta Reg 112/1993, s 3.

[118] *Ibid*, s 3(1)(b)(iii).

[119] *Environmental Protection and Enhancement Act*, *supra* note 13, s 45(1)(a).

[120] *Environmental Assessment Regulation*, *supra* note 117, s 4.

[121] *Ibid*, s 4(1)(e).

[122] *Environmental Protection and Enhancement Act*, *supra* note 13, ss 45-46.

[123] *Environmental Assessment (Mandatory and Exempted Activities) Regulation*, *supra* note 111, s 2.

- Small sweet gas processing plants;
- Ready-mixed concrete plants;
- Plants that manufacture metal containers, tools, and hardware as primary metal products;
- Plants that manufacture secondary food, beverage, or animal products;
- Waterworks systems under the *Potable Water Regulation*[124];
- Wastewater systems under the *Wastewater and Storm Drainage Regulation*[125];
- Subsurface sewage disposal systems;
- Small pipelines;
- Transmission lines;
- Small plants or structures to produce wind or solar electric power;
- Small sand, gravel, clay, and marl pits; and
- Day use recreation sites and facilities, such as campgrounds, interpretive centres, and ski hills.[126]

In addition, the *Environmental Assessment (Mandatory and Exempted Activities) Regulation* exempts the following activities from the requirement for an environmental assessment:

- Widening or realigning a highway;
- Drilling or reclaiming a water well;
- Drilling or reclaiming a water observation well or monitoring borehole;
- Drilling, constructing, operating, or reclaiming an oil or gas well; and
- Maintaining a water management project, such as a dam, weir, reservoir, or canal.[127]

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[124] *Potable Water Regulation*, Alta Reg 277/2003.

[125] *Wastewater and Storm Drainage Regulation*, Alta Reg 119/1993.

[126] *Environmental Assessment (Mandatory and Exempted Activities) Regulation*, *supra* note 111, Schedule 2.

[127] *Ibid*.

Ministerial Assessment

The third and final way a project can be required to undergo an environmental assessment is if the responsible Minister orders it.[128] Under the *Environmental Protection and Enhancement Act*, the Minister has the power to order an environmental assessment if he or she is of the opinion that it is necessary given the nature of the proposed activity. Overall, the Minister has fairly wide discretion to decide whether an environmental assessment is required.[129]

Importantly, the Minister can require an environmental assessment even if the government or the Alberta Energy Regulator has decided an assessment is not necessary.[130] Equally, the Minister can require an environmental assessment even if an activity is exempted from assessments under the *Environmental Assessment (Mandatory and Exempted Activities) Regulation*.[131] For more information about the activities that are normally exempted from environmental assessments, take a look at the section on government assessments, immediately above.

[128] *Environmental Protection and Enhancement Act*, *supra* note 13, s 47.

[129] See *Castle-Crown Wilderness Coalition v Alberta (Director of Regulatory Assurance Division, Alberta Environment)*, 2005 ABCA 283 at paras 41-42.

[130] *Environmental Protection and Enhancement Act*, *supra* note 13, s 47(b).

[131] *Ibid*, s 47(c).

b. Preparation of the Report

If a project is required to undergo an environmental assessment, the project proponent is responsible for preparing the environmental assessment report. To start with, the proponent must propose terms of reference for the report.[132] The proponent must then publish notice of the proposed terms in at least one newspaper that is local to the area where the project would occur, including notice that anyone can provide comments on the proposed terms to the government or the Alberta Energy Regulator.[133]

After considering any such comments, the government or the Regulator will finalize the terms of reference for the environmental impact assessment report.[134] The proponent must then hire someone to prepare the report. In addition to following the terms of reference, the report must contain:

- A description of the project and the reasons it is necessary;
- An explanation of how the project site was selected over any alternatives;
- A description of baseline environmental conditions;
- A description of potential positive and negative environmental, social, economic, and cultural impacts of the project;
- A description of the plans to mitigate potential negative impacts and to monitor environmental impacts;
- A description of the contingency plans for unexpected negative impacts;
- A description of the plan to minimize the release of any harmful substances into the environment;
- An identification of any issues relating to human health;
- A consideration of alternatives to the proposed project; and
- A plan for public consultation about the proposed project.[135]

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[132] *Ibid*, s 48.

[133] *Ibid*, s 48(2); *Environmental Assessment Regulation*, *supra* note 117, s 6.

[134] *Environmental Protection and Enhancement Act*, *supra* note 13, s 48(3).

[135] *Ibid*, s 49.

The government or the Regulator may also require any other information it considers necessary to assess the impact of the project.[136]

Once the environmental impact assessment report is complete, the proponent must publish the report and make it available to the public.[137] Additionally, the proponent must submit the report to the government or the Alberta Energy Regulator, and, if the report is complete, the government or the Regulator must submit the report to the responsible Minister.[138] After reviewing the report, the Minister may make any recommendations that he or she thinks are necessary to any person, government, or government agency that is dealing with the proposed project.[139]

Generally speaking, for more information about ongoing and completed environmental assessments, take a look at the Government of Alberta's website.[140]

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[136] *Ibid*, s 49(o).

[137] *Ibid*, s 52. See also *Environmental Assessment Regulation*, *supra* note 117, s 8.

[138] *Ibid*, ss 50, 53(c). But see ss 53(a), (b).

[139] *Ibid*, s 55. But see *ibid*, s 64.

[140] "Environmental Impact Assessments – Current projects" (2021), online: Government of Alberta https://www.alberta.ca/environmental-impact-assessments-current-projects.aspx.

iii. Federal Impact Assessments

In 2019, the federal government introduced a new federal impact assessment regime through the *Impact Assessment Act*[141], which replaced the previous impact assessment regime under the *Canadian Environmental Assessment Act, 2012*[142].

Like the provincial impact assessment regime, the main goal of the federal impact assessment regime is to determine the potential impacts of major development projects. Generally speaking, the federal regime applies to any project that might have a negative impact on areas of federal legislative jurisdiction, including national parks, Indigenous peoples, endangered species, and fisheries. More information about legislative jurisdiction and how it is assigned to the different levels of government can be found in the introduction.

In the following sections, we will provide an overview of the federal impact assessment regime, starting with a discussion of which projects require an impact assessment, before turning to the process for conducting a federal impact assessment. Then, we will provide a brief discussion of the secondary impact assessment process that applies to projects on lands owned or administered by the federal government.

As you review the following sections, be aware that the federal government can choose to fully adopt the impact assessment process of another jurisdiction, such as the Government of Alberta, instead of conducting its own impact assessment.[143] For more information about the provincial impact assessment process, take a look at the section on provincial environmental assessments.

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[141] *Impact Assessment Act*, SC 2019, c 28, s 1.

[142] *Canadian Environmental Assessment Act, 2012*, SC 2012, c 19, s 52.

[143] See *Impact Assessment Act*, *supra* note 141, ss 31-35.

a. Projects Needing Assessment

There are two ways a project can be required to undergo an impact assessment under the federal impact assessment regime. The first is if the project is listed in the *Physical Activities Regulations*[144] as the sort of project that requires an impact assessment.[145] Generally speaking, the projects listed in the *Regulation* are the most likely to have negative environmental impacts in areas of federal jurisdiction.[146]

Notably, the projects listed in the *Physical Activities Regulations* include constructing, operating, expanding, decommissioning, or abandoning:

- Some transportation and natural resource projects in wildlife areas;
- Some physical works in national marine conservation areas;
- New pipelines in national marine conservation areas;
- Some physical works, transportation corridors, and dams in national parks;
- Military bases;
- Large mines, mills, quarries, and sand and gravel pits;
- Nuclear facilities and reactors;
- Large fossil fuel powered generating facilities;
- Some large in situ oil sands extraction facilities;
- Large oil refineries, sour gas processing plants, and facilities to liquefy natural gas;
- Large storage facilities for petroleum and natural gas;
- Some new pipelines and international and interprovincial power lines;
- Large hydroelectric generating facilities;

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[144] *Physical Activities Regulations*, SOR/2019-285.

[145] *Ibid*, s 2. But see *ibid*, ss 2(2)-(3), 4.

[146] "Operational Guide: Designating a Project under the *Impact Assessment Act*" (9 December 2021), online: Government of Canada https://www.canada.ca/en/impact-assessment-agency/services/policy-guidance/designating-project-impact-assessment-act.html.

- Some new aerodromes;
- New canals;
- Some new public highways, railways, and railway yards;
- New hazardous waste facilities within 500 meters of a natural waterbody;
- Dams and dykes on natural waterbodies with large reservoirs; and
- Large diversion structures in natural waterbodies.[147]

The second way a project can be required to undergo a federal impact assessment is if it is designated as such by the responsible Minister.[148] Under the *Impact Assessment Act*, the Minister can designate a project either on his or her own initiative or in response to a request from someone else, which could be from a member of the public, another government, or a federal agency.[149]

Generally speaking, the Minister can require an impact assessment of a project if the project may cause negative social, economic, environmental, or health-related impacts on a matter of federal jurisdiction or if public concern warrants an impact assessment.[150] To decide if this is the case, the Minister will receive recommendations from the Impact Assessment Agency, which is a federal agency set up to facilitate the impact assessment process.[151]

Importantly, under the *Impact Assessment Act* the Minister cannot require an impact assessment if a project has already substantially begun.[152] The Minister also cannot require an impact

[147] *Ibid*, Schedule.

[148] *Impact Assessment Act*, *supra* note 141, s 9(1).

[149] *Ibid*. See also "Operational Guide: Designating a Project under the *Impact Assessment Act*" (9 December 2021), online: Government of Canada https://www.canada.ca/en/impact-assessment-agency/services/policy-guidance/designating-project-impact-assessment-act.html.

[150] *Impact Assessment Act*, *supra* note 141, s 2, 9(1).

[151] *Ibid*, s 9(3); "Operational Guide: Designating a Project under the *Impact Assessment Act*" (9 December 2021), online: Government of Canada https://www.canada.ca/en/impact-assessment-agency/services/policy-guidance/designating-project-impact-assessment-act.html.

[152] *Impact Assessment Act*, *supra* note 141, s 9(7).

assessment if the federal government has already in some way permitted the project to be carried out.[153] Generally speaking, for more information about designating projects under the *Impact Assessment Act*, including how to request that the Minister designate a project, take a look at the federal government's website.[154]

b. Impact Assessment Process

Once a project has been designated as requiring a federal impact assessment, the impact assessment process occurs in five steps. In the following sections, we will review each of these five steps in turn. Otherwise, for more information about the federal impact assessment process, take a look at the resources available on the federal government's website.[155]

Step 1: Confirming the Need

In the first stage of the impact assessment process, the Impact Assessment Agency makes a second, more precise assessment of whether the impact assessment of a proposed project is necessary.

To facilitate this assessment, the project proponent must submit a description of the proposed project to the Agency.[156] The Agency may also collect additional information about the project from other federal departments and agencies.[157] In addition, it must offer to consult with any other levels of government that require an environmental assessment, such as the Government of Alberta, as well as

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[153] *Ibid*.

[154] "Operational Guide: Designating a Project under the *Impact Assessment Act*" (9 December 2021), online: Government of Canada https://www.canada.ca/en/impact-assessment-agency/services/policy-guidance/designating-project-impact-assessment-act.html.

[155] See "Impact Assessment Agency of Canada" (15 December 2021), online: Government of Canada https://www.canada.ca/en/impact-assessment-agency.html.

[156] *Impact Assessment Act*, *supra* note 141, s 10. See also *Information and Management of Time Limits Regulations*, SOR/2019-283, s 3.

[157] *Ibid*, s 13.

any Indigenous groups that could be affected by the proposed project.[158] The Agency must also provide an opportunity for the public to provide comments on whether an impact assessment is necessary.[159]

Once the Impact Assessment Agency has collected this information, it must make a list of the potential issues with the project and provide that list to the project proponent.[160] In response, the proponent must return a more detailed description of the proposed project, along with a description of how it intends to address the issues raised by the Agency.[161] At this point, the Agency will make a final decision about whether an impact assessment is required, having regard to all the information collected, any comments from the public or Indigenous groups, and the potential for the project to cause adverse impacts on areas of federal jurisdiction.[162]

Step 2: Deciding the Scope

In the second stage of the impact assessment process, the Impact Assessment Agency sets out its expectations for how the project proponent must conduct the impact assessment. In doing so, the Impact Assessment Agency must identify the studies and the information the proponent must provide as part of the impact assessment.[163] Generally speaking, this will include information about:

- The purpose and need for the project;
- Environmental, social, economic, or health-related impacts of the project;
- Impacts the project could have on Indigenous groups and their rights;
- Measures the proponent will take to mitigate negative impacts of the project;
- Alternatives to the project and alternative ways of carrying out the project;

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[158] *Ibid*, s 12.

[159] *Ibid*, s 11.

[160] *Ibid*, s 14.

[161] *Ibid*, s 15; *Information and Management of Time Limits Regulations*, *supra* note 156, s 4.

[162] *Impact Assessment Act*, *supra* note 141, s 16.

[163] *Ibid*, s 18; *Information and Management of Time Limits Regulations*, *supra* note 156, s 5.

- Follow-up programs to monitor the impacts of the project;
- Impacts of the project on Canada's ability to meet its climate change commitments;
- Indigenous knowledge and cultural considerations related to the project;
- Contributions of the project towards general sustainability;
- Community knowledge and public comments related to the project;
- Comments from any other implicated federal agency or level of government; and
- Implications of the project for sex and gender and other identity factors.[164]

Additionally, the Impact Assessment Agency must provide the proponent with a plan for how it will issue any permits that are required for the project, as well as a plan for how the Agency will collaborate with any other jurisdictions or agencies.[165] It must also provide the proponent with a plan for conducting consultations with the public and any affected Indigenous groups.[166] Generally speaking, more information about Indigenous consultations can be found in the chapter on water in Indigenous communities.

Step 3: Gathering the Information

Once the scope of the assessment has been set, the third stage of the impact assessment process is all about gathering information. Specifically, at this stage, the project proponent is responsible for gathering the information required by the Impact Assessment Agency and for carrying out consultations with Indigenous groups and the public.[167] During this stage, the Impact Assessment Agency will also carry out consultations with Indigenous groups and the public according to the plan it set out in the second stage of the impact assessment process.

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[164] *Impact Assessment Act*, *supra* note 141, ss 18(1.1)-(1.2), 22.

[165] *Ibid*, s 18; *Information and Management of Time Limits Regulations*, *supra* note 156, s 5.

[166] *Ibid*.

[167] *Impact Assessment Act*, *supra* note 141, s 19.

In total, the proponent has three years to gather and submit all the required information to the Impact Assessment Agency.[168] If the proponent does not provide the information within that period, or within a longer time period, if the Agency grants an extension, the impact assessment is automatically terminated, and the project may not proceed.[169]

Step 4: Assessing the Project

In the fourth stage of the impact assessment process, the federal government procures an impact assessment report, which sets out the likely impacts of the project, as well as recommendations for mitigating and monitoring the impacts of the project.[170]

Practically, there are two ways the government can procure an impact assessment report. The first is to have the Impact Assessment Agency review all the information that has been collected about the project and prepare the report.[171] As part of this process, the Agency must provide a final opportunity for the public to provide input and incorporate that input into the report.[172]

The second way the government can procure an impact assessment report is for the Minister to appoint a review panel.[173] Like the Impact Assessment Agency, this review panel must review the information that has been collected about the project and prepare an impact assessment report.[174] However, unlike the Agency, the review panel must do so by holding public hearings.[175]

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[168] *Ibid*.

[169] *Ibid*, s 20.

[170] *Ibid*, ss 28, 51(1)(d). See also *ibid*, s 22.

[171] *Ibid*, s 28.

[172] *Ibid*, ss 27, 28.

[173] *Ibid,* s 36. Note that the federal government can appoint a joint review panel if it is carrying out the impact assessment in cooperation with another government or agency (*ibid*, s 39).

[174] *Ibid*, ss 51, 52.

[175] *Ibid*, ss 51, 53.

As part of these public hearings, the review panel must publicly present the information that has been collected about the project.[176] Additionally, as part of the hearings, the panel must give the public an opportunity to provide comments about the potential impacts of the project.[177] Then, at the end of the hearings, the review panel must prepare the impact assessment report, using the information presented at the hearings, as well as any input from the public.[178]

Step 5: Making the Final Decision

At the end of the assessment stage, the final impact assessment report must be sent to the responsible Minister.[179] The Minister must then review the report, and either decide whether the project is in the public interest or refer the report to the federal cabinet to make that decision.[180] If the report was prepared by a review panel, the Minister must refer the report to the federal cabinet to make the decision.[181]

To decide whether a project is in the public interest, the Minister or the federal cabinet must consider:

- The project's contributions to general sustainability;
- The potential impact of the project on federal jurisdiction;
- The possible measures to mitigate negative impacts;
- The impact of the project on Indigenous groups and their rights; and
- The effect of the project on Canada's ability to meet its climate change commitments.[182]

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[176] *Ibid*, s 51(1)(c).

[177] *Ibid*, s 51(1)(b).

[178] *Ibid*, s 51(1)(d).

[179] *Ibid*, ss 28(2), 51(1)(e).

[180] *Ibid*, s 60.

[181] *Ibid*, s 61.

[182] *Ibid*, s 63.

If the Minister or cabinet decides a project is in the public interest, the proponent is entitled to go ahead with the project.[183] However, the Minister is able to attach conditions to the project to manage any adverse effects within federal jurisdiction, including measures to mitigate those effects, as well as requirements to monitor the impacts of the project.[184] By contrast, if the Minister or cabinet decides the project is not in the public interest, the proponent may not proceed with the project, subject only to a formal legal challenge to the Minister or cabinet's decision.[185]

C. Assessments on Federal Lands

Under the *Impact Assessment Act*, there is a secondary assessment process that applies to development projects on lands owned or administered by the federal government, which are not subject to the full impact assessment process.[186] Specifically, no federal government authority can permit one of these projects to go forward, unless the authority is satisfied the project is unlikely to have a significant negative impact on the environment.[187] Alternatively, if the activity is likely to have significant negative impact on the environment, the authority must be satisfied the impact is justified in the circumstances.[188]

[183] *Ibid*, s 8.

[184] *Ibid*, s 64.

[185] *Ibid*, s 8.

[186] *Ibid*, ss 81, 82. But see *ibid*, s 88; *Designated Classes of Projects Order*, SOR 2019/323.

[187] *Impact Assessment Act*, *supra* note 141, s 82(a).

[188] *Ibid*, s 82(b). See also *ibid*, s 90.

To determine whether a project is likely to have a significant negative impact on the environment, a federal authority must consider:

- Any Indigenous knowledge provided about the project;
- Any adverse impact the project may have on the rights of any Indigenous groups;
- Any community knowledge provided about the project; and
- Any measures that could mitigate the impacts of the project.[189]

The authority must also give the public the opportunity to comment on the potential environmental impacts of the project and take those comments into consideration in making its determination.[190]

[189] *Ibid*, s 84.

[190] *Ibid*, ss 84(1)(d), 86(1).

III. PROHIBITIONS AGAINST SUBSTANCE RELEASES

To protect water quality in Alberta, there are restrictions that limit the release of harmful substances into water and into areas that could impact water. In this section, we will review the legislation that imposes these restrictions, starting with a review of the general legislation that limits substance releases into the environment, including into water. Then, we will discuss the legislation that specifically prohibits substance releases into waters frequented by fish and migratory birds.

As we go through this section, keep in mind that the word "release" is a general term that captures all the different ways substances can enter the environment, including through leaks, spills, deposits, sprays, injections, disposals, discharges, seepage, and emissions.[191] As well, be aware that just because a substance release is allowed under one piece of legislation, it is not necessarily allowed under another piece of legislation. Instead, if a substance release is prohibited under another piece of legislation, it is not allowed.[192]

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[191] See e.g., *Environmental Protection and Enhancement Act*, *supra* note 13, s 1(hhh).

[192] But see "Canada-Alberta equivalency agreement for the control of toxic substances" (30 June 2017), online: Government of Canada https://www.canada.ca/en/environment-climate-change/services/canadian-environmental-protection-act-registry/agreements/equivalency/canada-alberta-control-toxic-substances.html.

Finally, as we go through this section, take note that in addition to the legislation discussed here, there is also federal and provincial legislation that regulates the release of harmful substances through certain industrial activities, such as agricultural activities, shipping, and oil and gas development. As this legislation is quite technical and specific to each industry, it will not be dealt with in this publication.

i. General Prohibitions

In Alberta, there are two pieces of general legislation that govern the release of substances into the environment, including into the waters of the province. The first is the *Environmental Protection and Enhancement Act*, which is provincial legislation that governs the release of substances that may cause damage to the environment, human health, or property. The second is the *Canadian Environmental Protection Act*[193], which is federal legislation that governs the release of toxic substances into the environment. In the following sections, we will discuss each of these two pieces of legislation in turn.

a. *Environmental Protection and Enhancement Act*

The *Environmental Protection and Enhancement Act* is provincial legislation that prohibits the release of any substance into the environment in an amount that may cause damage to the environment, human health, or property.[194] The only exception is if the substance release is specifically permitted by an approval issued under the *Environmental Protection and Enhancement Act* or a regulation or code of practice created under that *Act*, in which case the release is permitted.[195]

Under the *Environmental Protection and Enhancement Act*, you must report if you have released a potentially harmful substance into the environment, and that release was not authorized under the

[193] *Canadian Environmental Protection Act, 1999*, SC 1999, c 33.

[194] *Environmental Protection and Enhancement Act*, *supra* note 13, ss 108, 109.

[195] *Ibid*, s 107(2).

Act. Specifically, you must report the release as soon as possible to the provincial government, to any person responsible for the substance, and to any person who may be affected by the release.[196] For more information about when and how to report the release of a harmful substance, take a look at the resources on the Government of Alberta's website.[197]

Once a potentially harmful substance has been released into the environment, any person who is responsible for the substance must, as soon as that person becomes aware of the release, take all reasonable measures to stop the release, to prevent further damage to the environment, and to restore the environment to a condition satisfactory to the government.[198] For more information about cleaning up substance releases, take a look at the Government of Alberta's website.[199]

To ensure that a person responsible for a released substance takes action, the government has the power to issue an environmental protection order requiring that person to investigate the circumstances of the release or to take any measure the government thinks is necessary to prevent the release, to minimize the effects of the release on the environment, or to restore the environment to a condition satisfactory to the government.[200] If the potential effects of the release are immediate and significant, the government may also issue an emergency environmental protection order requiring the person responsible for the substance to take emergency measures to deal with the release, or, if necessary, the government can step in directly and take emergency measures to deal with the release.[201]

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[196] *Ibid*, ss 110, 111. But see *Release Reporting Regulation*, Alta Reg 117/93, s 2.

[197] See "Reporting Spills and Releases" (4 February 2016), online: Government of Alberta https://open.alberta.ca/publications/reporting-spills-and-releases.

[198] *Environmental Protection and Enhancement Act*, *supra* note 13, s 112. See also *Remediation Regulation*, Alta Reg 154/2009.

[199] "Contaminated site remediation" (2021), online: Government of Alberta https://www.alberta.ca/contaminated-site-remediation.aspx.

[200] *Environmental Protection and Enhancement Act*, *supra* note 13, s 113.

[201] *Ibid*, ss 114-15.

To deal with harmful substances that are present in the environment, the provincial government also has the power to designate an area as a contaminated site.[202] This allows the government to issue an environmental protection order to any person who is responsible for the site and require that person to take any measures the government thinks are necessary to restore the site and to secure it to prevent further contamination.[203]

Finally, in addition to the general controls on releasing harmful substances, the *Environmental Protection and Enhancement Act* specifically prohibits disposing of waste onto ice or into water unless you are authorized to do so by an approval, code of practice, or regulation made under the *Act*.[204]

b. ***Canadian Environmental Protection Act***

The *Canadian Environmental Protection Act* is federal legislation that governs the release of toxic substances into the environment, including the release of these substances into water.[205] The *Act* establishes a scheme for identifying when a substance is toxic and allows the federal government to create regulations that restrict the release of these substances into the environment.[206] The substances that have already been identified as toxic are listed in the schedules to the *Canadian Environmental Protection Act*, and the specific conditions and limits for releasing a given toxic substance are set out in the regulations to the *Act*.

Under the *Canadian Environmental Protection Act*, any person who is in charge of a substance or causes its release contrary to one of the regulations to the *Act* is responsible for reporting the release to

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[202] *Ibid*, s 125.

[203] *Ibid*, s 129. See also *ibid*, s 107(1)(c).

[204] *Environmental Protection and Enhancement Act*, *supra* note 13, s 181.

[205] See *A Guide to Understanding the Canadian Environmental Protection Act, 1999* (10 December 2004), online: Government of Canada https://www.canada.ca/en/environment-climate-change/services/canadian-environmental-protection-act-registry/publications/guide-to-understanding.html.

[206] *Canadian Environmental Protection Act, 1999*, *supra* note 193, s 93.

the federal government and for taking any reasonable measures to stop the release or to limit the possible harm it may cause to the environment or to human health.[207] In addition, the owner of a property affected by the release of a toxic substance must report the release as soon as possible to the federal government.[208] Any other person may also voluntarily report the release of a toxic substance to the federal government and, in doing so, may request to have his or her identity kept confidential to avoid repercussions.[209] In Alberta, releases should be reported to the provincial Ministry of Environment and Parks.[210]

To prevent the release of toxic substances, the responsible Minister under the *Canadian Environmental Protection Act* has the power to require any person or organization to prepare and implement a release prevention plan to prevent or minimizing the release of toxic substances into the environment.[211] The Minister can also require any person or organization to prepare an emergency response plan to deal with accidental or unplanned releases of toxic or other harmful substances.[212] Notably, under the *Act*, a person who owns or is in control of a substance at the time of an accidental or unplanned release may be required to restore the environmental damage caused by the release or to pay the costs of doing so.[213]

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[207] *Ibid*, s 95.

[208] *Ibid*, s 95(3).

[209] *Ibid*, s 96.

[210] See *Release and Environmental Emergency Notifications Regulations*, SOR/2011-90.

[211] *Canadian Environmental Protection Act, 1999*, *supra* note 193, s 56.

[212] *Ibid*, ss 193, 199. See also *Environmental Emergency Regulations, 2019*, SOR/2019-51, ss 4-12.

[213] *Canadian Environmental Protection Act, 1999*, *supra* note 193, s 205. See also *ibid*, s 201.

Beyond regulating the release of toxic substances, the *Canadian Environmental Protection Act* regulates the release of some other substances that may affect water quality, including substances released on federal lands, nutrients that promote aquatic vegetation, and international water pollution. In the following sections, we will briefly discuss how the *Act* regulates each of these substances in turn.

Substance Releases on Federal Lands

The *Canadian Environmental Protection Act* allows the federal government to create regulations to manage the release of substances of any kind on federal lands and waters—such as those found on military bases, national parks, and First Nations' reserves—and by federal departments and agencies—such as crown corporations, federal boards, and federal works and undertakings.[214] The *Canadian Environmental Protection Act* also allows the federal government to set out non-binding guidelines and codes of practice to help manage substance releases on federal lands and by federal departments and agencies.[215]

Currently, the only regulation enacted under these provisions that is relevant to water quality is the *Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations*[216], which sets out a framework for managing releases, leaks, and spills of petroleum products from storage tanks.

International Water Pollution

The *Canadian Environmental Protection Act* allows the federal government to take action in response to any water pollution that could affect the water quality in another country or that could violate an international agreement the federal government has entered into with another country to regulate water quality.[217]

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[214] *Ibid*, ss 207(1), 209

[215] *Ibid*, s 208.

[216] *Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations*, SOR/2008-197.

[217] *Canadian Environmental Protection Act, 1999*, *supra* note 193, s 176.

Specifically, to deal with international water pollution, the *Canadian Environmental Protection Act* allows the responsible Minister to:

- Require any person to prepare and implement a pollution prevention plan to deal with the pollution;[218]
- Recommend regulations to cabinet for the purpose of preventing, controlling, or correcting the pollution;[219] or
- Where there is an immediate and significant danger to the environment or human health, make a temporary order regulating the source of the pollution.[220]

Notably, if the source of the international water pollution is a person or organization other than the federal government or a federal agency or crown corporation, the federal government must consult with the government of the province where the source is located before taking any of these actions.[221]

Use or Sale of Nutrients

The *Canadian Environmental Protection Act* restricts the use of nutrients that promote the growth of aquatic vegetation in water conditioners and household cleaning products.[222] In particular, the *Act* prohibits manufacturing or importing these products for use or sale in Canada unless they follow a maximum allowable concentration of nutrients, as determined by the federal government.[223]

Currently, the federal government has used this power to enact the *Phosphorus in Certain Cleaning Products Regulations*[224], which set limits on the level of phosphorus allowed in laundry detergents and other household cleaners.

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[218] *Ibid*, s 176(3)(a).

[219] *Ibid*, s 176(3)(b).

[220] *Ibid*, s 183.

[221] *Ibid*, ss 176(2), 183(4).

[222] *Ibid*, ss 116-17.

[223] *Ibid*, ss 117-18.

[224] *Phosphorus in Certain Cleaning Products Regulations*, SOR/89-501.

ii. Protecting Fish and Migratory Birds

In addition to the general rules that govern the release of substances into the environment, there are also special provisions in place to limit substance releases in waters that may impact fish and migratory birds. In this section, we will provide a brief overview of these rules, which are set out in the *Fisheries Act*[225] and the *Migratory Birds Convention Act, 1994*[226], respectively.

a. *Fisheries Act*

The *Fisheries Act* prohibits releasing substances into water that would be harmful to fish or fish habitat.[227] In particular, the *Fisheries Act* prohibits:

- Throwing harmful substances, including ballast, coal ashes, and stones, overboard from a boat in any water where fishing occurs;[228]
- Disposing of fish offal on the shore of any waters, below the high-water mark;[229] and
- Releasing harmful substances in any waters frequented by fish or any place where the substance may enter waters frequented by fish.[230]

Despite these prohibitions, releasing a harmful substance is allowed under the *Fisheries Act* if the substance release is authorized under a regulation passed under the *Fisheries Act* or under any other federal legislation.[231] For this purpose, a number of regulations under the *Fisheries Act* set out standards for substance releases for specific industrial activities, including the operation of meat and poultry

[225] *Fisheries Act*, RSC 1985, c F-14.

[226] *Migratory Birds Convention Act, 1994*, SC 1994, c 22.

[227] See *Fisheries Act*, *supra* note 225, ss 34, 36.

[228] *Ibid*, s 36(1)(a).

[229] *Ibid*, s 36(1)(b).

[230] *Ibid*, s 36(3).

[231] *Ibid*, s 36(4).

plants,[232] metal and diamond mining,[233] petroleum refining,[234] pulp and paper production,[235] and wastewater systems.[236]

Under the *Fisheries Act*, if an unauthorized substance release occurs in water frequented by fish and there may be harm to fish, fish habitat, or the human use of fish, then any person who is in charge of the substance or the activity that caused the substance release, or any person who contributed to the substance release, has an obligation to report that release to the federal government.[237] As well, those same people have an obligation to take all reasonable measures to prevent the release of the substance or to mitigate or remedy any negative impacts of the substance release.[238]

Additionally, if an officer of the federal government believes on reasonable grounds that immediate action is necessary to deal with a substance release, that officer may take all reasonable measures to deal with the substance release, at the expense of any person who was responsible for the release.[239]

Generally speaking, for more information about the rules around substance releases under the *Fisheries Act*, take a look at the federal government's website.[240] As well, for information about how the *Fisheries Act* limits activities that take place in waters frequented by fish, take a look at the chapter on land ownership and use.

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[232] *Meat and Poultry Products Plant Liquid Effluent Regulations*, CRC, c 818.

[233] *Metal and Diamond Mining Effluent Regulations*, SOR/2002-222.

[234] *Petroleum Refinery Liquid Effluent Regulations*, CRC, c 828.

[235] *Pulp and Paper Effluent Regulations*, SOR/92-269.

[236] *Wastewater Systems Effluent Regulations*, SOR/2012-139.

[237] *Fisheries Act*, *supra* note 225, s 38(5). See also *Deposit Out of the Normal Course of Events Notification Regulations*, SOR/2011-91.

[238] *Fisheries Act*, *supra* note 225, ss 38(6).

[239] *Ibid*, s 38(7.1). See also *ibid*, s 42.

[240] "Frequently asked questions: Fisheries Act pollution prevention provisions" (10 May 2021), online: Government of Canada https://www.canada.ca/en/environment-climate-change/services/managing-pollution/effluent-regulations-fisheries-act/frequently-asked-questions.html.

b. Migratory Birds Convention Act, 1994

The *Migratory Birds Convention Act, 1994* is federal legislation that protects migratory birds and their habitat.[241] As part of this protection, the *Act* prohibits releasing any substance that is harmful to migratory birds into waters frequented by migratory birds or into any area where the substance could enter waters frequented by migratory birds.[242]

The only exception to this rule is if the release of the substance is allowed under the *Canada Shipping Act, 2001*[243], another piece of federal legislation, or by the responsible Minister for scientific purposes.[244]

[241] *Migratory Birds Convention Act*, *supra* note 226, s 4.

[242] *Ibid*, s 5.1.

[243] *Canada Shipping Act, 2001*, SC 2001, c 26.

[244] *Ibid*, s 5.1(3). But see *R v Syncrude Canada*, 2010 ABPC 229.

IV. DRINKING WATER, SEWAGE, WASTEWATER, AND STORM DRAINAGE SYSTEMS

The systems that manage the water we use for basic domestic and sanitation purposes can have significant implications for water quality. Drinking water, especially, must be kept to certain standards to ensure human health. Likewise, the systems that manage wastewater, such as municipal wastewater and storm drainage systems, as well as private sewage systems, can have a significant impact on water quality if they are not properly treated and if they are allowed to contaminate other water sources.

In this section, we will discuss the regulatory schemes that manage our everyday uses of water and how they impact water quality. To do this, we will start by discussing the two overlapping legislative schemes that set water quality standards for water intended for human consumption. Then, we will provide an overview of the regulatory scheme that governs wastewater and storm drainage systems, along with the rules for private sewage systems.

i. Drinking Water Standards

In Alberta, there are two overlapping legislative schemes that govern the quality standards for water intended for human consumption. The first is set out under the *Environmental Protection and Enhancement Act*, and it establishes water quality standards for waterworks systems which provide water to residential, commercial, and industrial properties. The second scheme is out under the *Public Health Act*[245], and it governs water quality from the perspective of public health and disease prevention. In the following sections, we will discuss each of these two legislative schemes in turn.

As you read these sections, be aware that there is a separate legal regime for managing the quality of drinking water on First Nations' reserves. For more information about that scheme, take a look at the chapter on water in Indigenous communities.

a. Waterworks Systems

In Alberta, the quality of water provided by waterworks systems is governed by the *Potable Water Regulation*, which is a provincial regulation passed under the *Environmental Protection and Enhancement Act*. Roughly speaking, this regulation applies to all waterworks systems that serve a municipality, an unincorporated municipal development, a non-subdivided private development, or a Metis Settlement.[246] It also applies to waterworks systems owned by regional services commissions. By contrast, the *Regulation* does not apply to waterworks systems that serve an individual residential or farm property.

In terms of content, the *Potable Water Regulation* sets out standards for the design, operation, and maintenance of waterworks systems.[247] In addition, it sets out water quality requirements, meaning

[245] *Public Health Act*, RSA 2000, c P-37.

[246] *Potable Water Regulation*, *supra* note 124, s 1(2); *Activities Designation Regulation*, *supra* note 71, Schedule 1, Division 5; Schedule 2, Division 5.

[247] See *Potable Water Regulation*, *supra* note 124.

the maximum level of contaminants allowed in water intended for human consumption.[248] In particular, the *Regulation* incorporates the standards set out in the *Guidelines for Canadian Drinking Water Quality*[249], according to the parameters listed in the *Standards and Guidelines for Municipal Waterworks, Wastewater and Storm Drainage Systems*[250].

Complementary to the *Potable Water Regulation*, the *Environmental Protection and Enhancement (Miscellaneous) Regulation* adopts additional rules for waterworks systems that use high quality groundwater and water systems that obtain water from another waterworks system.[251] These rules can be found in the *Code of Practice for Waterworks Systems Using High Quality Groundwater*[252] and the *Code of Practice for Waterworks Systems Consisting Solely of a Water Distribution System*[253], respectively.

Overall, if you think there is a problem with the quality of the water provided by a waterworks system, you should contact Alberta Environment and Parks, which is responsible for enforcing the requirements set out in the *Potable Water Regulation*.[254] Alberta Environment and Parks also offers a database of the latest water quality test results for the waterworks systems that it oversees, which is available on the Alberta Environment and Parks website.[255]

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[248] *Ibid*, s 6. See also *Environmental Protection and Enhancement Act*, *supra* note 13, s 149.

[249] See "Guidelines for Canadian Drinking Water Quality – Summary Table" (4 September 2020), online: Government of Canada https://www.canada.ca/en/health-canada/services/environmental-workplace-health/reports-publications/water-quality/guidelines-canadian-drinking-water-quality-summary-table.html.

[250] *Standards and Guidelines for Municipal Waterworks, Wastewater and Storm Drainage Systems* (22 March 2021), online: Government of Alberta https://open.alberta.ca/publications/5668185.

[251] *Environmental Protection and Enhancement (Miscellaneous) Regulation*, Alta Reg 118/1993, s 8.1.

[252] *Code of Practice for Waterworks Systems Using High Quality Groundwater* (1 June 2012), online: Government of Alberta https://open.alberta.ca/publications/groundwater2.

[253] *Code of Practice for a Waterworks System Consisting Solely of a Water Distribution System* (1 June 2012), online: Government of Alberta https://open.alberta.ca/publications/distribution2.

[254] See "Energy and Environmental Response Line" (2021), online: Government of Alberta https://www.alberta.ca/energy-and-environmental-response-line.aspx.

[255] "Regulated Drinking Water in Alberta" (2015), online: Government of Alberta http://environment.alberta.ca/apps/regulateddwq/.

b. Public Health

Under the *Public Health Act* and the regulations passed under it, the provincial government regulates water quality, specifically dealing with its potential to cause disease and affect public health. Functionally, the *Act* and its regulations include a potpourri of rules around water quality, including quality standards for potable water, rules for water well placement, and requirements for providing potable water at public venues.

The most important regulation under the *Public Health Act* is the *Nuisance and General Sanitation Regulation*[256], which sets out quality standards for water that is intended to be consumed by the public. These standards include an overarching requirement that the water must be safe for human consumption.[257] The *Regulation* also prohibits doing anything to a water supply that might be dangerous to public health or that might allow the spread of disease.[258]

In addition, the *Nuisance and General Sanitation Regulation* sets out minimum distances that water wells must be from sources of potential contaminants, if the wells supply water for human consumption. Those minimum distances are:

- Septic tanks, pump out tanks, and any other watertight compartment – 10 meters;
- Weeping tile fields, evaporative treatment mounds, and outdoor toilets with a pit – 15 meters;
- Leaching cesspools – 30 meters;
- Sewage effluent on the ground surface – 50 meters;
- Sewage lagoons – 100 meters; and
- Any landfill or similar area where waste may be disposed – 450 meters.[259]

[256] *Nuisance and General Sanitation Regulation*, Alta Reg 243/2003.

[257] *Ibid*, s 11.

[258] *Ibid*, s 2(2)(c).

[259] *Ibid*, s 15.

Other regulations under the *Public Health Act* also set out situation-specific requirements relating to water quality.[260]

- *Food Regulation*[261]: requires commercial food establishments, farmers' markets, temporary food establishments, and bed and breakfasts to have potable water available.[262]
- *Housing Regulation*[263]: requires apartments, dormitories, hotels, and similar accommodations to provide potable water to occupants.[264]
- *Institutions Regulation*[265]: requires day cares and similar facilities to provide potable water.[266]
- *Personal Services Regulation*[267]: requires personal cosmetic service providers to have a supply of potable water.[268]
- *Public Swimming Pools Regulation*[269]: sets out requirements for water quality in swimming pools.

[260] See also *Potable Water on Board Trains, Vessels, Aircraft and Buses Regulations*, SOR/2016-43.

[261] *Food Regulation*, Alta Reg 31/2006.

[262] *Ibid*, ss 17(1)(f)(i), 34(a), 41, 44, 52(a).

[263] *Housing Regulation*, Alta Reg 173/1999.

[264] *Ibid*, s 3(1)(b)(iii).

[265] *Institutions Regulation*, Alta Reg 143/1981.

[266] *Ibid*, s 19(d).

[267] *Personal Services Regulation*, Alta Reg 1/2020.

[268] *Ibid*, s 5(1)(d).

[269] *Public Swimming Pools Regulation*, Alta Reg 204/2014.

- *Recreation Area Regulation*[270]: sets out requirements for water supplies in campgrounds and other recreation camps, as well as requirements for the location of toilets and sewage disposal for recreational vehicles.[271]
- *Work Camps Regulation*[272]: requires an adequate supply of potable water in work camps.[273]

Under the *Communicable Diseases Regulation*[274], Alberta Health Services has the power to investigate the presence of any waterborne disease to determine the source of the contamination.[275] It may also take actions to reduce the likelihood that a waterborne disease spreads further, including by requiring a person or organization to change water treatment processes or to use a different source of water.[276]

If you have concerns about your water quality, be aware that Alberta Health Services offers free water quality testing for drinking water, but only for non-municipal water systems. More information about this service, including who may use it, is available from the Alberta Health Services website.[277]

[270] *Recreation Area Regulation*, Alta Reg 198/2004.

[271] *Ibid*, ss 7-8, 11-14.

[272] *Work Camps Regulation*, Alta Reg 218/2002.

[273] *Ibid*, ss 10, 11.

[274] *Communicable Diseases Regulation*, Alta Reg 238/1985.

[275] *Ibid*, s 8; Schedule 4, "Food or Waterborne Illness".

[276] *Ibid*.

[277] "Water Testing: Testing your drinking water in Alberta" (19 November 2021), online: Government of Alberta https://myhealth.alberta.ca/Alberta/Pages/Testing-Your-Drinking-Water-in-Alberta.aspx.

ii. Wastewater, Sewage, and Storm Drainage

Wastewater, sewage, and storm drainage systems are important to maintaining water quality, because these are the systems that collect and treat household and industrial wastewater, as well as storm run-off, which can pick up chemicals and other contaminants as it moves over land.

In this section, we will outline the law that regulates each of these types of systems, with a focus on the rules that relate to water quality. Take note that wastewater and storm drainage systems are governed by a single regulatory scheme and, accordingly, we will deal with those systems together.

As well, as you review this section, keep in mind that there are separate rules that apply to the water systems on First Nations' reserves. For more information about the water systems on reserves, take a look at the chapter on water in Indigenous communities. Likewise, there are separate rules that apply to national parks, with the exception of the towns of Jasper and Banff.[278] For more information about water systems in national parks, take a look at the *National Parks of Canada Water and Sewer Regulations*.[279]

a. Wastewater and Storm Drainage Systems

Wastewater and storm drainage systems are systems that deal with excess water, whether that is the wastewater of daily life, the wastewater produced by industrial plants, or the excess water resulting from storms and precipitation. These systems may include sewer systems, as well as facilities for treating sewage and other wastewater.

In Alberta, wastewater and storm drainage systems are primarily governed by the *Wastewater and Storm Drainage Regulation*, which was enacted under the *Environmental Protection and Enhancement Act*. Roughly speaking, this regulation applies to all municipal wastewater and storm

[278] See *National Parks of Canada Water and Sewer Regulations*, CRC, c 1134, ss 2.1, 2.2.

[279] *Ibid*.

drainage systems, as well as wastewater and storm drainage systems owned by regional services commissions.[280] It also applies to wastewater and storm drainage systems on Metis settlements, unincorporated municipal developments, and non-subdivided private developments.[281] By contrast, it does not apply to wastewater or storm drainage systems that serve only a single residence or a farm.

In terms of content, the *Wastewater and Storm Drainage Regulation* sets out standards for the design, operation, and maintenance of storm drainage and wastewater systems, which include the standards in the *Standards and Guidelines for Municipal Waterworks, Wastewater and Storm Drainage Systems*.[282] In addition, the *Regulation* sets out rules for substances that may be released into these systems, the application of sludge to agricultural land, and the use of wastewater for irrigation.[283] It also includes rules for the disposal of snow, which can affect water quality if it has absorbed road salt and other chemicals used to keep roads safe in winter.[284]

Additionally, the *Wastewater and Storm Drainage Regulation* adopts two codes of practice, which set out further rules for wastewater systems that use a wastewater lagoon or that only include a collection system and not a treatment system.[285] Respectively, these are the *Code of Practice for Wastewater Systems Using a Wastewater Lagoon*[286] and the *Code of Practice for Wastewater Systems Consisting Solely of a Wastewater Collection System*[287].

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[280] *Ibid*, s 2; *Activities Designation Regulation*, *supra* note 71, Schedule 1, Division 2, Part 7; Schedule 2, Division 2, ss (d)-(f).

[281] *Ibid*.

[282] *Wastewater and Storm Drainage Regulation, supra* note 125, ss 4-6.1. See also *Wastewater and Storm Drainage (Ministerial) Regulation,* Alta Reg 120/1993.

[283] *Wastewater and Storm Drainage Regulation, supra* note 125, ss 7-9.1.

[284] *Ibid*, s 6.2.

[285] *Ibid*, ss 3.1-3.2.

[286] *Code of Practice for Wastewater Systems Using a Wastewater Lagoon* (1 October 2003), online: Government of Alberta https://open.alberta.ca/publications/lagoon.

[287] *Code of Practice for Wastewater Systems Consisting Solely of a Wastewater Collection System* (1 October 2003), online: Government of Alberta https://open.alberta.ca/publications/collection.

Notably, alongside these provincial regulations, the federal government also regulates the discharge of wastewater from storm drainage and wastewater systems under the *Fisheries Act*. In particular, the *Wastewater Systems Effluent Regulations* set out restrictions for discharging wastewater into waters frequented by fish. Generally speaking, for more information about how the *Fisheries Act* governs substance releases into waters frequented by fish, take a look at the section of this chapter on protecting fish and migratory birds.

Finally, take note that local governments may also pass bylaws relating to drainage and wastewater systems, such as rules for drainage on individual residential lots. Since the bylaws relating to drainage and wastewater systems will vary from municipality to municipality, you should contact your local municipality for more information.

b. Private Sewage Systems

A private sewage disposal system is a sewage system that manages sewage at the site where it was generated.[288] In Alberta, private sewage systems are governed by the *Private Sewage Disposal Systems Regulation*[289], which sets out standards for the design of private sewage systems. Most importantly, the *Regulation* adopts the *Alberta Private Sewage Systems Standard of Practice 2015*[290], which sets out design and installation standards for smaller private sewage systems.[291]

[288] See *Safety Codes Act*, RSA 2000, c S-1, s 1(1)(z).

[289] *Private Sewage Disposal Systems Regulation*, Alta Reg 229/1997.

[290] See "Alberta Private Sewage Systems – Standard of Practice – Third Edition 2015" (2022), online: Queen's Printer https://www.qp.alberta.ca/Laws_Online.cfm.

[291] *Private Sewage Disposal Systems Regulation*, *supra* note 289, s 4.

Notably, under the *Private Sewage Disposal Systems Regulation*, municipalities are able to pass bylaws restricting the type of private sewage systems you can use in new installations.[292] Accordingly, if you are installing a new private sewage disposal system, you should check with your municipality to confirm if such a bylaw is in place and, if so, what restrictions it imposes.

As well, be aware that under the *Environmental Protection and Enhancement Act* it is an offence to dispose of sewage on, into, or under water or ice unless you have an approval from the government that gives you permission to do so.[293] Generally speaking, for more information about the restrictions on releasing substances into water, take a look at the section of this chapter on prohibitions against substance releases.

[292] *Ibid*, s 5.1. See also *Safety Codes Act*, *supra* note 288, s 66(2)(b.1).

[293] *Environmental Protection and Enhancement Act*, *supra* note 13, ss 181, 227(j).