



ENVIRONMENTAL MANAGEMENT SYSTEM MANUAL (v.11)

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Executive Summary

Alberta Transportation's Environmental Management System ("EMS") is an organizational approach to environmental management with the goal of making environmental considerations part of daily activities. The EMS applies to the Department employees identified herein, and consultants and contractors contracted by Alberta Transportation (collectively "Service Providers") to build and maintain the province's transportation and water infrastructure facilities.

EMS Chapters

Chapter 1: Introduction to the Environmental Management System – Chapter 1 describes the elements of an EMS, explains the application of the EMS, and sets out the purposes of the EMS Manual.

Chapter 2: Roles and Responsibilities – Roles and responsibilities under the EMS are identified for all levels of personnel (Alberta Transportation employees and Service Providers).

Chapter 3: Regulatory Requirements – Chapter 3 summarizes the federal, provincial and municipal regulatory requirements and current regulatory trends that relate to Alberta Transportation's key environmental activities.

Chapter 4: Environmental Practices and Procedures – This chapter is a reference to all existing Departmental environmental practices and procedures, contained in various Department specifications, tender documents, special provisions, manuals, standards, best management practices and guidelines, and those developed under the EMS.

Chapter 5: Spill Release Reporting Procedures – This chapter outlines release reporting requirements and procedures that apply to all Department staff and Service Providers. The procedures ensure consideration of the environmental effects resulting from accidental releases and that there will be an appropriate reporting response to environmental incidents. The procedures address the release of hazardous materials and sediment under the federal Fisheries Act, the Transportation of Dangerous Goods Act and the Alberta Environmental Protection and Enhancement Act.

Chapter 6: Noncompliance and Corrective and Preventive Action – This chapter describes Alberta Transportation's procedures for investigating and correcting non-conformances, and for preventing the re-occurrence of non-conformances. Non-conformances are activities and/or incidents that do not conform to identified requirements. These requirements include Department specifications, legislation, regulations and contracts, to name a few.

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Chapter 7: Inspection and Monitoring – This chapter outlines Alberta Transportation's processes for inspection and monitoring of the key characteristics of the Department's environmental activities. This includes tracking of the Department's environmental liabilities, regulatory monitoring, site inspections, and the monitoring of EMS objectives and targets. These activities allow the Department to establish its due diligence and evaluate its environmental performance on an annual basis.

Chapter 8: Communication – Chapter 8 describes Alberta Transportation's approach to the ongoing management of comments and information requests from internal and external stakeholders.

Chapter 9: Environmental Training – Chapter 9 outlines the environmental awareness training required to support the EMS.

Chapter 10 - Environmental Audit Program – This chapter identifies the key components and responsibilities associated with Alberta Transportation's audit program and management reviews.

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1.0 Introduction to the Environmental Management System

1.1 APPLICATION OF THE EMS

1.1.1 Alberta Transportation

The Alberta Transportation (the Department) EMS Manual consists of two modules. Module A focuses on the environmental aspects of the provincial transportation network and provincial water infrastructure. Module B addresses the environmental aspects associated with the management of hazardous materials associated with provincially owned or leased facilities.

Highway and Water Infrastructure

The EMS is intended to manage the environmental impacts related to the Department's core activities related to the design, construction, operations, maintenance and decommissioning of the provincial highway network and water infrastructure.

The following offices and divisions within the Department provide support as required:

Offices:

- Minister
- Deputy Minister
- Assistant Deputy Ministers

Divisions:

Support Services

- Communications
- Finance, Business and Legislative Planning

Detailed descriptions of the offices and divisions as well as the organization chart for the Department is located on the Department website.

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Environmental Working Group

The Environmental Working Group (EWG) provides support to Environmental Management Services by ensuring the implementation of the EMS effectively and consistently. The members of the EWG identify environmental issues and provide advice and recommendations to upper management. EWG members also review proposed changes to the EMS and identify the need for further improvements.

1.2 BACKGROUND

The Department has responsibility for the Province's extensive transportation network and water management infrastructure, including, but not limited to, highways, bridges, culverts, tunnels, ferries, dams, reservoirs and canals. The Department has a business goal of providing safe, efficient and sustainable transportation and water management infrastructure through effective planning, design, construction, rehabilitation, operation, maintenance and decommissioning.

The Department is committed to meeting this goal in a manner that minimizes impacts on the environment, including the land, water and air, and human health. It has enhanced its ability to meet this commitment by developing an Environmental Management System (EMS) for its transportation and water management infrastructure projects and activities.

An EMS is an organized and formal approach to managing environmental issues with the goal of making environmental considerations part of daily activities. At its core, the purpose of the EMS is to identify and responsibly manage the potential environmental impacts of the Department's activities and projects.

The Department's EMS is designed to accomplish the following:

- Integrate consideration of environmental impacts into the Department's decision-making processes
- Extend environmental considerations into policies, procedures and practices
- Prevent the occurrence of environmental incidents at the outset
- Establish the Department's due diligence in the event that an incident does occur
- Establish a means of monitoring the Department's environmental performance

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1.3 The EMS Manual

The EMS Manual is intended to identify the policies, procedures and practices that make up the Department's EMS. The Manual does the following:

- ✓ Outlines the roles and responsibilities of all personnel under the EMS
- ✓ Identifies the Department 's key regulatory environmental responsibilities
- ✓ Provides details of procedures and practices designed to manage the Department 's potential environmental impacts
- ✓ Sets out the Department's communications approach and procedures
- ✓ Outlines the training required to maintain and potentially improve the Department's environmental performance.
- ✓ Provides information regarding EMS documentation and document control systems
- ✓ Outlines the process for inspection and monitoring of the key characteristics of the Department's environmental activities
- ✓ Describes procedures for investigating, correcting and preventing re-occurrence of non-conformances
- ✓ Outlines the Department's environmental audit program

Official Manual Version

The official version of the Manual is the electronic version located on the Department's web site. If your document is a printed copy it is uncontrolled and may not be the current version. Check the Department's web site for the current, official version.

Maintenance

Environmental Management Services is responsible for maintaining the EMS Manual and issuing revisions as required. The EMS Manual is reviewed and updated on an annual basis.

Consultants and Contractors

The Department out-sources the design, construction, rehabilitation, maintenance, and decommissioning of transportation and water infrastructure projects to private sector consultants and contractors (collectively, "Service Providers"). The EMS applies to the work of all Service Providers (individuals and companies) who build and maintain the Department's transportation and water infrastructure facilities. As the Department's representatives on site, Service Providers play an integral role in helping the Department fulfill its commitment to environmental protection. The Department continues to work with

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the consulting and contracting sectors to develop sound policies and procedures to meet the EMS requirements and overall environmental management goals.

The specific EMS roles and responsibilities of the Department's offices and divisions, and Service Providers are detailed in Chapter 2.0 of the Manual.

All Department employees and Service Providers should regularly review the EMS Manual. Department employees, Service Providers, and other stakeholders are asked to bring any suggestions regarding the EMS Manual to the attention of Environmental Management Services.

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2.0 EMS Roles and Responsibilities

2.1 INTRODUCTION

The Department recognizes that its primary activities can result in lasting changes to the environment. The Department believes in identifying and managing its environmental issues in a pro-active and responsive manner. This includes taking environmental issues into account throughout the entire lifecycle of a project. This way, the Department hopes to reduce its negative environmental impacts, while maximizing positive environmental effects. Proper planning and investment in the early stages of project development can result not only in environmental benefits, but also economic and social benefits for all Albertans.

2.2 PRIMARY ROLES AND RESPONSIBILITIES UNDER THE EMS

The EMS identifies the roles and responsibilities for all levels of personnel under the EMS. This ensures that all personnel involved in environmental activities have a clear understanding of their roles and responsibilities.

Table 2.1 sets out the primary roles and responsibilities for environmental activities and the EMS. In addition to the information set out below, specific roles and responsibilities are set out in procedures and practices throughout the EMS Manual. Personnel are expected to review and become familiar with all of their responsibilities under the EMS.

TABLE 2.1: EMS ROLES AND RESPONSIBILITIES

TITLE/POSITION	ROLES AND RESPONSIBILITIES
Minister	<ul style="list-style-type: none"> • Review and provide direction to the Deputy Minister on environmental matters to ensure consistency with other government and departmental policies and initiatives. • Coordinate with other government Departments on environmental issues, and any other issues related to the Department's EMS and overall environmental management. • Receive and review environmental information from the Deputy Minister.
Deputy Minister & Executive Committee	<ul style="list-style-type: none"> • Incorporate into budgetary planning the allocation of resources to address the Department's EMS requirements. • Approve allocation of resources. • Receive and review environmental information from the Assistant Deputy Ministers and provide to the Minister as required. • Receive information and direction from the Minister and disseminate to the Department as appropriate.

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TITLE/POSITION	ROLES AND RESPONSIBILITIES
Assistant Deputy Ministers & Divisional Executive	<ul style="list-style-type: none"> • Make recommendations to the Deputy Minister and Executive Committee on the resources required to address the Department's environmental interests. • Integrate environmental planning into the Department's business planning processes. • Receive and review environmental information from Environmental Management Services. • Provide direction to the relevant Divisions of the Department on environmental matters. • Provide long-term direction to the Environmental Management Services on environmental matters.
Environmental Working Group	<ul style="list-style-type: none"> • Identify environmental issues related to the Department's activities. • Provide expertise regarding the EMS to their respective functional units. • Provide expertise regarding regulatory requirements to their respective units. • Manage environmental programs in their functional units. • Review proposed changes to the EMS and identify the need for further improvements. • Be a champion for environmental excellence. • Provide support, direction and advice to Environmental Management Services on matters related to the EMS and other environmental matters affecting the Department.
Environmental Management Services	<ul style="list-style-type: none"> • Continuously improve and maintain the EMS for the Department's environmental activities. • Identify and advise Divisional Executive on resource requirements for the Department's EMS. • Deliver EMS awareness programs, as required, to ensure Department staff and Service Providers continue to meet the Department's requirements under the EMS. • Conduct annual reviews of the EMS and issue EMS revisions as changing circumstances require. • Commission, receive and review audit results and other environmental data required to monitor and evaluate the Department's environmental performance, and ensure appropriate follow up. • Report audit findings and environmental performance issues to Divisional Executive. • Provide environmental information, direction and advice as requested by Divisional Executive or by Department employees. • Undertake liaison with regulatory agencies to address compliance and consistency issues.
Regional	<ul style="list-style-type: none"> • Provide leadership and direction with respect to environmental

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TITLE/POSITION	ROLES AND RESPONSIBILITIES
Environmental Coordinators (REC)	<p>stewardship.</p> <ul style="list-style-type: none"> • Monitor, track and identify departmental or regional environmental performance issues. • Ensure measures are in place for compliance with regulatory requirements and the EMS. • Report to Environmental Management Services on regional or departmental environmental issues and incidents that have been identified by Service Providers or by Department employees and ensure proper follow-up.
Alberta Transportation Employees	<ul style="list-style-type: none"> • Ensure measures are in place for compliance with regulatory requirements and the EMS. • Report to Environmental Management Services or RECs on local or regional environmental issues that have been identified by Service Providers or other Department employees and ensure proper follow-up. • Report to Project Sponsors or RECs on local or regional environmental incidents that have been identified and ensure the proper reporting to external stakeholders (e.g. regulatory authorities, adjacent landowners, etc.) as required. • Incorporate training requirements to meet regulatory requirements and the EMS into individual learning plans, and complete the required training. • Provide feedback regarding the EMS, documentation, procedures and practices (as per the EMS Communications Procedure) to ensure that the Department continuously improves its ability to limit and manage the environmental impacts associated with its activities.
Service Providers	<ul style="list-style-type: none"> • Ensure measures are in place for compliance with regulatory requirements and the EMS. • Identify environmental incidents, report these to the Department and to external stakeholders (e.g. regulatory authorities, adjacent landowners, etc.) as required, and undertake appropriate incident response and follow up. • Identify environmental issues/concerns and report these to the Project Sponsor/Administrator. • Possess the appropriate knowledge and expertise to meet environmental responsibilities (regulatory requirements, EMS responsibilities, etc.). • Provide feedback regarding the EMS, documentation, procedures and practices to ensure that the Department continuously improves its ability to limit and manage the environmental impacts associated with its activities.

3.0 Regulatory Requirements

3.1 INTRODUCTION

This chapter provides an initial reference regarding the primary statutes, regulations, bylaws, codes of practice, standards and guidelines that relate to the Department's key environmental impacts and affect the Department's activities. It also identifies the current regulatory trends related to the Department's environmental impacts.

This chapter does not include a detailed summary of the environmental compliance requirements contained in specific regulatory authorizations, approvals, licences or permits (collectively, "Regulatory Instruments"), as there are numerous Regulatory Instruments issued for Department projects that come into force and expire at various times, depending upon the activity in question. A summary of the Department's Regulatory Instruments could not accurately capture all of the variations and permutations. Service Providers are to keep copies of all Regulatory Instruments for each Department project/activity, and the original copies are to be submitted to the Department. Department employees and Service Providers working on Department projects are expected to be familiar with, and comply with, the Regulatory Instruments that have been issued for the project activity. Mechanisms designed to aid in identifying and obtaining regulatory approvals are available in the Appendices.

3.1.1 Authorizations Required

It is important to recognize that the required authorizations (i.e. approval, permit, licence, etc.) must be obtained prior to commencing the activity. Failure to have the proper authorization in hand prior to commencing the activity could result in contravention of legislation and enforcement measures being imposed. This applies to all legislation under which authorizations are needed for a given activity, for example: *Fisheries Act, Navigation Protection Act, Environmental Protection and Enhancement Act, Water Act, etc.*

3.2 ENVIRONMENTAL LEGISLATION LISTS

The following lists identify the PRIMARY acts that may apply to the environmental impacts resulting from the Department's activities, products and services. The lists are NOT exhaustive and legal advice must be sought to ensure all relevant legislation has been identified when a specific regulatory issue arises.

Appendix 4 identifies the Department's key environmental impacts and the corresponding regulatory requirement(s) that relates to that impact. The table provides a quick cross-reference for regulatory requirements related to specific environmental impacts.

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The Environmental Section updates this chapter on an annual basis. The currency of the legislation listed is identified at the top of each list. Unless otherwise noted, the legislation listed is as amended to the currency date.

3.2.1 Federal Legislation List (current to October 2013)

- *Canada Water Act*, R.S.C. 1985, c. C-11
- *Canada National Parks Act*, S.C. 2000, c. 32
- *Canada Wildlife Act*, R.S.C. 1985, c. W-9
- *Canadian Environmental Assessment Act, 2012*, S.C. 2012, c. 19
- *Canadian Environmental Protection Act, 1999*, S.C. 1999, c. 33
- *Environmental Enforcement Act* (received Royal Assent on June 18, 2009; not all provisions are currently in force)
- *Fisheries Act*, R.S.C. 1985, c. F-14
- *Forestry Act*, R.S.C. 1985, c. F-30
- *Migratory Birds Convention Act, 1994*, S.C. 1994, c. 22
- *Navigation Protection Act*, R.S.C. 1985, c. N-22
- *Species At Risk Act, 2002*, c. 29
- *Transportation of Dangerous Goods Act, 1992*, S.C. 1992, c. 34

3.2.2 Provincial Legislation List (current to October 2013)

- *Alberta Land Stewardship Act*, S.A. 2009, c. A-26.8
- *Climate Change and Emissions Management Act*, S.A. 2003, c. C-16.7
- *Dangerous Goods Transportation and Handling Act*, R.S.A. 2000, c. D-4
- *Environmental Protection and Enhancement Act*, R.S.A. 2000, c. E-12
- *Forest and Prairie Protection Act*, R.S.A. 2000, c. F-19
- *Government Organization Act*, R.S.A. 2000, c. G-10
- *Historical Resources Act*, R.S.A. 2000, c. H-9
- *Natural Resources Conservation Board Act*, R.S.A. 2000, c. N-3
- *Provincial Parks Act*, R.S.A. 2000, c. P-35
- *Public Highways Development Act*, R.S.A. 2000, c. P-38
- *Public Lands Act*, R.S.A. 2000, c. P-40
- *Responsible Energy Development Act*, SA 2012, c R-17.3
- *Soil Conservation Act*, R.S.A. 2000, c. S-15
- *Special Areas Act*, R.S.A. 2000, c. S-16
- *Water Act*, R.S.A. 2000, c. W-3
- *Weed Control Act*, S.A. 2008, c. W-5.1
- *Wilderness Areas, Ecological Reserves, Natural Areas and Heritage Rangelands Act*, R.S.A. 2000, c. W-9
- *Wildlife Act*, R.S.A. 2000, c. W-10

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3.2.3 Municipal Legislation List (current to October 2013)

- *City of Edmonton, By-law No. 14600, Community Standards Bylaw (Consolidated on July 16, 2014)*
- *City of Edmonton, By-law No. 5590, Traffic Bylaw (consolidated on July 3, 2013)*
- *City of Edmonton, By-law No. 12846, Regulation at Work and Equipment Installation on City Lands Bylaw (consolidated on November 12, 2002)*
- *City of Edmonton, By-law No. 13777, Waste Management Bylaw (consolidated on May 14, 2014)*
- *City of Calgary, Community Standards Bylaw No. 5M2004 being a Bylaw of the City of Calgary to Regulate Neighborhood Nuisance, Safety and Liveability Issues (last amended on September 22, 2014)*
- *City of Calgary, Bylaw No. 41M2002 being a Bylaw of the City of Calgary to Control and Regulate Parking within the City*
- *City of Calgary, Bylaw No. 14M2012 Being a Bylaw of the City of Calgary to Regulate Wastewater*
- *City of Calgary, Bylaw No. 60M90 Being a Bylaw of the City of Calgary respecting Truck Routes (last amended on April 28, 2014)*
- *City of Calgary, Bylaw No. 20M2001, Being a Bylaw of the City of Calgary to Regulate and Manage Waste*

In order to keep the regulatory documentation brief and focused only on the Department's primary impacts, not all legislation listed above as potentially applicable has been summarized in detail in the regulatory summaries that follow. Further, even the more detailed summaries are provided as a general orientation to the regulatory requirements and focus only on those requirements that were thought by the reviewer to be of the greatest interest to the Department. Accordingly, the summaries are not exhaustive, nor are they intended to be relied upon to determine particular compliance requirements in any given case. Specific legal and regulatory compliance advice must be sought to assess compliance requirements in individual cases.

3.3 PRIMARY FEDERAL LEGISLATIVE REQUIREMENTS

3.3.1 Canada Water Act

The *Canada Water Act* aims to provide for the management of Canada's water resources through programs relating to the conservation, development and utilization of those water resources. Pursuant to the *Act*, the Minister must enter into an agreement with a provincial government, subject to the approval of the Governor in Council, to design projects for the efficient conservation, development and utilization of Canada's water resources.

3.3.2 Canada National Parks Act

The *Canada National Parks Act* aims to maintain and protect the national parks of Canada through the protection of natural resources and natural processes. Pursuant to the Act, the Minister is responsible for the administration, management and control of national parks, including public lands. As such, the Minister must enter into an agreement authorizing the use of lands in a national park.

3.3.3 Canada Wildlife Act

The *Canada Wildlife Act* aims to preserve habitats that are critical to wildlife species, particularly those that are at risk. In this regard, the Minister must issue a permit authorizing the use of any federal wildlife area that has been identified for research and conservation purposes.

3.3.4 Canadian Environmental Assessment Act, 2012 ^

Purpose and Scope

The *Canadian Environmental Assessment Act, 2012* ("CEAA, 2012") is administered by the Canadian Environmental Assessment Agency ("Agency"). CEAA, 2012 and regulations passed under that statute set out the responsibilities and procedures for conducting environmental assessments ("EA") in relation to certain projects.

Under CEAA 2012, only those projects designated by regulation or Ministerial Order (Designated Projects), or those projects for which a responsible authority identified in section 15 has a decision to make in relation to, require an EA. CEAA 2012 considers changes to the environment only within those areas of federal jurisdiction: Aboriginal peoples, fish and fish habitat (*Fisheries Act*), aquatic species (*Species at Risk Act*), and migratory birds (*Migratory Birds Convention Act, 1994*). EAs for Designated Projects may be conducted by bodies other than the Agency, if the Minister of the Environment authorizes an equivalent assessment to be conducted by a responsible federal authority (e.g. National Energy Board, or the Canadian Nuclear Safety Commission), provincial government agency, foreign government, or other approved authority. The Minister of the Environment may designate a project not on the Designated Projects list and may refer an EA to a review panel if the Minister considers it to be in the public interest.

Projects on federal lands require a federal authority to make a determination with respect to potential adverse environmental effects that may result. The project cannot be carried out unless:

- the authority determines that it is not likely to cause significant adverse environmental effects, or

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- the federal authority determines that the carrying out of the project is likely to cause significant adverse environmental effects and the Governor in Council decides that those effects are justified in the circumstances (s. 67).

Regulations

The *Regulations Designating Physical Activities*, prescribe physical activities and classes of projects for which a federal EA is required because they may cause significant adverse environmental effects or generate considerable public concern. Examples of transportation and water management related activities that require EAs include:

-
- The expansion of an existing dam or dyke that would result in an increase in the surface area of the existing reservoir of 50 per cent or more and an increase of 1 500 ha or more in the annual mean surface area of the existing reservoir
- The construction, operation, decommissioning and abandonment of a new dam or dyke that would result in the creation of a reservoir with a surface area that would exceed the annual mean surface area of a natural water-body by 1500 ha or more
-
- The construction, operation, decommissioning and abandonment of a new structure for the diversion of 10 000 000 m³/year or more of water from a natural water body into another natural water body
- The expansion of an existing structure for the diversion of water from a natural water body into another natural water body that would result in an increase in diversion capacity of 50 per cent or more and a total diversion capacity of 10 000 000 m³/year or more
-
- The construction, operation, decommissioning and abandonment of a canal, lock, dam, dyke, reservoir or other structure for the diversion of water, railway line or public highway, aerodrome or runway in a wildlife area or migratory bird sanctuary
- The construction, operation, decommissioning and abandonment of a new:
 - canal or any lock or associated structure to control water levels in the canal
 - lock or associated structure to control water levels in existing navigable waterways
-
- railway line that requires a total of 32 km or more of new right of way

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- all-season public highway that will be more than 50 km in length and either will be located on a new right-of-way or will lead to a community that lacks all-season public highway access
 - railway line designed for trains that have an average speed of more than 200 km/h
 - railway yard with seven or more yard tracks or a total track length of 20 km or more
 - aerodrome located within the built-up area of a city or town
 - airport
 - all-season runway with a length of 1,500 m or more
- The extension of an existing all-season runway by 1,500 m or more

The regulations require that a project description must be submitted to the Agency for Designated Projects in order to determine whether a federal EA is required.

Time Limits

CEAA, 2012 sets the following time limits within which the Minister of Environment must render a decision pertaining to the EAs:

- Upon receipt of the proponent's project description for a Designated Project, the Agency has 45 days to determine if a federal EA is required.
- 365 days for EAs conducted by the Agency
-
- 24 months if the EA is handled by a review panel or is currently subject to a comprehensive review initiated under the predecessor to CEAA, 2012

However, all time limits are subject to extensions provided by the Minister of Environment or Federal Cabinet, depending on the circumstances. The time limits also apply only to “complete applications” and the clock is halted if further studies or information are required.

Canada-Alberta Agreement

The *Canada-Alberta Agreement for Environmental Assessment Cooperation* was signed in June 1999, and was renewed in 2005 after an interim extension to this Agreement was

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reached in 2004. Under the Agreement, projects that require a review under both federal and provincial environmental assessment legislation undergo a single cooperative assessment. One government takes the lead in administering the assessment, but both governments are involved. The process ensures a single panel and a single public hearing process for joint assessments.

3.3.5 Canadian Environmental Protection Act, 1999

Purpose and Scope

The *Canadian Environmental Protection Act, 1999* ("CEPA") targets pollution prevention and protection of the environment, human life and health from the risks associated with toxic substances. The goal is the "virtual elimination" of the most persistent toxic substances that remain in the environment for extended periods of time before breaking down.

Toxic Substances and Release Reporting

Part 5 provides the authority to assess substances to determine if they are toxic, and to manage them to prevent pollution that could harm the environment or human health. Under s. 64, a substance is "toxic" if it is entering or may enter the environment in a quantity or concentration or under conditions that:

- have or may have an immediate or long-term harmful effect on the environment or its biological diversity;
- constitute or may constitute a danger to the environment on which life depends; or
- constitute or may constitute a danger in Canada to human life or health.

The Priority Substances List identifies substances to be assessed on a priority basis to determine whether they are toxic. Once a substance is declared toxic, it is placed on the Toxic Substances List, found in Schedule 1 of CEPA. These substances are considered for risk management measures, such as regulations, guidelines, or codes of practice, to control any aspect of their life cycle, from the research and development stage through manufacture, use, storage, transport and disposal. Examples of toxic substances include PCBs, lead, mercury, asbestos, formaldehyde, particulate matter (less than or equal to 10 microns), and road salts.

Under ss. 95 to 99, where a toxic substance is released into the environment, any person who owns or has the charge, management or control of a substance, or causes or contributes to the release or increases the likelihood of the release, must report the release and take measures to prevent the release and remedy/mitigate the effects.

ROAD SALTS

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The *Code of Practice for the Environmental Management of Road Salts (the “Code”)* was first published on April 3, 2004. Organizations that use more than 500 tonnes of road salts per year and that have vulnerable areas (as defined in the *Code*) should submit a notice of intention to prepare a Salt Management Plan (“SMP”). Implementation of the SMP is recommended to occur in the fiscal year following the preparation of the SMP.

The *Code* indicates that organizations that do not meet the 500 tonnes threshold should consider implementing best management practices that are relevant to their local conditions in order to protect the environment from the negative impacts of road salts.

The SMP is to contain best management practices with the following objectives: salt storage, snow disposal, and salt application. The best management practices set out by the Transportation Association of Canada (“TAC”), as well as any other federal, provincial or municipal maintenance standards, are to be used as guidance in addition to the *Code*.

The elements that should be included in a SMP are set out in the *Code*, and the *Code* also contains environmental impact indicators, guidance for identifying vulnerable areas, and reporting provisions in the three Annexes to the *Code*.

Information required to be reported by an organization to the Minister in the *Code* is to be provided by June 30 of the year an organization becomes subject to the *Code*, and every year thereafter.

The *Code* also recommends that organizations that hire agents or contractors ensure that the agents/contractors comply with any measures in the salt management plan related to their work.

The *Code* is periodically reviewed by the Multi-stakeholder Working Group on Road Salts (the “Working Group”), administered by Environment Canada. Working Group members represent a wide range of stakeholders, including federal, provincial, territorial and municipal governments, environmental organizations, insurance companies and the salt industry.

The primary purpose of the Working Group is to review and comment on materials sent by Environment Canada, share information, transfer technology and ideas, and develop a common approach to addressing environmental issues related to the use of road salts in Canada. The reviews consider implementation of best management practices, such as those found in the TAC *Syntheses of Best Practices*, the progress accomplished towards preventing or reducing the negative impacts of road salts on the Canadian environment and road safety monitoring data. The Working Group also identifies other steps or programs needed to further prevent or reduce negative impacts of road salts on the environment.

In November 2013, the Working Group published a draft document for consultation, the “Performance Indicators and National Targets Code of Practice for the Environmental

Management of Road Salts”. Consultations closed on January 24, 2014 and no amendments to the Code have been published yet.

Hazardous Waste and Hazardous Recyclables

The *Export and Import of Hazardous Wastes and Hazardous Recyclable Material Regulation* govern the transporting of hazardous wastes and hazardous recyclables coming into, leaving, and in transit through Canada. There are requirements for prior notification and consent of the importing and transit jurisdictions, and tracking the movement of hazardous wastes and hazardous recyclables from the point of origin to the final destination through the use of manifests and certificates of recycling/disposal.

The *Interprovincial Movement of Hazardous Waste Regulations* under CEPA requires a hazardous waste manifest when transporting inter-provincially. These requirements are in addition to those under the *Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations*, which were enacted in 2005.

In summary:

- If a hazardous waste/recyclable is being transported solely within a province, the provincial regulatory requirements apply. Most provinces have adopted the federal *Transportation of Dangerous Goods Act* (“TDGA”) and *Transportation of Dangerous Goods Regulations* (“TDGR”) provisions.
- If a hazardous waste/recyclable is being transported between provinces within Canada, the *Interprovincial Movement of Hazardous Waste Regulations* apply in addition to the *Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations*. Furthermore, if the waste is a “toxic leachate” or “environmentally hazardous substance” (as defined in the TDGR) that is “destined for disposal”, TDGR requirements also apply.
- If a hazardous waste/recyclable is being imported into Canada or exported out of Canada, the *Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations*, and the *PCB Waste Export, 1996 Regulations* apply.

Offences and Penalties

Under s. 272, in general terms, it is an offence under CEPA to contravene: specified provisions of the Act or the regulations; an obligation or a prohibition arising from the Act or regulations; an order or direction made under the Act; an order, direction, or decision of a court made under the Act; or an agreement respecting environmental protection alternative measures within the meaning of s. 295.

Summary conviction offences for individuals carry a minimum penalty of a \$5,000 fine and a maximum penalty of a \$600,000 fine and/or imprisonment for not more than six months. Individuals convicted of an indictable offence face a minimum penalty of \$15,000 fine and a maximum penalty of a fine \$2,000,000 fine and/or imprisonment for not more than three years.

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Penalties for corporations vary widely. Penalty amounts depend on the type of offence (*i.e.* summary conviction or indictable), and other factors such as the size of the corporation, enforcement history, etc. Generally, penalties for corporations range between a minimum fine of \$25,000 up to a potential maximum fine of \$12,000,000.

Minimum fines less than the prescribed amount may be imposed if the court is satisfied that the prescribed amount would cause undue financial hardship (s. 273). Conversely, pursuant to s. 274.1, additional fines may be imposed if the court is satisfied that additional benefit was gained from commission of the offence. The additional fine shall be equal to the court's estimation of the value of the property, benefit or advantage gained.

Enforcement history is an important factor for determining the penalty that individuals and corporations may receive. Generally, lower minimum and maximum penalties are associated with first offences, compared to subsequent offences. If a person either: (i) intentionally or recklessly causes an environmental disaster, or (ii) shows wanton and reckless regard for the lives or safety of other persons and causes a risk of death or harm to another person, he is guilty of an indictable offence under s. 274(1) and is liable to a fine and/or to imprisonment for not more than five years.

The fundamental purpose of sentencing under the Act is stated in s. 287 as being the protection of human and environmental health, and to promote respect of the law protecting the environment and human health. Sanctions under the Act ought to: deter the commission of offences under the Act, denounce unlawful conduct that damages or risks causing damage to the environment or human health, and to reinforce the "polluter pays" principle by ensuring that offenders are held responsible for effective clean-up and environmental restoration. Section 287.1 lists sentencing principles and aggravating factors that ought to be considered when determining appropriate sanctions under the Act.

Where a contravention is committed or continued on more than one day, each day may be considered a separate offence (s. 276). In addition to any penalties imposed, s. 291 provides the court with authority to issue orders with a broad array of implications. Orders imposed by the court under s. 291 may even suspend or cancel permits and authorizations issued to the offender under the Act.

Section 282 indicates in any prosecution of an offence (see exceptions), it is sufficient proof of the offence that an employee or agent of the accused committed it, whether or not the employee or agent is identified or prosecuted for the offence. Due diligence is a defence to most offences under CEPA. Due diligence is established when the accused either: demonstrates that even though the offence has occurred, all reasonable steps were taken prior to the offence in order to prevent it from taking place, or where the accused reasonably but mistakenly believed in a set of facts which if true, would have rendered the activity in question compliant.

3.3.6 Environmental Enforcement Act

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An Act to amend certain Acts that relate to the environment and to enact provisions respecting the enforcement of certain Acts that relate to the environment, also known as the *Environmental Enforcement Act*, received Royal Assent on June 18, 2009. The provisions of the *Act*, other than clause 127, will come into force on a day or days to be fixed by order of the Governor in Council. Clause 127, which is a coordinating amendment, came into force when the bill received Royal Assent.

The *Environmental Enforcement Act* proposes to amend nine existing environmental statutes administered by Environment Canada and Parks Canada. To date, provisions amending only six statutes have been brought into force. All nine affected statutes are:

- *Antarctic Environmental Protection Act*
- *Canada National Marine Conservation Areas Act*
- *Canada National Parks Act*
- *Canada Wildlife Act (amending provisions not yet in force)*
- *Canadian Environmental Protection Act, 1999*
- *International River Improvements Act*
- *Migratory Birds Convention Act, 1994 (amending provisions not yet in force)*
- *Saguenay-St. Lawrence Marine Park Act*
- *Wild Animal and Plant Protection and Regulation of International and Interprovincial Trade Act (amending provisions not yet in force)*

The *Environmental Enforcement Act* also creates a new act called the *Environmental Violations Administrative Monetary Penalties Act* (“*EVAMP Act*”), which makes a number of changes to Canada’s environmental enforcement scheme, including establishing minimum penalties and increasing maximum penalties for environmental offences enforced through prosecutions; providing for different fine amounts for individuals, corporations and vessels; providing sentencing guidance to courts; and creating administrative monetary penalties for less serious environmental offences. The administrative penalty regime under the *EVAMP Act* is discussed further below.

Penalties for Environmental Offences

The *Act* provides new minimum penalties, increases maximum penalties, and provides different levels of penalties for different classes of offenders (individuals, small and large corporations, and small and large vessels or ships), as well as for different types of offences (less and more serious offences). Prior to the *Environmental Enforcement Act*, the statutes amended by the bill included no minimum penalties, and maximum penalties

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varied widely. The following Tables reflect the penalty levels for individuals and corporations under the statutes that may be relevant to Alberta Transportation's activities, which have been or are proposed to be amended by the *Environmental Enforcement Act*:

Table 1 - New Penalty Levels for Individuals and Corporations¹			
More serious offence	Individual	Indictment	Min. \$15,000
			Max. \$1 million (and/or imprisonment)*
		Summary conviction	Min. \$5,000
			Max. \$300,000 (and/or imprisonment)*
	Large revenue corporation, or vessel or ship of 7,500 tonnes deadweight or over	Indictment	Min. \$500,000
			Max. \$6 million
		Summary conviction	Min. \$100,000
			Max. \$4 million
		Small revenue corporation, or vessel or ship of less than 7,500 tonnes deadweight	Indictment
Max. \$4 million			

¹ Peggy Becklumb, LEGISinfo Legislative Summary, "Bill C-16: Environmental Enforcement Act" (1 April 2009, revised 19 June 2009), online: <<http://www2.parl.gc.ca/Sites/LOP/LEGISINFO/index.asp?Language=E&query=5747&Session=22&List=ls>>

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		Summary conviction	Min. \$25,000
			Max. \$2 million
Less serious offence	Individual	Indictment	No minimum
			Max. \$100,000
		Summary conviction	No minimum
			Max. \$25,000
	Large revenue corporation, or vessel or ship of 7,500 tonnes deadweight or over	Indictment	No minimum
			Max. \$500,000
		Summary conviction	No minimum
			Max. \$250,000
	Small revenue corporation, or vessel or ship of less than 7,500 tonnes deadweight	Indictment	No minimum
			Max. \$250,000
		Summary conviction	No minimum
			Max. \$50,000

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Table 2 - Maximum Possible Terms of Imprisonment for Individuals			
<i>Canada Wildlife Act International River Improvements Act Wild Animal and Plant Protection and Regulation of International and Interprovincial Trade Act</i>	Indictment	First offence	5 years
		Subsequent offence	5 years
	Summary conviction	First offence	6 months
		Subsequent offence	6 months
<i>Canadian Environmental Protection Act, 1999 Migratory Birds Convention Act, 1994</i>	Indictment	First offence	3 years
		Subsequent offence	3 years
	Summary conviction	First offence	6 months
		Subsequent offence	6 months

Additional Sentencing Provisions

The *Act* explicitly sets out the purposes to be applied by the courts in sentencing those convicted under the legislation: deterrence, denunciation, and restoration, and/or making the offender pay for clean-up.

The *Act* also sets out aggravating factors a sentencing judge must consider: the damage caused and its extent, the offender's moral blameworthiness, the offender's profit or intended profit in committing the offence, whether the offender was warned not to commit the offence, the offender's history of non-compliance, and the offender's subsequent conduct. A court must give reasons if it decides not to increase a fine when there are aggravating factors.

Moreover, the *Act* adds or amends additional types of orders that a judge may impose for an environmental offence:

- directing the offender to implement an environmental management system, pollution prevention plan or environmental emergency plan;
- directing an offender to pay the Crown an amount for environmental/wildlife conservation or protection;
- directing an offender to compensate any person for the cost of any remedial or preventative action;

- monitoring (or paying for monitoring of) environmental effects of an activity on the resources of a marine conservation area;
- requiring periodic environmental audits;
- requiring an offender to provide information on the offender's activities;
- directing a person to perform community service;
- directing a person to pay an amount to environmental or other groups to assist in their work in the area;
- requiring an offender to pay an amount for research on protection, conservation or restoration; and/or
- directing an offender to pay an amount to an educational institution, including for scholarships for students enrolled in studies related to the environment.

A number of other sentencing provisions are added or amended by the *Act*.

Environmental Protection Compliance Orders

An “environmental protection compliance order” is a tool for dealing with certain suspected environmental contraventions in progress, or anticipated contraventions, discovered during the course of an inspection or search. The *Environmental Enforcement Act* amends the environmental protection compliance order process that was previously found only in the *Canadian Environmental Protection Act, 1999*, and adds that same process to several other Acts. Essentially, an enforcement officer may make an order directing a person to take action, or refrain from doing something, to comply with the *Act*, stop some activity or work for a period; move, unload, or reload a vehicle, vessel or aircraft; and take any other measures an officer considers necessary to facilitate compliance with the order, such as keep records or report periodically to the officer. Failure to comply with an order allows an officer to access a place or property and take measures or do anything reasonable and necessary in the circumstances.

Administrative Penalties under the *EVAMP Act*

The *EVAMP Act* establishes a system of administrative monetary penalties (“AMP”) for the enforcement of the nine amended acts, as well as the *Canada Water Act*. The purpose in establishing this system is to provide an alternative to the penal system and to supplement existing measures to enforce environmental Acts (s. 3). Accordingly, proceeding with a matter as a violation under the *EVAMP Act* precludes prosecuting the same matter as an offence under an environmental act, and vice versa (s. 13). The *EVAMP Act* came into force on December 10, 2010.

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AMP amounts, or methods for determining AMP amounts, payable for each violation by various types of offenders (individuals, corporations, ships, etc.) are left to be set out in regulations (s. 5(1)(b)). There are currently no such regulations in force. The maximum penalty levels are set at \$5,000 for an individual and \$25,000 for any other accused (s. 5(4)).

3.3.7 Fisheries Act

Purpose and Scope

The *Fisheries Act*, administered by the Department of Fisheries and Oceans (“DFO”), applies to all fishing zones, territorial seas and inland waters of Canada. It is binding on federal, provincial and territorial governments. The Act regulates the protection of fish habitat, pollution prevention, the harvesting of fish, and the safe use of fish.

“Fish” includes all parts of fish, shellfish, crustaceans and marine animals, in all life stages (eggs, sperm, spawn, larvae, spat, juvenile and adult stages) (s. 2). “Fish habitat” is defined as “spawning grounds and nursery, rearing, food supply and migration areas on which fish depend directly or indirectly in order to carry out their life processes” (s. 2).

Significant amendments to the *Fisheries Act* were made in 2012. The amendments were implemented in two phases, the first of which came into force on June 29, 2012. The remaining amendments came into force on November 25th, 2013.²

Prohibitions for killing fish by means other than fishing (previously in s. 32) and through the harmful alteration, disruption or destruction of habitat (previously in s. 35) were merged under the new s. 35, which prohibits “serious harm to fish” (as defined under the new s. 2(2)). The serious harm prohibition will apply to three categories of fisheries:

- commercial;
- recreational; and
- Aboriginal.

Serious harm is defined as “the death of fish or any permanent alteration to, or destruction of, fish habitat.” Under the new regime, serious harm to fish will be allowed if authorized by the Minister (or prescribed authority) or if the work is carried out in accordance with activities as permitted under the regulations.

Once it has been determined that a Ministerial power will be exercised the four factors in Section 6 of the *Fisheries Act* must be considered. The four factors in Section 6 are:

² For a more detailed discussion of the amendments, please refer to: The Fisheries Protection Policy Statement, October 2013.

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- a) The contribution of the relevant fish to the ongoing productivity of commercial, recreational or Aboriginal fisheries;
- b) Fisheries management objectives;
- c) Whether there are measures and standards to avoid, mitigate or offset serious harm to fish that are part of a commercial, recreational or Aboriginal fishery; and
- d) The public interest.

Penalties are also proposed to increase. For example, maximum fines for corporations causing serious harm to fish could be as high as \$4 million for a first offense, up from the maximum of \$300,000 for similar offences under the current provisions.

It is also worth noting that prohibitions against depositing deleterious substances will remain. However, such deposits can be authorized by regulations enacted to provide so.

Fish Passage

The *Fisheries Act* requires the safe passage of fish. Under s. 20(1), where the Minister determines it to be necessary for the public interest, he/she can require the construction of a fish-way or canal to permit the free passage of fish around obstructions across or in any stream. Any projects that have the effect of blocking the stream channel require the construction of a fish-way in a portion of the channel to allow for fish passage. For some projects (such as bridges), a fish-way may be required only during the construction phase; for projects that result in the permanent blockage of streams (such as dams), the fish-way would be a permanent structure requiring ongoing maintenance. A fish guard or screen must be placed at the entrance of water intakes, ditches, channels or canals that are constructed for conducting water from any Canadian fisheries waters for irrigating, manufacturing, power generation or domestic purposes.

Deposit of Deleterious Substances

Section 36(3) prohibits any person from depositing or permitting the deposit of a deleterious substance of any type in water frequented by fish or in any place under any conditions where the deleterious substance may enter such water. "Deleterious substance" means any substance that degrades or alters the water and makes it harmful to fish or fish habitat (s. 34(1)). Common types of deleterious substances are: silt, nutrient imbalances, acid rain, toxic contaminants, pesticides, industrial and municipal waste discharges, and other chemical, physical and biological agents.

Section 36(5.1) provides that regulations may be passed allowing the deposit of deleterious substances in certain classes of waters or places, or resulting from certain works undertakings or activities. However, no such regulations are currently in force.

The Act also places a duty on a person to report the deposit of a deleterious substance and to take steps to remedy or mitigate any adverse effects (s. 38(4)).

Offences and Penalties

Table A.1 in Appendix A to the Manual provides a summary of the relevant offences and minimum and maximum penalties under the *Fisheries Act*. In determining if an offence has occurred, fish need not be present in the area at the time of the deposit. The area must only be one that is found to support fish habitat. Where a contravention continues for more than one day, each day may be considered a separate offence (s. 78.1). If any monetary benefit was obtained as a result of the offence, the court can impose a fine equal to the amount of the monetary benefit and this fine can be in excess of the maximums specified (s. 79). Section 79.2 sets out a list of orders that may be imposed by the court in addition to any other penalty. Examples include directing the offender to publish the facts relating to the conviction, perform community service, or pay money to the Minister for the purpose of promoting the proper management, control, conservation and/or protection of fish or fish habitat. The Crown can also sue for costs related to prevention of a deposit of a deleterious substance or any measures to limit or remedy adverse effects that result or are expected to result from the release (s. 42). The parties responsible for such costs include the owner of the substance, a person with charge, management or control of the substance, and any person who contributed to the deposit or potential deposit.

The Act creates liability for employers if an offence is committed by one of their employees or agents, whether or not the employee or agent has been prosecuted or identified, unless the employer shows that it was done without their knowledge or consent (s. 78.3).

Offences under the Act are "strict liability" offences (ss. 40 & 78.6). Due diligence is a defence to strict liability offences and is established by demonstrating that even though the offence has occurred, all reasonable steps were taken prior to the offence in order to prevent it from taking place or that the accused reasonably but mistakenly believed in a set of facts, which if true, would have rendered the activity in question compliant.

Projects Near Water

It is important to note that DFO's Operational Statements are no longer valid as of November 25th, 2013. In place of the Operational Statements DFO has developed a number of guidance documents intended to assist proponents with the implementation of the new requirements of the federal Fisheries Act. These guidance documents identify:

- Types of water bodies where DFO review is not required;
- Those project activities and criteria where DFO review is not required; and
- Measures to avoid causing harm to fish and fish habitat.

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It is important to visit the DFO website frequently as additional guidance documents may be posted throughout the year.

3.3.8 Forestry Act

The *Forestry Act* aims to protect the forest resources of Canada, while promoting their efficient use. Pursuant to the Act, the Minister is responsible for the protection, management and utilization of forest resources. The Minister must enter into an agreement before resources can be taken from a forest area. Alternatively, a permit may be issued by a forestry officer, who is appointed by the Minister.

3.3.9 Migratory Birds Convention Act, 1994

Purpose and Scope

The *Migratory Birds Convention Act, 1994* and the *Migratory Birds Regulations* are the result of a Convention signed between the United States and Canada directed at the protection and preservation of migratory birds and migratory bird habitats. The Act protects certain species, controls the harvest of others, and prohibits the commercial sale of all species. It establishes a closed season, with limited exceptions, on the hunting of migratory birds from March 10 to September 1, and prohibits the taking of eggs or nests except for scientific or propagation purposes. The legislation is binding on federal and provincial governments. The Act and Regulations apply to various:

- Migratory game birds, including ducks, geese, swan, cranes, shorebirds and pigeons
- Migratory insectivorous birds, including chickadees, cuckoos, hummingbirds, robins, swallows and woodpeckers
- Other migratory non-game birds, including gulls, herons, loons, and puffins

The complete list of migratory birds to which the Act applies is set out in Article I of the Convention (Schedule to the Act).

Prohibitions

It is prohibited to disturb, destroy or take a nest, egg or nest shelter of a migratory bird or have in one's possession a live migratory bird, carcass, skin, nest or egg of a migratory bird except under authority of a permit (s. 6, Regulations). It is also prohibited to deposit or permit to be deposited oil, oil wastes or any other substances harmful to migratory birds in any waters or any area frequented by migratory birds (s.5.1), and also allows for the authorization of deleterious deposits by the *Canada Shipping Act*, another federal act, or the Minister.

Compliance Orders

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Sections 11.21 to 11.30 authorize game officers to issue compliance orders where there are reasonable grounds to believe that the Act and regulations have been, continue to be, or likely will be contravened. The compliance orders may direct persons to take measures consistent with the protection and conservation of migratory birds, their nests, and public safety.

Permits

Schedule II of the Regulations provides for the following permits: migratory game bird hunting; scientific; avicultural; migratory bird damage; airport-kill; taxidermist; and eiderdown. There are no permits, other than scientific permits, for disturbing, destroying, or taking a nest, egg, or nest shelter of a migratory bird, nor for depositing or permitting to be deposited oil, oil wastes or any other substances harmful to migratory birds in any waters or any area frequented by migratory birds. These activities are strictly prohibited by the legislation.

However, the responsible Minister may refuse to issue a permit, or may cancel a permit, if the applicant or permit holder has been convicted of an offence under the Act (s. 18.22).

Offences and Penalties

Offences and penalties are set out in s. 13 of the Act, which will be amended when the *Environmental Enforcement Act* comes into force. Currently, a person who is found to be in contravention of the Act or Regulations is subject to a fine not exceeding \$300,000 and/or up to six months in prison on summary conviction. Under an indictable conviction, a person is subject to a fine not exceeding \$1,000,000 and/or up to 3 years in prison.

Any subsequent offence by a person or corporation is subject to fines twice that of the maximums specified above (s. 13(2)). Additionally, if any monetary benefit was obtained as a result of the offence, the court can impose a fine equal to the amount of the monetary benefit and this fine can be in excess of the maximums specified (s. 13(5)). A court can also impose additional orders, such as the performance of community service.

A person or vessel that commits or continues an offence on more than one day is liable to be convicted for a separate offence for each day on which the offence is committed or continued (s. 13(3)). If the contravention involves more than one bird harmed, each bird may be considered a separate offence for the purpose of calculating a fine (s. 13(4)).

The Minister shall maintain a publically accessible registry containing information about the convictions against corporations under the Act. The registry is intended to encourage compliance with the Act and regulations (s. 18.21).

When the *Environmental Enforcement Act* comes into force, s. 13 of the Act will be amended to reflect the penalty provisions in Tables 1 and 2 reproduced in the *Environmental Enforcement Act* section of this Manual.

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Due diligence is a defence to strict liability offences, and is established by demonstrating that even though harm to a migratory bird, nest or egg occurred, all reasonable steps have been taken prior to an offence to prevent harm from taking place or when the accused reasonably but mistakenly believed in a set of facts which if true, would have rendered the activity in question compliant.

3.3.10 Navigation Protection Act

Purpose and Scope

The *Navigation Protection Act*, formerly called the *Navigable Waters Protection Act*, administered by Transport Canada, applies to navigable waters listed in the schedule at the end of the Act. The purpose of the Act is to protect the public right of navigation in navigable waters. "Navigable water" governed by the Act includes the water bodies listed in the schedule and any canal or other body of water created or altered that is associated with the water bodies listed in the schedule (s. 2). The schedule can be modified through regulations.

The following questions are considered when determining if a waterway is a navigable water under the Act:

- Do the physical characteristics of the waterway support carrying (floating and traversing) a vessel of any size (e.g., canoe/kayak) from one point to another?
- Is there information (i.e., evidence) of current use by the public of the waterway as an aqueous route for navigation purposes either as a self-contained route or as part of a navigation network extending beyond the boundaries of the specific waterway?
- Is there information (i.e., evidence) of historical or past use by the public of the waterway as an aqueous route for navigation purposes either as a self-contained route or as part of a navigation network extending beyond the boundaries of the specific waterway?
- Is there a reasonable likelihood of use by the public as an aqueous highway?

This Act has undergone significant amendments in 2014 that affect its scope of application.

There are six waterways in Alberta listed in the schedule that require approval under the Act. These are:

- Peace River
- Athabasca River
- Lake Athabasca

- North Saskatchewan River
- South Saskatchewan River
- Bow River

There are three main categories of works under the Act:

- approved works (s. 6)
- permitted works (s. 9)
- designated works (s. 10)

Approved works are works that are approved by the Minister after being assessed as likely to substantially interfere with navigation. Permitted works are works that may proceed without the Minister's approval, after determination by the Minister that they are not likely to substantially interfere with navigation. Permitted works are deemed compliant with the Act if they meet regulatory requirements and any terms and conditions applied to the project. Designated works are works that may proceed without notice under the Act, as long as they comply with the requirements of the *Minor Works Order* (discussed below). If the waterway is not listed in the schedule, an approval is not required under the Act (s. 10). If the waterway is listed in the schedule, and the work is not listed in the Minor Works Order an approval for the work must be obtained from Transport Canada.

The Act prohibits the building or placing of a work, other than a "designated work", in, on, over, under, through or across navigable waters unless an approval has been issued by the Minister prior to commencement of construction (s. 6). "Work" is defined in s. 2 and includes any structure, device or thing, whether temporary or permanent, that is made by humans. It also includes the dumping of fill or the excavation of materials from the bed of any navigable water. If the Minister considers that two or more works are related, the Minister may deem them to be a single work (s. 5(5)).

Designated works include "minor works" or works that are constructed or placed in, on, over, under, through or across any "minor water" (s. 2). Minor works and minor waters may be designated by Ministerial order pursuant to s. 28(2) of the Act. Section 28(1) of the Act also provides the Minister with broad authority to make regulations respecting the construction, placement, alteration, repair, rebuilding, removal, decommissioning, maintenance, operation, safety or use of works – other than in or over minor waters – and approvals relating to the same.

Minor Works Order

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The *Minor Works Order* allows for works to be built if they meet the criteria for the applicable class of works, as well as specific terms and conditions for construction. Works meeting the assessment criteria of the *Minor Works Order* are classed as “designated works” under the Act and may proceed without notice to the Minister as long as they comply with the requirements of the Act and any applicable regulations.

The classes of works established by the *Minor Works Order* are:

- Erosion-Protection Works
- Docks and Boathouses
- Boat Ramps, Slipways and Launch Ramps
- Aerial Cables — Power and Telecommunication
- Submarine Cables — Power and Telecommunication
- Pipelines Buried Under the Bed of Navigable Water
- Pipelines and Power or Communication Cables Attached To Existing Works
- Works within a Boomed-Off Area Upstream or Downstream of an Existing Work For Water Control
- Outfalls and Water Intakes
- Dredging
- Mooring Systems

Offences and Penalties

Failing to receive an approval for a work is not an offence under the Act. However, Transport Canada can order the owner of an unauthorized work to remove or alter it or to refrain from proceeding with construction of the work where the work interferes with navigation (s. 6(1)). The owner of an unauthorized work who fails to remove it can also be ordered to pay for the costs of removing, destroying or disposing of the work (s. 6(3)). Other offences and penalties include throwing or depositing sawdust, edgings, slabs, bark, stone, gravel, earth, cinders, ashes or other material or rubbish that interferes with navigation (ss. 21 & 22) and attract a fine of not more than \$5,000.

Offences under the Act are strict liability offences. Due diligence is a defence to strict liability offences and is established by demonstrating that even though the offence has

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occurred, all reasonable steps were taken prior to the offence to prevent it from taking place, or when the accused reasonably but mistakenly believed in a set of facts which if true, would have rendered the activity in question compliant.

The Act also provides for administrative penalties to be issued by Transport Canada if regulations under the Act are contravened (s. 39.1). Maximum administrative penalties for individuals are \$5,000 and \$40,000 for corporations.

Navigation continues to be protected for waters not listed in the schedule under common law rights, which could be subject to civil court actions if these rights are violated

3.3.11 Species At Risk Act

Purpose and Scope

The purposes of the *Species at Risk Act* (“SARA”) are to prevent Canadian indigenous species, subspecies and distinct populations of wildlife from becoming extirpated or extinct, to provide for the recovery of endangered or threatened species, and to encourage the management of other species to prevent them from becoming at risk. The Act is binding on provincial and federal governments.

“Critical habitat” is defined as habitat that is necessary for the survival or recovery of a listed wildlife species and that is identified as the species’ critical habitat in a recovery strategy or in an action plan for the species. An “endangered species” is a species that is facing imminent extirpation or extinction, while a “threatened species” is a wildlife species that is likely to become an endangered species if measures are not taken to reverse the factors leading to its extirpation or extinction. “Extirpated species” means a wildlife species that no longer exists in the wild in Canada, but exists elsewhere in the wild.

Species Listing

SARA formally establishes the Committee on the Status of Endangered Wildlife in Canada (“COSEWIC”) as the independent body of experts responsible for assessing and identifying species at risk. COSEWIC can classify a species as extinct, extirpated, endangered, threatened, of special concern, or not currently at risk. COSEWIC's assessments are reported to the Minister of the Environment and to the Canadian Endangered Species Conservation Council, and published in the SARA public registry. The Minister must publish a response within 90 days (s.251(3)). Schedule 1 lists the wildlife species at risk.

Prohibitions

As soon as a species is added to the list, a number of provisions take effect. Under s. 32 it is prohibited to kill, harm, harass, capture or take an individual of a wildlife species that is listed as an extirpated species, an endangered species or a threatened species, while s. 33 prohibits the destruction of their residences. Sections 32 and 33 apply to species found on federal lands throughout Canada.

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Section 34 provides that sections 32 and 33 apply and protect listed aquatic species and species of birds covered by the *Migratory Birds Convention Act, 1994* on both federal and non-federal lands. Non-aquatic listed species and species not covered under the *Migratory Birds Convention Act, 1994*, are not protected by SARA on non-federal lands unless the Governor in Council orders otherwise.

The Minister is required to develop recovery strategies and management plans within specific time periods for all species listed as extirpated, endangered, threatened or of special concern (s. 37 and s. 47). In addition, the Minister must recommend an emergency order to protect a listed species or its habitat if a species faces imminent threats to its survival or recovery (s.80). To the extent possible, recovery strategies, action plans and management plans must be prepared in cooperation with affected provinces, territories, aboriginal organizations, landowners and other affected parties. Under the Act, stewardship is the first response to critical habitat protection.

Permits and Environmental Assessments

Under s. 73, the Minister may enter into an agreement or issue a permit to a person, authorizing the person to engage in an activity affecting a listed wildlife species, any part of its critical habitat or the residences of its individuals if:

- the activity is scientific research relating to the conservation of the species and conducted by qualified persons;
- the activity benefits the species or is required to enhance its chance of survival in the wild; or
- affecting the species is incidental to the carrying out of the activity.

The agreement may be entered into, or the permit issued, only if all reasonable alternatives to the activity that would reduce the impact on the species have been considered and the best solution has been adopted, all feasible measures will be taken to minimize the impact of the activity on the species or its critical habitat or the residences of its individuals, and the activity will not jeopardize the survival or recovery of the species. The agreement or permit must also set out its date of expiry.

Where an environmental assessment for a project is required under a federal statute, including CEAA, 2012, the proponent must notify the Minister if the project is likely to affect a listed wildlife species or its critical habitat (s. 79(1)). If an environmental assessment is required under CEAA, 2012, the authority responsible for making that determination must also notify the Minister of the potential effect on listed species or its habitat (s. 79(1)). The adverse effects must be identified and measures taken to avoid or lessen the effects and to monitor them. The measures must be taken in a way that is consistent with any applicable recovery strategy and actions plans (s. 79(2)).

Offences and Penalties

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Under s. 97(1), a person who contravenes sections. 32 or 33 is guilty of an offence punishable on summary conviction and is liable (i) in the case of a corporation to a fine of not more than \$300,000, or (ii) in the case of any other person, to a fine of not more than \$50,000 or to imprisonment for a term of not more than one year, or to both. For an indictable offence the penalty for a corporation is a fine of not more than \$1,000,000, and for an individual a fine of not more than \$250,000 or to imprisonment for a term of not more than five years, or to both. For subsequent offences, the penalty is double the amounts set out above (s. 97(3)). A person who commits or continues an offence on more than one day is liable to be convicted for a separate offence for each day on which the offence is committed or continued (s. 97(4)). The court may order the person to pay an additional fine in an amount equal to the court's estimation of the amount of the monetary benefits.

Under s. 99, a person may be charged for an offence committed by an employee or agent.

Under s. 100, due diligence is a defence in a prosecution for an offence. Due diligence is established by demonstrating that even though the offence has occurred, all reasonable steps were taken prior to the offence in order to prevent it from taking place, or that the accused reasonably but mistakenly believed in a set of facts which if true, would have rendered the activity in question compliant.

3.3.12 Transportation of Dangerous Goods Act, 1992

Purpose and Scope

The *Transportation of Dangerous Goods Act, 1992* is in place to promote public safety dealing with the transportation of dangerous goods. Both the provinces and territories have memoranda of agreement to work with Transport Canada to enforce transportation on Highways. Transport Canada conducts the enforcement of rail, marine and aviation. In the event of a mishap, the Act assigns roles and responsibilities to shippers, carriers and empowers inspectors to take steps to preserve public safety.

An Act to amend the Transportation of Dangerous Goods Act, 1992 came into force on June 16, 2009. The legislation remains focused on the prevention of incidents during the handling and transportation of dangerous goods. The main amendments to the 1992 Act fall into two categories – safety amendments and new security requirements. The main points are the following:

1) Security

- Requiring security plans and security training;
- Requiring a transportation security clearance for the dangerous goods, including an appeals process;
- Enabling the use of Security Measures and Interim Orders (as in the *Public Safety Act* and 10 other existing Parliament Acts); and

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- Enabling regulations to be made to require that dangerous goods are tracked during transport or reported if lost or stolen.

2) Safety

- Reconfirming that the Act is applicable uniformly throughout Canada, including to local works and undertakings (movements of dangerous goods within a province not using a federal carrier/shipper);
- Reinforcing and strengthening Emergency Response Assistance Plan Program – including enabling the use of Emergency Response Assistance Plans to respond to a terrorist release of dangerous goods;
- Enabling inspectors to inspect any place for which a means of containment is being manufactured, repaired or tested (under a warrant if it is a private dwelling);
- Changing the concept of importer so that it is clearer who is the importer in Canada that needs to meet the obligations of the Act; and
- Enabling a shipping record to be used in court as evidence of the presence of a dangerous good in a means of containment.

The *Transportation of Dangerous Goods Regulations* (the “*TDGR*”) has been fully adopted in Alberta with some additional provisions included in the provincial regulations. The *TDGR* has been largely adopted by all provinces and territories. The *TDGR* establish the regulatory requirements for handling, offering for transport and transport of dangerous goods by all modes within Canada.

Offences and Penalties

Sections 33(1) and 33(2) provide that every person who contravenes or fails to comply with a provision of the Act, a direction issued under specified provisions of the Act, the regulations, a security measure or an interim order is guilty of an offence punishable on summary conviction and liable to a fine not exceeding \$50,000 for a first offence, and not exceeding \$100,000 for each subsequent offence. On a conviction for an indictable offence a person is liable to imprisonment for a term not exceeding two years.

Where an offence is committed or continued on more than one day, the person who committed the offence is liable to be convicted for a separate offence for each day on which the offence is committed or continued (s. 36). Before offering for transport or importing any quantity or concentration of dangerous goods prescribed for the purposes of this section, a person shall have an emergency response assistance plan that is approved by the transportation ministry and outlines what is to be done if there is an accident in transporting the dangerous goods (s.7(1)).

The Act creates a duty to report and to respond to accidental releases of dangerous goods. Section 18 indicates that where an accidental release of dangerous goods in excess of a prescribed quantity occurs or is imminent to occur from a means of containment being used to handle or transport dangerous goods, any person who at the time has the charge, management or control of the means of containment must report the occurrence or imminence of the release. As well, every person required to make a report shall take all reasonable emergency measures to reduce or eliminate any danger to public safety that results or may reasonably be expected to result from the release.

3.4 PRIMARY PROVINCIAL LEGISLATIVE REQUIREMENTS

3.4.1 Alberta Land Stewardship Act

The *Alberta Land Stewardship Act* ("ALSA") provides the legislative framework to support the Government of Alberta's Land-Use Framework ("LUF"). The LUF is a comprehensive strategy to guide the management of public and private lands and natural resources and is meant to provide a blueprint for land use management and decision-making in Alberta. As a component of the LUF, seven regional plans are being prepared to assist with managing cumulative effects at the regional level. All future development decisions and activities must be in accordance with the LUF and thus, the regional plans.

The Lower Athabasca Regional Plan ("LARP") was the first regional plan under the LUF, put in place in the summer of 2012. LARP identifies and sets resource and environmental management objectives for air, land, water and biodiversity. LARP is intended to guide future resource decisions, while considering social and economic impacts.

The following management frameworks outline monitoring, evaluation and reporting requirements, set early warning triggers to determine the need for action, identify what actions may be taken, and generally set out the Government of Alberta's role in managing cumulative effects in the Lower Athabasca Region:

- Air Quality Management Framework;
- Surface Water Quality Management Framework; and
- Groundwater Management Framework.

The South Saskatchewan Regional Plan 2014-2024 ("SSRP") came into effect on September 1, 2014. This region is comprised of the South Saskatchewan River Basin, the Milk River Basin and the Alberta portion of the Cypress Hills. The SSRP is a policy planning tool in an effort to align economic, environmental, and social goals.

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The following are noteworthy points to be taken from the SSRP:

- Eight new/expanded conservation areas, as well as two new and six expanded provincial parks and recreation areas. There will also be new recreation areas for camping and trails.
- Baselines for Air and Water Quality frameworks.
- A concerted effort to consult First Nations peoples on uses of land that may impact their treaty rights and treaty uses.
- Sustainable farming and ranching, energy, and forest management, as well as extension of grazing leases from 10-20 years.
- Development of sustainable and responsible methods for seeking and extracting energy resources.
- Maintenance and diversification of the forestry industry.
- Responsible development of aggregates on public land.
- Focus on developing and protecting the biodiversity and ecosystems of Regional, Crown land and Private land. This development and protection notably includes the maintenance of Native grasslands on public land.
- The management and development of healthy watershed systems.
- The creation and maintenance of safe, responsible transportation systems that can facilitate the future growth of the Province.

In addition, ALSA creates voluntary Conservation Easements supplementing the current legislative scheme set out under the *Environmental Protection and Enhancement Act* to protect agricultural land or land for agricultural purposes and Conservation Directives intended to protect, conserve, manage and enhance certain landscapes on both public land and privately owned land. ALSA provides persons with interests in affected lands a right to apply for compensation, and a mechanism for requesting a review of regional plans. ALSA also allows for the creation of Conservation Offsets and a Transfer of Development Credit Scheme.

3.4.2 Climate Change and Emissions Management Act

The *Specified Gas Reporting Regulation* under the *Climate Change and Emissions Management Act* requires that organizations, including the Crown, report the release of specified gases into the environment at or in excess of the amount specified in the Specified Gas Reporting Standard. The threshold level for submission of a Specified Gas

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Report under the legislation is currently 100,000 tonnes of certain gases. Currently, the *Specified Gas Reporting Regulation* is set to expire on December 31, 2014.

The *Renewable Fuels Standard Regulation* establishes technical requirements that must be met for a fuel to qualify as “renewable fuel”. This regulation requires suppliers and providers of renewable fuels to submit compliance reports at specified times. The compliance reports must include validation of greenhouse gas emissions from a qualified greenhouse gas validator established under the Regulation.

3.4.3 Dangerous Goods Transportation and Handling Act

The *Dangerous Goods Transportation and Handling Act* prohibits the handling and transportation of dangerous goods, such as explosives, gases, poisonous substances, nuclear substances, and corrosives, unless the requisite safety requirements are met and specific documentation is filed. The penalty for a first offence under this Act is a \$50,000 fine and/or 2 years’ imprisonment for a first offence.

3.4.4 Environmental Protection and Enhancement Act

Purpose and Scope

The *Environmental Protection and Enhancement Act* (“EPEA”) is the key piece of environmental legislation in Alberta. Included are provisions that require the review of proposed projects that could cause an adverse effect on the environment, and the reclamation and conservation of land. Alberta Environment and Sustainable Resources Development (“ESRD”) and the Alberta Energy Regulator (“AER”) administer the Act. The legislation is binding on the provincial government. A Director under EPEA is appointed by the responsible Minister and is involved in making key decisions for approvals issued by ESRD and the AER, and enforcement actions for contraventions of the legislation.

Environmental Impact Assessments

The primary purpose of the environmental assessment (“EA”) process is to integrate environmental protection and economic decisions at the earliest stages of planning, predict the environmental, social, economic and cultural consequences of proposed activities, and assess plans to mitigate any adverse impacts (s. 40). All “mandatory” activities require an EA, and so do any projects for which the potential environmental impacts warrant further consideration (s. 44).

Mandatory activities under the *Environmental Assessment (Mandatory and Exempted Activities) Regulation* include dams greater than 15 metres in height, water diversion structures and canals with capacity greater than 15 m³/sec. and water reservoirs with capacity greater than 30 million m³. Exempted activities include the:

- Widening or realignment of an existing highway; and

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- Maintenance and rehabilitation of a water management project, including a dyke, dam, weir floodgate, breakwater, drain, groyne, ditch, basin, reservoir, canal, tunnel, bridge, culvert, embankment, headwork, fishway, flume, aqueduct, pipe, pump or measuring weir.

Where the project is not a mandatory activity, but the potential environmental impacts warrant further consideration, a Director appointed under EPEA will prepare a screening report to determine whether an EA report is required (s. 45(1)).

Where an EA report is required, the proponent must prepare the terms of reference for the EA, which are made available for public comment. Once the terms of reference are finalized, an EA report is prepared in accordance with the terms of reference and including the information set out in s. 49 (need for the project, site selection procedure, baseline data, positive and negative impacts, alternatives to project, mitigation plans, etc.). Once the EA report is complete, the Director submits it to the AER or the Natural Resources Conservation Board ("NRCB"), where the activity requires an approval by either body, or in any other case, to the Minister of Environment (s. 53). The Minister may advise the proponent to apply for an approval, registration or licence, as the case may be (s. 54), and may make any recommendations in respect of the proposed activity that he considers necessary (s. 55).

Water management projects that require an environmental assessment under EPEA (i.e. they are included in the list of mandatory activities in the *Environmental Assessment (Mandatory and Exempted Activities) Regulation*) are:

The construction, operation or reclamation of

- (c) a dam greater than 15 metres in height when measured to the top of the dam
 - (i) from the natural bed of the watercourse at the downstream toe of the dam, in the case of a dam across a watercourse, or
 - (ii) from the lowest elevation at the outside limit of the dam, in the case of a dam that is not across a watercourse
- (d) a water diversion structure and canals with a capacity greater than 15 cubic metres per second
- (e) a water reservoir with a capacity greater than 30 million cubic metres

If the proposed project is not a mandatory activity as defined by the regulation, the Director may decide that the potential environmental impacts warrant further consideration and order that an environmental assessment be undertaken (EPEA, s. 44).

Approvals, Registrations and Codes of Practice

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Sections 60 and 61 of EPEA prohibit anyone from commencing or continuing an activity designated by the regulations as requiring an approval or registration unless they hold the required approval or registration. The *Activities Designation Regulation* (“ADR”) lists the activities that require an approval (Schedule 1), a registration (Schedule 2) or the filing of a notice (Schedule 3)³. Registration activities are governed by a code of practice.

PITS

All pits (including those for sand and gravel extraction) in Alberta are required to comply with the EPEA and associated regulations, regardless of size.

The *Code of Practice for Pits* (“Code”) was published on September 1, 2004, and forms part of the *Conservation and Reclamation Regulation* under the EPEA. The Code replaces the previous approvals process for all private land pits that are five hectares (12.5 acres) in size or larger under the under the ADR. The Code covers topics such as: registrations and authorizations, operational requirements, conservation and reclamation, reporting, record keeping, etc. For further information, ESRD published A Guide to the Code of Practice for Pits (October 2004).

The Code includes the following specific provisions of interest:

- Written landowner consent will be required to conduct any activity in the pit;
- An "Activities Plan" (detailed in Schedule 2) must be prepared before operating the pit and must be updated and maintained to reflect the operation;
- Pit water cannot be released to an outside pit area if it does not meet criteria outlined in s. 4.2.1;
- Soil conservation requirements apply in respect of topsoil and subsoil; and
- A report on the status of the pit must be submitted every five years.

In addition to the Code, EPEA and the *Conservation and Reclamation Regulation*, operation of pits may invoke the following legislation and considerations:

- Pits less than 2 hectares (5 acres) in size will generally be exempt from the requirement to have an environmental assessment conducted (under the *Environmental Assessment (Mandatory and Exempt Activities) Regulation*, pursuant to EPEA).
- Fee schedules may be prescribed under the *Community Aggregate Payment Levy Regulation*, pursuant to the *Municipal Government Act*.

³ There are only two activities that require a notice; all other activities listed in the ADR require either an approval or registration.

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- Authorizations under the *Water Act* may be required for activities requiring the use of water, or the subject activity or pit may be exempt pursuant to Schedule 3 of the *Water (Ministerial) Regulation*.

ASPHALT PAVING PLANTS

A registration is required for the construction, operation or reclamation of an asphalt paving plant (ADR, Schedule 2, Division 2). Contractors must comply with the *Code of Practice for Asphalt Paving Plants* ("Code"). The *Code* is incorporated by the *Substance Release Regulation*. "Asphalt paving plant" is defined under the Code as "a plant that manufactures asphalt through the mixing of aggregate and asphalt oil or recycled asphalt material, but does not include hot in-place recycling equipment". The Code outlines the minimum operating requirements that asphalt paving plants that produce hot or cold mix asphalt must meet to ensure environmental protection. An asphalt paving plant must be equipped with pollution control technology that meets the requirements of the Code. There are specific operating requirements for plants that use wet scrubbers or a baghouse type system to control particulate emissions. The Code also sets out requirements for record keeping and reporting.

CONCRETE PRODUCING PLANTS

The *Code of Practice for Concrete Producing Plants* is incorporated by the *Substance Release Regulation*, under the authority of s. 36 of EPEA. Persons responsible for plants affected by this Code must register with ESRD prior to commencing operation of a concrete producing plant.

"Concrete producing plant" is defined as a "stationary plant that manufactures concrete and has a designed production rate of at least 120 tonnes of concrete per hour or 50 cubic metres of concrete per hour".

In addition to any information required by the Director under the *Approvals and Registration Procedure Regulation*, the person responsible is required to complete the registration form attached to the Code of Practice for Concrete Producing Plants and forward it to the Director. This Code sets out requirements for pollution control technology, operation, recordkeeping and reporting that must be met.

PESTICIDES

Under Schedule 1, Division 4 of the ADR, an approval is required for the application of pesticides in, on or within 30 horizontal metres of an open body of water. A special use approval is required under s. 9 of the *Pesticide (Ministerial) Regulation* to:

- Use or apply a pesticide in or on an open body of water;
- Use, apply or store a pesticide listed in Schedule 1, 2 or 3 within 30 horizontal metres of an open body of water;

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- Store a pesticide within a horizontal distance of 30m from an open body of water; or
- Wash equipment or vehicles used to apply pesticides within 30 horizontal metres of an open body of water

Under Schedule 2, Division 4 of the ADR, a registration is required for:

- Storing or selling pesticides listed in Schedules 1, 2 or 3 of the *Pesticide (Ministerial) Regulation* as a wholesale vendor;
- Selling pesticides listed in Schedule 1 or 2 of the *Pesticide (Ministerial) Regulation* as a retail vendor; and
- Offering a pesticide service, including the use and application of pesticides listed in Schedule 1, 2 or 3 of the *Pesticide (Ministerial) Regulation*.

The *Pesticide (Ministerial) Regulation* requires anyone using or applying a pesticide to have an applicator certificate (s. 3), or to work under the supervision of a certified applicator. The classes of certificates are set out in Schedule 5 and include an "industrial" class for:

...the use of herbicides by ground application for controlling weeds on industrial areas including roadsides, power lines, pipelines, rights of way, easements, railways, petroleum well sites and equipment yards.

In addition, this class includes herbicide applications to parking lots and landscaped areas surrounding industrial facilities for the control of designated noxious or restricted weeds.

In addition to the requirements of the Act and regulations, pesticides applicators, vendors and services must comply with the *Environmental Code of Practice for Pesticides* and the *Pesticide Sales, Handling, Use and Application Regulation*.

Release Reporting Requirements

Under ss. 108 and 109, it is prohibited to: (i) release or permit the release, or (ii) knowingly release or permit the release, of a substance into the environment in an amount concentration or level or at a rate of release that is in excess of an approval or a regulation, or that causes or may cause a significant adverse effect.

Section 110 creates a duty to report a release that has caused, is causing or may cause an adverse effect on the environment. The person who releases or causes or permits the release must report it as soon as they know of the release to:

- Director of ESRD or AER, as applicable;
- The owner of the substance;
- Their employer;
- The person having control of the substance; and

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- Any other person who may be directly affected by the release.

The release must be reported in person or by telephone or by electronic means and must include the information in s. 111(1)(a) to (e). This must be followed up by a written report to ESRD within seven days of the verbal report. The written report must contain the information set out in s. 4(3) of the *Release Reporting Regulation*.

EPEA also creates a duty to take remedial measures where a substance is released into the environment that has caused, is causing or may cause an adverse effect. Section 112 places this duty on the "person responsible for the substance", which includes the owner or a previous owner of the substance, every person who has had charge, management or control of the substance and any person who acts as the principle or agent of any of these persons (s. 1(tt)). Required measures include repairing, remedying and confining the effects of the substance, removing or otherwise disposing of the substance, and restoring the environment to a condition satisfactory to ESRD.

Under s. 113, where the Director is of the opinion that a release of a substance may occur, is occurring or has occurred, and the release may cause, is causing or has caused an adverse effect, the Director may issue an Environmental Protection Order (EPO) to the person responsible for the substance. An EPO may be issued under this section in respect of a substance released several years in the past.

In addition to the general releases provisions under EPEA, the *Substance Release Regulation* ("Regulation") specifically addresses air emissions that result in "visible emissions" and "particulate releases." The Regulation prohibits the release of any emissions into the ambient air that would impair the visibility along a highway or developed property (s. 5). Section 4 of the Regulation applies to prohibit visible emissions from a source that exceeds an opacity level of 40% for more than 6 consecutive minutes unless otherwise stated in an approval.

Part 2 of the Regulation applies to limit the amount of particulate matter that may be emitted by various types of operations. Section 8(1)(b)(v) of the Regulation establishes that operations, including the manufacturing of asphalt, are limited to emitting 0.20 grams per kilogram of effluent.

Part 3.1 of the Regulation applies to require that activities listed in the Schedule attached to the Regulation must comply with all provisions of the applicable Code of Practice. Asphalt paving plants have a Code of Practice that applies to limit the release of substances from these types of activities.

Conservation and Reclamation

Conservation and reclamation of land is dealt with in Part 6 of EPEA and in the *Conservation and Reclamation Regulation* ("CRR"). Under s. 137 of EPEA, an operator is required to conserve and reclaim specified land and obtain a reclamation certificate (unless

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the requirement for a certificate is exempted under the regulations). "Operator" is defined in s. 134 of EPEA and includes:

- An approval or registration holder who carries on/has carried on an activity on or in respect of specified land under the approval or registration;
- Any person who carries on/has carried on an activity on or in respect of specified land (other than under an approval or registration); and
- Anyone acting as a principal or agent of the persons referred to above.

"Specified land" includes land used for the construction, operation or reclamation of a pit or borrow excavation, and the construction or reclamation of a roadway (s. 1(t) of the regulation). "Pit" has the same definition as in the ADR. "Borrow excavation" is defined in s. 1(b.1) of the CRR as "an excavation⁴ in the surface made solely for the purpose of removing borrow material for the construction of the sub-base for a specific roadway project or the construction of a dam, canal, dike, structure or erosion protection works associated with a provincial water management infrastructure project, and includes any associated infrastructure⁵ connected with the borrow excavation. "Roadway" means a highway or road as defined in the *Public Highways Development Act* (includes a bridge forming part of the highway and any structure incidental to the highway or bridge).

Specified land must be returned to an "equivalent land capability" defined in s. 1(e) as the ability of land to support various land uses after conservation and reclamation is similar to the ability that existed prior to an activity being conducted on the land. The individual land uses will not necessarily be identical. The operator must obtain a reclamation certificate for all borrow excavations over 5 hectares in size. A reclamation certificate is not required for a borrow excavation less than 5 hectares (12.5 acres) in size. However, without a reclamation certificate the operator remains liable for conservation and reclamation issues.

The Department has published three guidelines relating to borrow excavations and reclamation:

- Alberta Transportation Pre-Disturbance Assessment Procedures for Borrow Excavation for Road Construction (December 2013);
- Alberta Transportation Post-Disturbance Reclamation Criteria and Assessment Procedures for Borrow Excavation (December 2013); and

⁴ This definition is restricted to excavations that are outside the highway right-of-way. Excavations inside the right-of-way are treated as part of the right-of-way and subject to the *Environmental Protection Guidelines for Roadways* (see AESRDIL 00-3: *Borrow Excavation*).

⁵ Defined in s. 1(h.1) of the CRR as "any works, buildings, structures, facilities, equipment, apparatus, mechanism, instrument or machinery belonging to or used in connection with a mine, oil production site, well, battery, pipeline, quarry, pit, borrow excavation, peat operation, coal processing plant, plant or transmission line, and includes any storage site or facility, disposal site or facility, access road, haul road, railway or telecommunication line".

- Alberta Transportation Guide to Reclaiming Borrow Excavation Used for Road Construction (December 2013).

Snow and Ice Removal and Disposal

Snow and ice removal and disposal does not require an approval, registration or notice under EPEA, however, it can pose a risk to the environment as snow on highways can contain contaminants such as suspended solids, organic chemicals, phosphates, dissolved salts, heavy metals, trash and oil.

The *Snow Disposal Guidelines for the Province of Alberta* (1994) set out siting and design guidelines for snow/ice disposal sites. The guidelines discourage the direct dumping of waste snow into watercourses or onto ice-covered water bodies and advise against the disposal of snow in or adjacent to landfills, on prime agricultural land, above a groundwater aquifer with a high water table, on land with below ground or above ground utilities, closer than 350 meters from residential areas, near recreational areas, or closer than 200 meters from any water body.

The guidelines set out design mitigation measures that may be required: containment (e.g. earthen berms and compacted subgrades), settling ponds, grading, release of meltwater, site base (e.g. asphalt, clay or waterproof membrane) and security (fencing and lighting). Snow disposal sites are to be located to ensure melt water runoff does not flood adjacent lands and maximum exposure to the sun provides for rapid snowmelt.

Salt Contamination and Remediation

The *Salt Contamination Assessment and Remediation Guidelines* (2001) govern salt releases that occur in association with "salt/sand processing and storage facilities at highway maintenance yards". ESRD regulates the release of salt through the general release of substances provisions under EPEA. Any remediation of salt impacted lands must meet the requirements of EPEA – specifically Part 5, Division 1. This includes prevention and mitigation of adverse effects caused by a release of salt into the environment and reclamation when there has been an impact.

The guidelines provide generic remediation procedures and objectives (soil and water quality guidelines). As an alternative, a site-specific risk management approach may be used to develop site-specific remediation procedures and objectives. The guidelines contain a comprehensive risk assessment procedure and outline various remediation methods and procedures that may be utilized on a site-specific basis.

Waste Management and Disposal

The disposal of waste is generally addressed under Part 9, Division 2 of EPEA. Section 176 of EPEA prohibits the disposal of waste except in accordance with an approval or registration, or as otherwise provided for within EPEA. EPEA also prohibits the disposal of

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waste on public land (s. 178), highways (s. 179) and on, into or under water or ice except in accordance with an approval, a Code of Practice or a registration or as otherwise provided for under this Act. (s.181). The *Waste Control Regulation* ("WCR") imposes specific requirements with respect to the management of both hazardous and non-hazardous wastes. Section 23 prohibits the disposal of waste in any place other than a waste management facility authorized under EPEA and the WCR. This prohibition does not apply to the disposal of agricultural waste by a farmer on his own land where the waste is produced on his farm, the depositing of earth, or inert waste used for reclamation.

The WCR creates three classes of landfills in Alberta. Class I landfills are for the disposal of hazardous waste; Class II landfills accept non-hazardous waste (municipal); Class III landfills accept inert waste (such as demolition debris, concrete, glass, etc.).

Road kill is considered "waste" under the provisions of EPEA and the WCR. There are some Class II landfills in Alberta that specifically accept animal carcasses. Road kill can also trigger the *Wildlife Act* (discussed below).

Remediation of Contaminated Sites

ESRD applies the following guidelines to remediation of contaminated sites: *Alberta Tier 1 Soil and Groundwater Remediation Guidelines* and *Alberta Tier 2 Soil and Groundwater Remediation Guidelines*.

The Tier 1 guidelines consolidate updated guidelines from a number of sources (Canadian Council of Ministers of the Environment, Health Canada, and Alberta Environment) into one document. The Tier 2 guidelines describe how the Tier 1 guidelines can be modified using site-specific information. Both provide information on managing contaminated sites and include common objectives for the assessment and remediation of all contaminated sites.

EPEA authorizes the Director or inspector to issue a remediation certificate where contaminated land has been remediated. Remediation certificates are issued pursuant to the *Remediation Certificate Regulation*. Remediation certificates are currently available for: (i) sites with petroleum storage tanks, (ii) facilities operating under approvals, (iii) facilities operating under codes of practice, (iv) other commercial and industrial contaminated sites, and (v) upstream oil and gas sites. While encouraging remediation of contaminated land, the remediation certificate also protects the responsible party from future regulatory liability. Remediation certificates can be issued after a third party verification process is completed.

Offences and Penalties

ESRD can either take administrative enforcement action or prosecute in response to a contravention. There are four types of administrative enforcement tools: (i) warnings, (ii) environmental protection orders, (iii) enforcement orders, and (iv) administrative penalties. ESRD may decide that the circumstances of the offence are serious enough to warrant prosecution, in which case the matter is referred to the Provincial Crown Prosecutor.

Section 227 sets out the list of offences and s. 228 the list of penalties under EPEA. These are summarized in Table A.2 in Appendix A to the Manual.

An offender is liable for each day or part of a day that the offence occurs or continues (s. 231). Where the offender received monetary benefits as a result of the commission of the offence, the court may order the offender to pay an amount equal to those monetary benefits (s. 230). Section 234 sets out a list of possible orders that may be imposed by the court. Examples include directing the offender to publish the facts relating to the conviction, post a bond or pay money into court, and/or perform community service. Under s. 235, an offender may be ordered to compensate a victim for loss of or damage to property as a result of the commission of the offence.

Section 233 relates to liability of public officials. The relevant portions read:

- (1) *Where a person who is acting under the direction of*
 - (a) *a Minister of the Government, [or]*
 - (b) *an official of the Government,*

commits an offence under this Act, the Minister [or] official... is also guilty of the offence and is liable for the punishment provided for the offence,... if he knew... or ought reasonably to have known of the circumstances that constituted the commission of the offence and had the influence or control to prevent its commission, whether or not the other person has been prosecuted for or convicted of the offence.

- (2) *No person shall be convicted of an offence by reason of the operation of subsection (1) if that person establishes on a balance of probabilities that he took all reasonable steps to prevent the commission of the offence by the other person referred to in subsection (1).*

In addition to EPEA, a breach of the *Substance Release Regulation* is an offence and individual offenders are liable to a maximum fine of \$50,000 or, in the case of a corporate offender, a maximum fine of up to \$500,000 (s. 16.1 of the Regulation).

Most of the offences under EPEA and regulations are “strict liability” offences. Due diligence is a defence to strict liability offences. A successful due diligence defence is established if it is shown that all reasonable steps were taken to prevent the incident from occurring. These steps must have been taken prior to the incident in order for the defence to succeed. A due diligence defence can also be established if it the accused reasonably but mistakenly believed in a set of facts which if true, would have rendered the activity in question compliant.

3.4.5 Forest and Prairie Protection Act

The *Forest and Prairie Protection Act* aims to control fire hazards on Alberta lands by placing restrictions on fires. For example, it is an offence under the Act to discard a

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burning substance in a place where it might result in a fire. The legislation also gives forest officers and fire guardians the power to inspect, investigate and make orders respecting fires.

3.4.6 Government Organization Act

The *Government Organization Act* generally governs the rights and responsibilities of government ministries, departments and staff. It also contains a Schedule dealing specifically with environmental matters. The Minister can expropriate land for environmental purposes, declare an environmental state of emergency, develop areas of restricted use and development, grant enforcement orders, and take other steps in furtherance of environmental objectives.

3.4.7 Historical Resources Act

Purpose and Scope

The *Historical Resources Act* is administered by the Minister of Alberta Culture. The purpose is to preserve, protect and present historical and archaeological resources of provincial, national and international significance. The definitions of "historical resource" and "archaeological resource" in s. 1 of the Act are very broad:

"archaeological resource" means a work of humans that (i) is primarily of value for its prehistoric, historic, cultural or scientific significance, and (ii) is or was buried or partially buried in land in Alberta or submerged beneath the surface of any watercourse or permanent body of water in Alberta

"historical resource" means any work of nature or of humans that is primarily of value for its palaeontological, prehistoric, historic, cultural, natural, scientific or aesthetic interest including, but not limited to, a palaeontological, archaeological, prehistoric, historic or natural site, structure of object

Title to all archaeological and paleontological resources in Alberta is vested in the Crown in right of Alberta (s. 32(1)).

Orders and Approvals

General prohibitions in the *Act* include s. 34(1), which prohibits anyone from altering, marking or damaging an archaeological resource or paleontological resource unless he is the holder of a research permit under s. 30 or has the written permission of the Minister. Any person who discovers an historic resource in the course of making an excavation for any purpose, other than research, must immediately notify the Minister of the discovery (s. 31).

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Under s. 37, where any operation or activity will, or is likely to, result in the alteration, damage or destruction of historical resources, the person undertaking the activity or operation may be ordered to:

- Carry out an assessment to determine the effect of the proposed activity or operation on historical resources in the area where the activity is being carried on;
- Prepare and submit a report containing the assessment of the proposed activity or operation; and
- Undertake all salvage, preservation or protective measures or take any other action the Minister considers necessary.

Any project can attract the requirements of the *Act*, depending upon where the project is located, the existence of historic resources, the extent to which the area has already been disturbed, and the extent to which it will be further disturbed by the activity.

Offences and Penalties

A "temporary stop order" can be issued under s. 49. If a person is doing an activity that is likely to result in damage to or destruction of a potential historical resource, the Minister can order the person to cease the activity for a period not exceeding 15 days. If the potential historical resource qualifies for designation, the stop order can be extended for a further specified period to allow for salvage, recording or excavation of the historical resource and investigation of alternatives to its destruction (s. 49(2)). The person issued the order can appeal the order to the Court of Queen's Bench, and the Court may confirm, vary or rescind the order (s. 49(3)).

Under s. 53, the Crown is bound by the *Act* except for specific sections, including s. 52 (offences and penalties). As such, a government department is not liable for an offence, but can be issued a stop order under s. 49.

3.4.8 Natural Resources Conservation Board Act

Purpose and Scope

The *Natural Resources Conservation Board Act* is administered by the Natural Resources Conservation Board ("NRCB"). The Crown is bound by the Act. The purpose of the *Act* is set out in s. 2:

...to provide for an impartial process to review projects that will or may affect the natural resources of Alberta in order to determine whether, in the Board's opinion, the projects are in the public interest, having regard to the social and economic effects of the projects and the effect of the project on the environment.

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Projects that are reviewed by the NRCB include forest, recreation and tourism, mining, and water management projects, and projects referred to the NRCB by the provincial cabinet. "Water management projects" are defined in s. 1(j) as:

- a project to construct a dam, reservoir or barrier to store water or water containing any other substance for which an environmental impact assessment report has been ordered; or
- a project to construct a water diversion structure or canal capable of conducting water or water containing another substance for which an environmental impact assessment report has been ordered.

Approvals

No person may commence a reviewable project unless the NRCB, on application, has granted an approval for the project (s. 5(1)). NRCB approvals must be authorized by the Alberta cabinet and are in addition to any licenses, permits or approvals stipulated by other acts, regulations or by-laws. The NRCB decides if these projects are in the public interest and in making this determination must consider social, economic and environmental effects (s. 2).

3.4.9 Provincial Parks Act

The *Provincial Parks Act* aims to maintain and protect Alberta's parks and recreation areas. Pursuant to the *Act*, parks and recreation areas can be acquired and managed by the Minister in order to ensure their environmental integrity. The Minister must grant a disposition before construction, storage, landscaping, or other such activities may occur in a designated park or recreation area.

3.4.10 Public Highways Development Act

The *Public Highways Development Act* governs the construction, maintenance, use and protection of highways in the province. The *Act* prohibits actions that could injure highways, such as the deposit of any material without justification or excuse.

3.4.11 Public Lands Act

Purpose and Scope

The *Public Lands Act* ("PLA") only applies to public land under the administration of the Minister of ESRD (s. 2(1)) and the Alberta Energy Regulator ("AER") (per s. 2.01). It does not apply to land under the administration of another Minister.. All public land is under the administration of the Minister of ESRD unless otherwise stated in an act or ordered by the Lieutenant Governor in Council (s. 2(2)). Rights of way for roads and road allowances are under the administration of the Minister of Transportation. However, naturally occurring water bodies fall under the authority of ESRD and are therefore subject to the Act.

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With a few exceptions, title to the beds and shores of (a) all permanent and naturally occurring bodies of water, and (b) all naturally occurring rivers, streams, watercourses and lakes, is vested in the Crown in right of Alberta (s. 3). Water and the use of water is also under provincial jurisdiction through the *Water Act*. The extent of the Province's ownership of the bed and shore is limited by the bank of the water body (defined in s. 17(2) of the *Surveys Act*). This is the line along the upper limit of the bed and shore. It is formed by the normal, continuous action or presence of surface water on the land, that forms a natural boundary between the Crown owned bed and shore, and privately owned land. The location of the bank is not affected by occasional periods of drought or flooding. The 'bed' is the land on which the water sits, and the 'shore' is that part of the bed that is exposed when water levels are not at their normal fullest level.

Approvals

Generally speaking, approvals are required under the PLA for any activity that may disturb or modify the bed and/or shore of a water body or impact the aquatic environment (s.54(1)). As well, approvals are necessary where a person creates a condition that may cause a danger by fire or soil erosion. To view a list of common activities that require a *Public Lands Act* approval visit the ESRD and AER websites.

The following activities are exempt from the approval requirement:

- Temporary, seasonal docks/piers and associated mooring structures⁶ - by policy, ESRD does not currently require an approval for the placement of docks/piers and associated mooring facilities on the bed and shore of a lake or river, provided that:
 - Use of mooring structures is reasonable⁷
 - A single pier or dock that is appurtenant to a riparian landowner's upland
 - Associated mooring structures are limited to boat lifts and shelters, or a swimming raft
 - All structures are temporary for seasonal, non-commercial use
 - At the end of the recreational season, all such structures are completely removed from public land and stored on private property over the winter

⁶ Some exceptions apply to the placement of mooring structures on the bed and shore of a water body, particularly in those areas or circumstances where: (i) the provincial or federal government identifies an environmentally sensitive area or a management concern and restrictions have been established, (ii) a local municipal development plan, a lake management plan, or a water management plan limits or restricts such uses, (iii) the proposed structure's design may interfere with the normal flow of water or is likely to increase the probability of bank or shoreline erosion, or (iv) such structures may block public access along the bed or shore of the water body.

⁷ "Reasonable use" is defined as the balance between a riparian owner's right to access, construct, place and use a temporary pier or wharf on the bed of a navigable water body for the purpose of facilitating navigation; the rights of another adjacent riparian owner; and that which is in the general public's interest, including their right of access along the shore of a Crown owned water body, navigation, etc.

- Pipeline watercourse crossings - pipelines installed across a watercourse and regulated by the *Code of Practice for Pipelines and Telecommunication Lines Crossing a Water Body* under the *Water Act* will only require an approval under the following conditions:
 - Public land is adjacent on both sides of the watercourse
 - Pipeline company requests an approval to ensure location is identified within departmental records
 - At the request of a departmental officer
- Road allowances on beds and shores - Surveyed and un-surveyed road allowances that cross a Crown owned water body or watercourse are considered to be highways or roads under Schedule 14 of the *Government Organization Act* and their administration is transferred to Alberta Transportation.

A permit is required to divert water, or prior to developing the following structures or modifications on lake beds, shores and floodplains:

- Any project (temporary or permanent) that impacts the aquatic environment or involves the disturbance, modification, placement or removal of material on the lake's bed, shore or floodplain (includes removal of pressure ridges caused by ice thrusts and the placement of sand for beaches)
- Any commercial development (temporary or permanent)
- Cutting or removal of aquatic vegetation
- Erosion protection, retaining walls, groynes, breakwaters and causeways
- Permanent piers, boat launches, boathouses, etc., and other associated improvements
- Permanent waterline installations into or beneath the lake
- Other permanent structures on the bed, shore or floodplain of the lake

Applications are reviewed for potential impacts to the water body's bed and shore, floodplain, water quality, fish and wildlife habitat, and public access.

Offences and Penalties

Under section 54 the following activities are prohibited, unless one is authorized under the PLA or any other applicable legislation:

- Loss or damage to public land;
- Existence of any conditions or activities on, or the use of, public land that is likely to result in loss or damage to public land;
- The accumulation of waste material, debris, refuse or garbage on public land;

- The existence on public land of any structure or excavation of any kind that is undesirable or otherwise in contravention of this Act or the regulations;
- The doing of any act on public land that may injuriously affect watershed capacity;
- The disturbance of any public land in any manner that results or is likely to result in injury to the bed or shore of any river, stream, watercourse, lake or other body of water or land in the vicinity of that public land; and
- The creation of any condition on public land which is likely to result in soil erosion.

Under section 59(2), the general penalty for an offence under the PLA or the regulations is a fine not exceeding \$100,000 in the case of an individual, and a fine of not more than \$1,000,000 for a corporation. Section 59 of the Act provides for the defence of due diligence (i.e., the person can show on a balance of probabilities that they took all reasonable steps to prevent the offence or that the accused reasonably but mistakenly believed in a set of facts which if true, would have rendered the activity in question compliant).

Sections 59.01 and 59.02 enable courts to issue orders relating to penalties in addition to any other penalty that may be imposed under the PLA or the regulations. Courts may consider the nature of the offence and the circumstances surrounding its commission when issuing an order. An order may have effects such as:

- Prohibiting the offender from doing anything that might result in the continuation or repetition of the offence;
- Directing the offender to take any action the court considers appropriate to remedy or prevent any loss or damage to public land that results or might result from the act or omission that constituted the offence;
- Directing the offender to publish the facts relating to the conviction;
- Directing the offender to notify any person aggrieved or affected by the offender's conduct of the facts relating to the conviction, in the prescribed manner and at the offender's cost;
- Directing the offender to post a bond or pay money into court in an amount that will ensure compliance with any order made pursuant to this section;
- Directing the offender to compensate the Minister, in whole or in part, for the cost of any remedial or preventive action that was carried out or caused to be carried out by the Crown and was made necessary by the act or omission that constituted the offence; and

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- Directing the offender to pay to the Crown or aggrieved person an amount by way of satisfaction or compensation for loss of or damage to property suffered by the Crown or aggrieved person as a result of the commission of the offence.

Whether or not a person has been charged with or convicted of an offence, the Director can issue an enforcement order under s. 59.1 ordering the person to, among other things, do or refrain from doing anything, carry out any specified measures, and remedy the effects of the contravention. If the person fails to comply with the order, the Director can carry out its terms and recover the costs from the person in an action in debt (ss. 59.1 (6)). All persons named in an order are jointly responsible for carrying out the order and jointly and severally liable for the costs.

Section 170 of the *Public Lands Administration Regulation* allows the Director to determine the amount payable for an unauthorized use of public lands.

3.4.12 Responsible Energy Development Act

The *Responsible Energy Development Act* (“REDA”) establishes the Alberta Energy Regulator (“AER”), and sets out its mandate, structure, powers, duties and functions. REDA was proclaimed in part on June 17, 2013 and further parts of REDA were proclaimed in November 2013.

The AER is responsible for regulating the life cycle of energy projects in Alberta including: oil, oil sands, natural gas, and coal projects from application and construction to production, abandonment, and reclamation. Activities associated with these projects, such as the construction access roads or tie into existing highways, may fall under the jurisdiction of the AER.

The AER administers the following provincial energy statutes:

- *Coal Conservation Act*
- *Coal Conservation Rules*
- *Gas Resources Preservation Act*
- *Oil and Gas Conservation Act*
- *Oil Sands Conservation Act*
- *Pipeline Act*
- *Turner Valley Unit Operations Act*

The AER administers the following “specified enactments” so far as they relate to energy projects:

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- *Environmental Protection and Enhancement Act*
- *Mines and Minerals Act (Part 8)*
- *Public Lands Act*
- *Water Act*

The following regulations and rules under REDA provide more details regarding the legislative framework of the AER, including principles governing the transition of the ERCB to the AER, and the transfer of jurisdiction over the specified enactments (listed below) to the AER:

- *Responsible Energy Development Act General Regulation*
- *Responsible Energy Development Act General Amendment Regulation*
- *Specified Enactments (Jurisdiction) Regulation*
- *Responsible Energy Development Act Transition Regulation*
- *Security Management for Critical Upstream Petroleum and Coal Infrastructure Regulation*
- Alberta Energy Regulator Rules of Practice
- Alberta Energy Regulator Administration Fees Rules
- Enforcement of Private Surface Agreement Rules

3.4.13 Soil Conservation Act

The *Soil Conservation Act* imposes a duty on landholders to take appropriate measures in respect of their land to prevent soils loss or deterioration from taking place, or, in the event such soil loss or deterioration is taking place, to stop the loss or deterioration from continuing. The landholder is the occupant of the land, or the owner of the land, if there is no occupant. An occupant is a person other than the landowner who occupies or exercises control over the land.

Therefore, to the extent that the Department is occupying or exercising control over the land they are working on, they will be landholders for the purposes of this Act.

The Act contains an enforcement scheme to enforce remedial measures given by notice to a landholder by an officer under the Act. In addition, the Act permits “local authorities” (Municipal Council or Authority, or the Minister responsible for the *Municipal Government Act* and *Special Areas Act*) to regulate the removal of topsoil from and burning of stubble

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on land. Local authority by-laws and guidelines, if any, must be consulted to ensure compliance in respect of soil conservation (s.21).

This Act does not apply in respect of the specified land within the meaning of Part 6 of EPEA, which are provisions dealing with conservation and reclamation of land.

3.4.14 Special Areas Act

The *Special Areas Act* allows the Lieutenant Governor in Council to designate portions of Alberta as “special areas”. The Minister can then regulate what is allowed and prohibited on the land in the special area. For example, the Minister can order a landowner to adopt any method of farming or grazing that the Minister considers necessary to prevent soil drifting, water erosion, over-grazing or any hazard that might jeopardize the economic security of residents in the special area.

3.4.15 Water Act

Purpose and Scope

The *Water Act* regulates the allocation, protection and conservation of water in the Province of Alberta and is administered by Alberta Environment and Sustainable Resource Development (“ESRD”) and the Alberta Energy Regulator (“AER”). The Crown is bound by the Act.

Approvals

Section 36(1) of the Act prohibits anyone from commencing or continuing an activity unless that person holds the required approval. "Activity" is broadly defined in s. 1(1)(b) and can be summarized as:

- Placing, constructing, operating, maintaining, removing or disturbing works
- Maintaining, removing or disturbing ground, vegetation or other material
- Carrying out any undertaking in or on any land, water or water body that:
 - alters or may alter the flow or level of water,
 - changes or may change the location of water or direction or flow of water,
 - causes or may cause siltation of water or erosion of the bed or shore, or
 - causes or may cause an effect on the aquatic environment
- Altering the flow, direction of flow, level of water or changing the location of water for removing an ice jam, drainage, flood control, erosion control or channel realignment
- Drilling or reclaiming a water well or borehole
- Anything defined as an activity in the regulations

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The *Water (Ministerial) Regulation* ("WMR") defines "activity" as anything (i) conducted by a licensee subject to a license, (ii) impairing or may impair the rights of any household or traditional agricultural user, or (iii) causing a or may cause a significant adverse effect on the aquatic environment, human health, property or public safety.

There are two groups of activities exempt from the approval requirement: (i) activities listed in Schedules 1 and 2 of the WMR, and (ii) activities that require the giving of notice to the Director and are conducted pursuant to a code of practice.

Schedule 1 exempt activities include, but are not limited to:

- Placing, constructing, installing, maintaining, replacing or removing:
 - floating platforms, portable or seasonal piers, boat launches or docks
 - fences in or adjacent to water bodies
 - crossings in water bodies that (i) are not frequented by fish, (ii) are not altered at flood events below the 1/25 year flood event, (iii) have a culvert 1.5 metres in diameter or less (where applicable), (iv) divert no water, and (v) the installation of the crossing is not part of a causeway through a lake, slough, wetland or other similar water body
- Installing a water supply line in, adjacent to or beneath a water body for the purpose of diverting water from the water body, if the line is installed by directional drilling or boring, and if a license is not required for the diversion of the water
- Landscaping where it is not adjacent to a water course nor will change the flow or volume of water on an adjacent parcel
- Removal of debris from a water body that is not frequented by fish if the person removing the debris owns or occupies the land adjacent to the water body
- Removing a beaver dam from a water body if the person removing the dam owns or occupies the land adjacent to it or has been authorized to remove it under s. 95 of the Act
- Constructing, installing, maintaining, replacing or filling in a dugout, except where the dugout is located in a watercourse, lake or wetland

Schedule 2 lists activities within designated areas of the province for which an approval is required.

Licenses

A license is required under s. 49(1) of the Act to commence or continue a diversion of water for any purpose, or to operate a works. "Works" is defined broadly as any man-made structure, device or contrivance (includes dam or canal) and the land and mitigative measures associated with it.

Diversions or works exempt from the license requirement include those:

- for household purposes;
- already subject to a registration or approval;
- diversions/works listed in Schedules 3 and 4 of the WMR; and
- temporary diversion carried out pursuant to a code of practice and requiring the giving of notice to the Director.

Codes of Practice

Sections 36(2) and 49(1) of the Act prohibit anyone from commencing or carrying on an activity, diversion of water or operation of a works that are subject to a code of practice unless notice is provided to the Director in accordance with the regulations. The following activities are subject to codes of practice:

- Pipeline crossing or telecommunication line crossing – *Code of Practice for Pipelines and Telecommunications Lines Crossing a Water Body*
- Watercourse crossing – *Code of Practice for Watercourse Crossings*
- Diversion of water for hydrostatic testing of pipelines – *Code of Practice for the Temporary Diversion of Water for Hydrostatic Testing of Pipelines*
- Outfall structure – *Code of Practice for Outfall Structures on Water Bodies*

CODE OF PRACTICE FOR WATERCOURSE CROSSINGS

A "watercourse crossing" is defined in the Code as any permanent or temporary structure that crosses or is being constructed to cross, over or through a water body, including associated permanent or temporary structures (i.e. isolation measures, erosion protection structures and sedimentation management structures). Owners of crossings and those who conduct works (i.e. construction, maintenance, replacement or removal of all or part of a crossing) are bound by the Code (s. 2). Notice must be given to the Director at least 14 days in advance of works being carried out (s. 3). The substantive requirements of the notice include schedule, plans, maps, class of water body, and type of watercourse crossing. Any variation in the works requires a new notice (s. 4). Notice is not required in emergency situations (s. 5) however the Director must be notified within 24 hours of the owner becoming aware of the emergency and within 30 days of completion of works to deal with the emergency the owner must provide further information to the Director. A restricted activity period for works may apply (s. 10). The owner must maintain records regarding the works undertaken under their notice (s. 13). Upon contravention of the Code, owners must report to the Director within 24 hours and must file a written report to the Director within seven days (s. 12).

Offences and Penalties

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Section 142 of the Act sets out a number of offences, including:

- Contravening or knowingly contravening a water management order;
- Failing to provide information as required;
- Contravening or knowingly contravening an enforcement order;
- Contravening a term or condition of an approval or license; and
- Commencing or continuing or knowingly commencing or continuing an activity except under an approval or as otherwise authorized by the Act.

A Director can issue a water management order (s. 97), an enforcement order (s. 135, s. 136) or an administrative penalty (s. 152). Section 143 sets out the penalties that can be imposed if an accused is found guilty of an offence. For offences listed in s. 142(2) that require proof that the accused "knowingly" committed the offence, the maximum penalty for an individual is a \$100,000 fine and/or imprisonment for a term not more than 2 years. For a corporation, the maximum penalty is a \$1,000,000 fine. For offences listed in s. 142(1) (that do not require proof of intention), the maximum penalty for an individual is \$50,000 and for a corporation, \$500,000. There are a few offences listed under s. 142(1) that have less maximum penalties.

An offender is liable for each day or part of a day that the offence occurs or continues (s. 145). Where the offender received monetary benefits as a result of the commission of the offence, the court may order the offender to pay an amount equal to those monetary benefits (s. 144). Section 148 sets out a list of "creative sentencing" that may be imposed by the court. Examples include directing the offender to publish the facts relating to the conviction, post a bond or pay money into court, and/or perform community service. Section 147(1) deals with liability of public officials and is the same wording used in s. 233 of the *Environmental Protection and Enhancement Act*.

For the "strict liability" offences in s. 142(1), a due diligence defence is established if it is shown that all reasonable steps were taken to prevent the incident from occurring. These steps must have been taken prior to the incident in order for the defence to succeed. A due diligence defence can also be established if it the accused reasonably but mistakenly believed in a set of facts which if true, would have rendered the activity in question compliant.

3.4.16 Weed Control Act

Purpose and Scope

Sections 2, and 3 of the *Weed Control Act* imposes a duty on the occupant or owner of lands to destroy all prohibited noxious weeds and control all noxious weeds to prevent the spread, growth, ripening or scattering of the weeds. The *Weed Control Regulation* outlines what are "noxious" and "prohibited noxious" weeds for the purposes of the Act. "Occupant"

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is defined as the person actually or having the right to occupy or exercise control of lands (s. 1(k)). Under s. 2(2) of the *Public Lands Act*, the Minister of Transportation has authority over all rights of way for roads and road allowances.

Section 4 prohibits the movement of machines or vehicles that if moved would likely cause the spread of noxious or prohibited noxious weeds. Section 13 of the Act outlines that an inspector under the Act shall, upon finding prohibited noxious weeds give notice to the occupant or owner to destroy such weeds. Section 14 provides that the inspector must direct the method and time for compliance with the Act. An occupant or owner in receipt of a notice has a duty to comply (s. 17), and if they fail to do so the inspector may carry out the action required in the notice (s. 18) – expenses will be assigned to the owner of the lands (s.21).

Offences and Penalties

The Minister may issue a stop order under s.16, to anyone who contravenes the Act or regulations or operates anything that contributes to the spread of weeds. Section 28 provides that anyone who fails to comply with the stop order is liable to a fine of \$1,000 (maximum) for each day the offence continues. Contravention of the Act or regulations may result in a maximum fine of \$5,000 (s. 28).

3.4.17 Wilderness Areas, Ecological Reserves, Natural Areas and Heritage Rangelands Act

The *Wilderness Areas, Ecological Reserves, Natural Areas and Heritage Rangelands Act* allows the Lieutenant Governor in Council to establish wilderness areas, ecological reserves, natural areas and heritage rangelands, and to take measures to protect and preserve these lands. A number of activities are prohibited on these lands, including hunting, fishing, depositing litter, removing plant or animal life, lighting a fire, or in any way disturbing the surface of the land.

3.4.18 Wildlife Act

Disturbance of Habitat

Section 36 of the *Wildlife Act* prohibits the disturbance of wildlife habitation. A person must not molest, disturb or destroy a house, nest or den of prescribed wildlife or a beaver dam in prescribed areas and at prescribed times of the year, unless the person is authorized to do so pursuant to the *Agricultural Pests Act*, the *Water Act*, a licence authorizing the control or collection of wildlife, or regulations under the Act.

Section 96 of the *Wildlife Regulation* prescribes the wildlife, areas and times of year to which s. 36 of the Act applies. Included are all endangered wildlife, upland game birds, some migratory birds, snakes, bats and beavers (re: the latter, except on privately owned

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land). For most wildlife, disturbing the habitat of these animals is prohibited throughout Alberta and throughout the year.

Road Kill

Section 8 of the *Wildlife Act* provides that property in dead wildlife belonging to the Crown vests in the Crown. Section 55 prohibits the possession of dead wildlife unless property in the wildlife has been transferred from the Crown under s. 9. However, s. 134 of the *Wildlife Regulation* outlines that a person who finds dead wildlife may take possession of it without a permit until such time as it becomes reasonably possible for him to apply for a permit to “possess found dead wildlife” under s. 18 of the regulation. Section 57 of the Act prohibits the transportation of dead wildlife without the prescribed documents. Section 138 of the regulation outlines that a permit to possess found dead wildlife issued under s. 18 of the regulation meets the requirement for prescribed documents.

Offences and Penalties

The maximum penalty for contravening the Act is a \$100,000 fine and/or two years imprisonment (s. 92). The fine for an offence involving more than one animal is calculated separately for each animal (s. 90). Under s. 91(1), an employer or principal can be found guilty of an offence committed by an employee or agent: (i) while acting in the course of his or her employment, and (ii) the employer consented to or knew about the circumstances giving rise to that contravention. The Court can order the convicted person to pay an additional fine if the person financially benefited from the offence (s. 96). The Court can also order the convicted person to pay to the victim an amount for compensation for the loss or damage suffered (s. 96.1).

The Court can make additional orders, such as take action to remedy any harm to any animal or endangered organism or its habitat that resulted, publish the facts relating to that act or omission, perform community service, and pay money for the purpose of promoting proper management, control, conservation or protection of wildlife, endangered species or their habitats (s. 97).

3.5 PRIMARY MUNICIPAL LEGISLATIVE REQUIREMENTS

This section only reviews the municipal noise bylaws for the cities of Calgary and Edmonton to provide examples of the types of limits that apply in other jurisdictions. It should be noted that each city may use a different standard of sound pressure weighting (i.e. “A” or “C”) and/or response (“slow” or “fast”).

3.5.1 City of Calgary Bylaw No. 5M2004

Part 9 of the City of Calgary, Bylaw No 5M2004, *being a Bylaw of the City of Calgary to Regulate Neighbourhood Nuisance, Safety and Liveability Issues*, deals with the regulation of noise. The bylaw contains a general prohibition against noise within the city limits and prohibits any person⁸ from causing any noise or from allowing property occupied or owned by him to have noise emanate from it such that it annoys or disturbs another person (s. 27). Whether any sound annoys or disturbs a person, or otherwise constitutes objectionable noise, is a question of fact to be determined by a Court hearing a prosecution pursuant to this section of the Bylaw (s. 27(5)).

Residential Development⁹ continuous noise limits are restricted to the following limits, measured at any point of reception within the residential development (s. 28):

- 65 dBA Leq¹⁰ measured over a one hour period during the daytime (“daytime” – 07:00 to 22:00 on weekdays and 09:00 to 22:00 on weekends)
- 50 dBA Leq measured over a one hour period during the night-time (“night-time” – 22:00 – 07:00 on weekdays or 22:00-09:00 on weekends)

However, the following continuous noise limits apply with respect to the operation of an air conditioner, fan, central vacuum system or generator within a Residential Development (s. 28.1):

- 70 dBC Leq measured over a one hour period during the daytime (“daytime” – 07:00 to 22:00 on weekdays and 09:00 to 22:00 on weekends)
- 60 (dBC) Leq measured over a one hour period during the night-time (“night-time” – 22:00 – 07:00 on weekdays or 22:00-09:00 on weekends)

Where the Ambient Sound Level for an area is at or above the maximum allowable Day-time or Night-time Sound Levels, measured over a one (1) hour period, a Sound Level

⁸ “Person” includes a corporation, other legal entities and an individual having charge or control of a Premises (s. 1(2)(k)).

⁹ “Residential Development” means any land, which is the site of a Residential Building, and is a listed land use district (see s. 26(1)(s) for list) as defined in the Land Use Bylaw.

¹⁰ “Leq” means the equivalent continuous Sound Level over periods of time as specified in this Bylaw at a specified location as measured by a Sound Level Meter.

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must exceed 5 decibels (dBA) Leq over the Ambient Sound Level before it becomes an offence under either ss. 28 or 28.1.

Downtown¹¹ continuous noise limits are restricted to the following limits, measured at any point of reception within the downtown (s. 29):

- 75 dBA Leq measured over a one hour period during the daytime (“daytime” – 07:00 to 22:00 on weekdays and 09:00 to 22:00 on weekends)
- 60 dBA Leq measured over a one hour period during the night-time (“night-time” – 22:00 – 07:00 on weekdays or 22:00-09:00 on weekends)

Where the Ambient Sound Level for an area is at or above the maximum allowable Day-time or Night-time Sound Levels, measured over a one hour period, a Sound Level must exceed 5 decibels (dBA) Leq over the Ambient Sound Level before it becomes an offence.

Non-continuous noise limits are the same for residential developments and the downtown and are restricted to the following limits, measured at any point of reception within the residential development or the downtown. (s. 30)¹²:

- 85 dBA Leq non-continuous measured over a 15 minute period during the day
- 75 dBA Leq non-continuous measured over a 15-minute period during the night

Non-residential development¹³ noise limits are restricted to the following limits, measured at any point of reception within a non-residential development (s. 32):

- For a continuous noise: the greater of 85 dBA Leq or 5 dBA Leq over the ambient noise level measured over a one hour period during the day or night
- 85 dBA Leq for a non-continuous noise measured over a one-hour period during the day or night

A person may make a written application to the Chief Bylaw Officer for a temporary permit allowing for noise or sound levels that would otherwise violate this bylaw (s. 36).

Penalties under the bylaw include fines ranging from \$50 to \$400 (for committing the same offence twice in a 24 month period) (s. 6) up to a fine of \$10,000 for a conviction under the bylaw or 6 months in jail in default of payment (s. 5(2)).

¹¹ “Downtown” means the area in the city of Calgary bounded on the east by 3rd Street East, on the south by the CPR tracks, on the west by 9th Street West, and on the north by the Bow River.

¹² This section appears to be misnumbered in the Bylaw available on the City of Calgary website at <<http://www.calgary.ca/CA/City-Clerks/Documents/Legislative-services/Bylaws/5M2004-CommunityStandards.pdf>>.

¹³ “Non-Residential Development” means any land or building that is not a Residential Development or Residential Building.

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3.5.2 City of Edmonton Bylaw No. 14600 (consolidated on July 16, 2014)

Part III of the bylaw contains a general prohibition against noise within the city limits and prohibits any person¹⁴ from causing or permitting any noise that disturbs the peace of another individual (s.14). Further, the bylaw provides that a person may be found guilty of a violation regardless of whether the noise complained of exceeds the dB(A)¹⁵ limits permitted in the bylaw – no measurement of the noise by an approved device is required (s. 14 (3)).

Residential district¹⁶ continuous noise limits are restricted to the following (ss. 19 & 20):

- 65 dB(A) during the day (“day” – 07:00 to 22:00)
- 70 dB(A) during the day for a maximum of 2 hours, in total per day
- 75 dB(A) during the day for a maximum of 1 hour, in total per day
- 80 dB(A) during the day for a maximum of 30 minutes, in total per day
- 85 dB(A) during the day for a maximum of 15 minutes, in total per day
- 50 dB(A) during the night (“night” – 22:00 – 07:00)

The noise reading is measured at the property line of the property from which the noise is emanating.

Non-residential continuous noise limits are restricted to the following (ss. 21 & 22):

- 75 dB(A) during the day (“day” – 07:00 to 22:00)
- 80 dB(A) during the day for a maximum of 2 hours, in total per day
- 85 dB(A) during the day for a maximum of 1 hour, in total per day
- 60 dB(A) during the night (“night” – 22:00 – 07:00)

The noise reading is to be measured at the property line of the property from which the noise is emanating.

The owner of a motor vehicle is liable for a contravention of the bylaw caused by any sound emitted from the motor vehicle (s. 23).

¹⁴ “Person” means an individual, firm, partnership, association, corporation, trustee, executor, administrator or other legal representative.

¹⁵ “dB(A)” is defined as “the sound pressure measured in decibels using the “A” weighted scale of a sound level meter set to fast response.”

¹⁶ “Residential district” means an area or district classified as residential by the *Land Use Bylaw*.

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4.0 Practices and Procedures

4.1 INTRODUCTION

The purpose of this chapter is to identify the Department's environmental practices and procedures. The Department develops practices and procedures to address its environmental activities. This includes the practices and procedures contained in various department specifications, tender documents, special provisions, manuals, standards, best management practices and guidelines.

Environmental practices and procedures clarify responsibilities for both Department employees and Service Providers with respect to the implementation and maintenance of the EMS, and undertaking the Department's activities and projects. These practices and procedures undergo regular revisions as required.

4.2 PRACTICES AND PROCEDURES

The tables below list the Department's environmental practices and procedures: those set out in specifications, tender documents, special provisions, manuals, guidelines and standards (Table 4.1), and those developed under the EMS (Table 4.2). In addition to the documents listed in Table 4.1, Service Provider agreements and contracts that are issued for specific projects contain environmental requirements, practices, and procedures. The specific terms of the agreements and contracts can vary from project to project and have not been included in Table 4.1. However, these documents form part of the roles and responsibilities for environmental issues and must be adhered to.

TABLE 4.1: ALBERTA TRANSPORTATION ENVIRONMENTAL PROCEDURES AND PRACTICES

PRACTICE/PROCEDURE	DOCUMENT	SECTION	DATE
POLICY			
Greenhouse Gas Emissions	A Guide to Energy Efficient Best Practices	AT Website	2012
Greenhouse Gas Emissions	Memorandum of Understanding - TRANS/AENV/ARHCA	AT Website	2010
PLANNING & DESIGN			
Borrow Areas Reclamation/Topsoil Conservation/Approvals	Engineering Consultant Guidelines for Highway, Bridge and Water Projects - Volume 2, Construction Contract Administration	Section 1: Contract Administration – General, Section 1.13	2013

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PRACTICE/PROCEDURE	DOCUMENT	SECTION	DATE
Borrow Excavations <ul style="list-style-type: none"> • AT Supply • Contractor Supply 	Engineering Consultant Guidelines for Highway, Bridge and Water Projects - Volume 1, Design and Tender	Section 4.7	2011
Conservation and Reclamation of Topsoil and Subsoil <ul style="list-style-type: none"> • Soil Stripping Plan 	Engineering Consultant Guidelines for Highway, Bridge and Water Projects - Volume 1, Design and Tender	Section 4.6	2011
Contaminated Sites	Engineering Consultant Guidelines for Highway, Bridge and Water Projects - Volume 1, Design and Tender	Section 4.9	2011
Environmental Approvals & Authorizations	Engineering Consultant Guidelines for Highway, Bridge and Water Projects - Volume 1, Design and Tender	Section 4.3	2011
Environmental Legislation, Approvals & Permits <ul style="list-style-type: none"> • Regulatory Framework 	General Specifications, Specification Amendments and Supplemental Specifications for Highway and Bridge Construction Specifications, Edition 15	Section 1.2.50.1	2013
Drainage	Drainage-Guidelines for Highways Under Provincial Jurisdiction in Urban Areas	Design Bulletin #16	2003
Drainage	Stormwater Management at Rural Crossings	BPG 11. AT Website	2010
Environmental Evaluation	Alberta Transportation Terms of Reference for Environmental Evaluation	AT Website	2014
Environmental Considerations	Highway Geometric Design Guide	Chapter A, Section A-10	1999
Environmental Management System	Alberta Transportation Environmental Management System Manual	AT Website	2014
Environmental Management System	Engineering Consultant Guidelines for Highway, Bridge and Water Projects - Volume 1, Design and Tender	Section 4.1	2011
Environmental Protection Plan	Alberta Transportation Environmental Protection Plan for the Planning and Construction of Water and Transportation Projects.	AT Website	2009
Environmental Risk Assessment	Engineering Consultant Guidelines for Highway, Bridge and Water Projects - Volume 1, Design and Tender	Section 4.5	2011
Erosion and Sediment Control	Erosion and Sediment Control Manual	AT Website	2011

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PRACTICE/PROCEDURE	DOCUMENT	SECTION	DATE
Erosion and Sediment Control Best Management Practices (BMPs)	Field Guide for Erosion and Sediment Control	AT Website	2011
Fish Habitat Manual	Fish Habitat Manual	AT Website	2009
Navigation	Guidelines for Navigable Waters Protection Act	AT Website	2013
Navigation	Alberta Transportation Drainage Basins and Navigated Streams Map	AT Website	2014
Project Sponsor Sign Off for Environmental Regulatory Applications	Engineering Consultant Guidelines for Highway, Bridge and Water Projects - Volume 1, Design and Tender	Section 4.3.1	2011
Special Provisions	Engineering Consultant Guidelines for Highway and Bridge Projects – Volume 1, Design and Tender	Section 4.4	2011
Weed Survey	Engineering Consultant Guidelines for Highway, Bridge and Water Projects - Volume 1, Design and Tender	Section 4.8	2011
Wetlands	General Design Guidelines for a Constructed 'Habitat' Wetland – Boreal Forest Region of Alberta	AT Website	2014
Wetlands	General Design Guidelines for a Constructed 'Habitat' Wetland – Grasslands Natural Region of Alberta	AT Website	2014
Wetlands	General Design Guidelines for a Constructed 'Habitat' Wetland – Parkland Natural Region of Alberta	AT Website	2014
Wildlife Passage	Wildlife Passage at Stream Crossings	BPG 14. AT Website	2010
Wetlands	Evaluation Form and Instructions for Assessing Candidate Sites for Alberta Transportation's Wetland Habitat Bank.	AT Website	2014
Wetlands	Standard Monitoring Protocols for Evaluating Wetland Performance for Constructed 'Habitat' Wetlands	AT Website	2014

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PRACTICE/PROCEDURE	DOCUMENT	SECTION	DATE
Wetlands	Alberta Transportation's Guidelines for Conducting Wetland Assessments to Meet Water Act Application Requirements	AT Website	2014
Wildlife Passage	Planning Considerations for Wildlife Passage in Urban Areas	AT Website	2011
CONSTRUCTION AND REHABILITATION			
Borrow Excavation Pre-Disturbance Assessment	Alberta Transportation Pre-Disturbance Assessment Procedures for Borrow Excavation for Road Construction	AT Website	2013
Borrow Excavation Reclamation Post-Assessment	Alberta Transportation Post-Disturbance Reclamation Criteria and Assessment Procedures for Borrow Excavation	AT Website	2013
Borrow Excavation Reclamation	Alberta Transportation Guide to Reclaiming Borrow Excavation Used for Road Construction	AT Website	2013
Control of Clubroot in Soil Disturbed Work	Engineering Consultant Guidelines for Highway, Bridge and Water Projects – Volume 2, Construction Contract Administration	General – 1.13	2013
Environmental management during construction and operations	Environmental Construction Operations Plan Framework	AT Website	2014
Environmental Construction Operations (ECO) Plan	General Specifications, Specification Amendments and Supplemental Specifications for Highway and Bridge Construction Specifications, Edition 15	Section 1.2.50	2013
Environmental Construction Operations (ECO) Plan	Engineering Consultant Guidelines for Highway, Bridge and Water Projects – Volume 2, Construction Contract Administration	Section 2.2.2	2013

PRACTICE/PROCEDURE	DOCUMENT	SECTION	DATE
Environmental Management (General, Definitions, Statement of Environmental Commitment by the Minister, Minister's Environmental Site Management, Contractor's Environmental Commitment, Environmental Management Plan, General Environmental Protection Requirements)	Civil Works Master Specification (Water Infrastructure)	Section 01390	2006
Environmental Protection (General, Surficial Aquatic Resources, Ground Water Resources, Terrestrial Resources, Historical and Archaeological Resources, Socio-Economic)	Civil Works Master Specification (Water Infrastructure)	Section 01391	2006
Inspection of Permanent Erosion Control Devices	Engineering Consultant Guidelines for Highway, Bridge and Water Projects – Volume 2, Construction Contract Administration	General – 1.13	2013
Erosion and Sediment Control <ul style="list-style-type: none"> • Temporary • Permanent • Transfer • Maintenance of 	General Specifications, Specification Amendments and Supplemental Specifications for Highway and Bridge Construction Specifications, Edition 15	Section 1.2.50.1	2013
Erosion and Sediment Control – Rip Rap	Standard Specifications for Highway Construction	Section 2.5	2013
Erosion and Sediment Control – Permanent Environmental Protection Devices	Standard Specifications for Highway Construction	Section 6.5	2013
Erosion and Sediment Control – Gabions	Standard Specifications for Highway Construction	Section 6.10	2013
Monitoring & Reporting	Engineering Consultant Guidelines for Highway, Bridge and Water Projects - Volume 1, Design and Tender	Section 4.10	2011

PRACTICE/PROCEDURE	DOCUMENT	SECTION	DATE
Regulatory Requirements (General, Regulatory Responsibility, Variations Between Contract Documents and the Regulatory Requirements, Alberta Building Code, Minister Obtained Approvals)	Civil Works Master Specification (Water Infrastructure)	Section 01410	2006
Conservation and Reclamation of Topsoil and Subsoil <ul style="list-style-type: none"> • Soil Stripping Plan 	Engineering Consultant Guidelines for Highway, Bridge and Water Projects - Volume 1, Design and Tender	Section 4.6	2011
Topsoil Conservation with the Right-Of-Way	Engineering Consultant Guidelines for Highway, Bridge and Water Projects – Volume 2, Construction Contract Administration	General – 1.13	2013
Topsoil Placement	Standard Specifications for Highway Construction	Section 2.6	2013
Turbidity	Turbidity – SPE 20	AT Website	2008
Turbidity	The Conversion of Nephelometric Turbidity Units	AT Website	2007
Fish Salvage	Fish Capture & Release	AT Website	2006
Environmental Protection	Alberta Transportation Environmental Protection Plan	AT Website	2009
Seeding	Standard Specifications for Highway Construction	Section 2.20	2013
Seeding	Grass Seed Mixtures Used on Highway and Bridge Projects	Design Bulletin #25	2005
MAINTENANCE			
Beaver Control	Standard Specifications for Highway Maintenance, Edition 5	General Specifications – Section 54.34	2010
Maintenance Yards	Environmental Management Plan	Available through the Environmental Section	2005
Bridge Structure Cleaning	Standard Specifications for Highway Maintenance, Edition 5	General Specifications – Section 54.30	2010
Pollution Control	Standard Specifications for Highway Maintenance, Edition 5	Section 51.2.54	2010

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PRACTICE/PROCEDURE	DOCUMENT	SECTION	DATE
Pollution Control	Standard Specifications for Highway Maintenance, Edition 5	General Specifications – Section 51.2.54	2010
Chemical Vegetation Control / Mowing	Standard Specifications for Highway Maintenance, Edition 5	Section 54.4	2010
Hand Brushing	Standard Specifications for Highway Maintenance, Edition 5	Section 54.2	2010
Culvert Cleaning/Removal	Standard Specifications for Highway Maintenance, Edition 5	Section 54.5 – 54.8	2010
Clean Up	Alberta Transportation Highway Clean-up Program	-	-
Clean Work Site	Standard Specifications for Highway Maintenance, Edition 5	Section 51.2.55	2010
Wildlife Reflectors	Standard Specifications for Highway Maintenance, Edition 5	Section 54.20	2010

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5.0 Release Response Procedures

5.1 INTRODUCTION

It is essential that Department staff and our Service Providers understand the release reporting requirements that the Department is subject to under various pieces of legislation, and that these reporting procedures apply to all Department staff and Service Providers. The following procedures ensure consideration of the environmental effects resulting from accidental releases and that there will be an appropriate reporting response to environmental incidents.

These procedures are intended to address the release of hazardous materials and sediment under the federal *Fisheries Act*, the *Transportation of Dangerous Goods Act* and the Alberta *Environmental Protection and Enhancement Act* ("EPEA").

In general, EPEA requires that all releases that have caused, are causing, or have the potential to cause adverse effects on the environment must be reported (s. 110). Failure to report a release is itself an offence under EPEA (s. 227).

In addition to the reporting requirements set out in the legislation mentioned above, there may be site-specific or project-specific reporting requirements set out in the various approvals, licences, permits, etc. for those particular sites or projects. This part of the Manual discussed only general reporting requirements and any approvals, licences, permits, etc. should be checked for specific reporting requirements that may be included. Additional reporting requirements may also be imposed by municipalities and other regulators applicable to certain projects and activities.

Important: This procedure is not intended to address actions required for imminent emergency response – please refer to the procedures in the ECO Plan Framework and the DANGEROUS GOODS PROCEDURES in the Alberta Transportation Safety Manual.

5.2 DEFINITIONS:

"Adverse Effect" – impairment of or damage to the environment, human health or safety or property.

"ESDR" – Alberta Environment and Sustainable Resource Development

"Environment" – the components of the earth including:

- air, land and water;
- all layers of the atmosphere;

- all organic and inorganic matter;
- living organisms (including humans); and
- the interacting natural systems.

“Release” – includes to spill, discharge, dispose of, spray, inject, inoculate, abandon, deposit, leak, seep, pour, empty, throw, dump, place and exhaust.

“Substance” – any matter that is capable of becoming dispersed into the environment, or is capable of becoming transformed in the environment. This includes any sound, vibration, heat or other form of energy.

5.3 THIRD PARTY RELEASES

5.3.1 Motor Vehicle Accidents

Releases related to motor vehicle accidents are to be reported to the authorities by the person who causes the release or is in control of the substance that is released during the course of the accident. Authorities to notify include ESRD and other potentially responsible agencies, for example the local fire department if the release poses a fire hazard.

However, if a Department employee becomes aware of a release into the environment such information should be reported to ESRD notwithstanding that the Department did not have control of the substance.

5.3.2 Illegal Dumping

In the event that a substance, that has the potential to cause or is causing an adverse environmental effect, has been illegally dumped along a right-of-way by an undetermined third party and the Department becomes aware of the illegal dumping, the onus is on the Department to report the release to the AESRD as soon as it becomes aware or ought to be aware of the illegal dumping.

5.4 TYPICAL UNAUTHORIZED RELEASES ON DEPARTMENT PROJECTS

5.4.1 Sedimentation

The potential release of deleterious or harmful substances into watercourses is a significant environmental impact that may result from the Department’s activities. The most common type of release into watercourses is silt or other sediment.

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5.4.2 Hazardous Materials

Diesel, gasoline, ethylene glycol, hydraulic fluid, pesticides, fertilizers and road salts are some of the many substances that have the potential to cause an adverse effect to soil and water.

The federal *Fisheries Act* prohibits any person from releasing a substance into water that is deleterious to fish or fish habitat. Under provincial jurisdiction, EPEA prohibits any person from releasing a substance that causes or may cause a significant adverse environmental effect. The following explains the procedures related to who is responsible for reporting and how and to whom the reports must be made.

5.5 RELEASE REPORTING REQUIREMENTS

5.5.1 What Must Be Reported

- a) The release of a substance to the environment that has caused, is causing, or may cause an adverse effect. Adverse effect may be determined by a number of factors including, but not limited to:
- The chemical and physical characteristics of the substance released;
 - The receiving media;
 - The location of the release;
 - The risk to the environment;
 - The release is at or in excess of the amount listed in Table 1 in Part 8 of the federal *Transportation of Dangerous Goods Regulations* (“TDGR”); and
 - The substance is listed in Table 1 in Part 8 of the TDGR and is released into a watercourse, groundwater, or surface water in any quantity.
- b) The release of a deleterious substance into water capable of supporting fish habitat, waters that feed into those capable of supporting fish habitat or a serious and imminent danger thereof by reason of any condition, where any damage or danger to fish habitat or fish or the use of fish by man, results or may reasonably be expected to result from the release.
- c) It is recognized that the cumulative effect of numerous small releases could result in a potential adverse effect even if the individual release itself may not have caused an adverse effect. For example, a number of small releases may not be of sufficient quantity individually to harm groundwater. However, if they continue at the same location over a prolonged time period, there is the potential for an adverse effect on the groundwater. The person who causes or caused the release, or who has control of the released substance, that has had, is having or may have an adverse effect on the environment shall report the release immediately upon discovery.

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5.5.2 Transportation of Dangerous Goods Reporting

Table 1 from Part 8 of the TDGR is reproduced at the end of Chapter 5. Table 1 summarizes the levels or quantities of substance releases that are reportable if exceeded, even if no adverse environmental effect has occurred. In situations where it may be difficult to determine whether the quantities or levels listed in the TDGR are exceeded, it is advisable to report the release. Remember, under EPEA, any level or quantity of these substances released that has caused an adverse effect or has the potential to cause an adverse effect must be reported.

Immediate oral reports under TDGR should be made to the local police and provincial authority at 1-800-272-9600.

Immediate reports must include:

- a) The shipping name or UN number of the dangerous goods;
- b) The quantity of dangerous goods that:
 - i) was in the means of containment before the accidental release, the “dangerous goods accident” or the “dangerous goods incident”; and
 - ii) is known or suspected to have been released;
- c) A description of the condition of the means of containment from which the dangerous goods were released, including details as to whether the conditions of transport were normal when the means of containment failed;
- d) For an accidental release from a cylinder that has suffered a catastrophic failure, a description of the failure;
- e) The location of the accidental release, the “dangerous goods accident” or the “dangerous goods incident”;
- f) For a ship, the position of the ship and the next location at which the ship will be at anchor or alongside a fixed facility;
- g) The number of deaths and injuries resulting from the accidental release, the “dangerous goods accident” or the “dangerous goods incident”; and
- h) An estimate of the number of people evacuated from private residences, public areas or public buildings as a result of the accidental release, the “dangerous goods accident” or the “dangerous goods incident”.

A written follow-up report must also be submitted to the Director General within 30 days of the release event.

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Further, provincial dangerous goods transportation regulations will also apply. Section 13(1) of the Alberta *Dangerous Goods Transportation and Handling Act* sets out that where an accidental release occurs or is imminent from a means of containment any person who has charge, management or control of the substance shall report the incident.

5.5.3 Fisheries Act Reporting

Sections 38(4) and (5) of the *Fisheries Act* require reporting of any deposit of a deleterious substance in water frequented by fish or a serious and imminent danger thereof by reason of any condition, where any damage or danger to fish habitat or fish or the use by man of fish results or may reasonably be expected to result therefrom., Any such events must be reported to an inspector or fishery officer by:

- The owner of the deleterious substance or the person who has the charge, management or control thereof; or
- The person who causes or contributes to the causation of the deposit or danger thereof.

It is important to note the wide definition of “deleterious substance”, which included:

- Any substance that, if added to any water, would degrade or alter or form part of a process of degradation or alteration of the quality of that water so that it is rendered or is likely to be rendered deleterious to fish or fish habitat or to the use by man of fish that frequent that water; or
- Any water that contains a substance in such quantity or concentration, or that has been so treated, processed or changed, by heat or other means, from a natural state that it would, if added to any other water, degrade or alter or form part of a process of degradation or alteration of the quality of that water so that it is rendered or is likely to be rendered deleterious to fish or fish habitat or to the use by man of fish that frequent that water.

The definition also, without limiting the foregoing, includes:

- Any substance or class of substances prescribed pursuant to the regulations;
- Any water that contains any substance or class of substances in a quantity or concentration that is equal to or in excess of a quantity or concentration prescribed in respect of that substance or class of substances pursuant to the regulations; and
- Any water that has been subjected to a treatment, process or change prescribed pursuant to the regulations.

The relevant regulations for determining whether a substance meets the threshold of a “deleterious substance” include the federal *Pulp and Paper Effluent Regulations* and *Metal Mining Effluent Regulations*.

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Section 38(6) imposes a duty to minimize any adverse effects that result or may reasonably be expected to result from the unlawful deposit of a deleterious substance.

Reporting obligations under the *Fisheries Act* are not triggered if the release is otherwise authorized by that Act or an approval thereunder. It is advisable to confirm that a reportable occurrence is in fact authorized before deciding not to report.

5.6 WHO MUST REPORT

Under EPEA (s. 110), the following persons have an obligation to make an oral report:

- a) The person who releases or causes or permits the release of the substance;
- b) The person having control of a substance that is released (unless they have reasonable grounds to believe it has already been reported); and
- c) A police officer or employee of a local authority or other public authority who is informed of or who investigates a release of a substance (unless they have reasonable grounds to believe it has already been reported).

The reporting duty on police officers and local or other public authorities is consistent with their existing obligations relating to environmental emergency response. Although it is not an offence under EPEA for them to fail to report, it is expected that they will notify the ESRD Environmental Response Centre of the release.

The onus is on the person who causes or permits the release, or has control of the released substance, to determine whether there is an adverse effect. WHEN IN DOUBT, REPORT!

5.7 HOW TO REPORT AND TO WHOM

5.7.1 Immediate Reporting Requirements

The release should be reported as soon as a person knows or ought to have known of the release. This means the release must be reported at the first available opportunity, not when it is convenient. A person 'ought to have known' a release has occurred when, based on the information available, it is reasonable to know that a release has occurred. That person must make a decision whether a report is required.

Section 110(2) of EPEA provides that the person having control of the substance released that may cause, is causing or has caused an adverse environmental effect shall "immediately on becoming aware of the release", report to the following persons:

- ESRD Director;

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- The owner of the substance (where able to ascertain);
- Any person to whom the person reporting reports in an employment relationship;
- The person having control of the substance; and
- Any other person who may be directly affected by the release.

5.7.2 Oral Reporting

Contact the **Environmental Response Centre (ESRD)** at – **(780) 422-4505 or 1-800-222-6514 (24 hrs)**. A reference number will be provided at the time of the oral report.

Once the oral report has been made, the Environmental Response Centre will ensure that relevant federal and provincial authorities are contacted on Alberta Transportation's behalf.

5.7.3 Written Reports

Written reports must be submitted to the Environmental Response Centre within 7 days of the oral report. A written report must include the following information:

- a) The date and time of the release;
- b) The location of the point of the release;
- c) The duration of the release and the release rate;
- d) The composition of the release including concentration, total weight, quantity or amount released;
- e) A detailed description of the circumstances leading up to the release;
- f) The steps or procedures which were taken to minimize or stop the release;
- g) The steps or procedures which will be taken to prevent future releases; and
- h) Any other information required.

Mail or fax to:

**Environmental Response Centre (ESRD)
111 Twin Atria Building
4999-98 Ave.
Edmonton, Alberta T6B 2X3
Fax: (780) 427-3178**

5.8 EXEMPTIONS FROM THE DUTY TO REPORT TO AESRD

The following releases are exempt from reporting to ESRD under EPEA:

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- Substances released in an amount not exceeding the level specified in an EPEA approval or registration;
- Substances released in an amount permitted by a regulation under EPEA; and
- Releases regulated by the *Dangerous Goods Transportation and Handling Act* and regulations thereunder.

However, such releases may be reportable to other regulators despite the exemptions with respect to EPEA and ESRD.

In the event that it cannot be readily determined whether a report should be made, report the release to ESRD for due diligence purposes – if in doubt, report.

5.9 ALBERTA TRANSPORTATION NOTIFICATION REQUIREMENTS

Contractors are required to submit an incident report of unauthorized releases to the Consultant within 72 hours of the release. Consultants are to provide a copy of the report to the Department Project Sponsor immediately. Environmental Management Services is to be supplied with copies of written reports by the Project Sponsor.

5.10 REFERENCES:

- *A Guide to Release Reporting, Alberta Environmental Protection and Enhancement Act*. May 2005.
- *Release Reporting Regulation*, Alta. Reg. 117/93.
- *Dangerous Goods Transportation and Handling Regulation*, Alta. Reg. 157/97.

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Transportation of Dangerous Goods Regulation Reportable Quantities

TABLE 1 Table Identified in Section 8.1(1) of Part 8 of the <i>Transportation of Dangerous Goods Regulation</i>		
Class	Quantity	Emission Level
1	Any quantity that (a) could pose a danger to public safety or is greater than 50 Kilograms; or (b) is included in Class 1.1, 1.2, 1.3 or 1.5 and is (i) not subject to special provision 85 or 86 but exceeds 10 Kilograms net explosives quantity, or (ii) subject to special provision 85 or 86 and the number of articles exceeds 1 000.	
2	Any quantity that could pose a danger to public safety or any sustained release of ten minutes or more	
3	200 Liters	
4	25 Kilograms	
5.1	50 Kilograms or 50 Liters	
5.2	1 Kilogram or 1 Liter	
6.1	5 Kilograms or 5 Liters	
6.2	Any quantity	
7	Any quantity that could pose a danger to public safety	An emission level greater than the emission level established in section 20 of the "Packaging and Transport of Nuclear Substances Regulations"

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8	5 Kilograms or 5 Liters	
9	25 Kilograms or 25 Liters	

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6.0 Non-compliance and Corrective and Preventive Action

6.1 INTRODUCTION

This chapter describes the Department's procedures for investigating and correcting non-conformances, and for preventing the re-occurrence of non-conformances. Non-conformances are activities and/or incidents that do not conform to identified requirements. These requirements include Department specifications, legislation, regulations and contracts.

The Department has two classifications of non-conformances. The first is known as a Minor Non-conformance, which is an isolated deficiency that has not led to an adverse environmental effect. Minor Non-conformances could include such things as missing documentation from files, or improperly maintained erosion control devices that have not resulted in a sediment release. The second type of non-conformance is known as a Major Non-conformance, which is defined as a serious deficiency that has led to a break-down of the 'system'. This includes incidents where adverse environmental impacts have occurred and/or where there has been a failure to conform to regulatory or departmental requirements. Any administrative penalty, no matter how small, is regarded as a Major Non-conformance. Non-compliance is defined as a failure to adhere to municipal, provincial, or federal legislation/regulation (including conditions of approvals and authorizations) and can result in court action.

Non-compliance/non-conformance incidents are typically identified during audits, Department site inspections, or by regulators. In identifying non-compliances/non-conformances, the Department ensures that appropriate steps for correcting the situation are implemented and that preventative measures to prevent similar occurrences are taken.

6.2 PROCEDURES FOR HANDLING ENVIRONMENTAL INCIDENTS

6.2.1 Reporting

It is the responsibility of Department employees (Project Sponsor/MCI/etc.) and Service Providers to report any environmental incidents they observe to the regulatory authorities as discussed in Chapter 5 of this manual. All reportable environmental incidents must be reported to Environmental Management Services by either the Project Sponsor or the REC to ensure proper follow-up and recording of the incident. The Environmental Working Group meetings can be used as the vehicle to share information regarding non-compliance incidents.

6.2.2 Investigation Process

If an environmental incident occurs it is imperative that the proper investigation procedure is followed in order to establish the Department's due diligence. This has an added importance as the details of the investigation also form the basis for the incident report that is submitted to the regulatory authorities. The investigation must include, but is not limited to, the following information: the location, date, time, substance released, the receiving media, the determination of the root cause of the incident and the immediate action taken. Environmental Management Services will aid in the investigation process as required however, it is the responsibility of the relevant Department employee or Service Provider to ensure that an investigation is immediately launched once safe to do so. Copies of all investigations are to be sent to Environmental Management Services.

Being Investigated By Regulatory Authorities

ENVIRONMENTAL INSPECTIONS AND INVESTIGATIONS RESPONSE GUIDELINES

Construction and maintenance activities have the potential to cause adverse effects on the environment. Most notable are the potential effects to fish and fish habitat resulting from activities in or near water bodies, destruction of vegetation impacts to wildlife habitat, disturbance to soils and the use of pesticides or herbicides.

The legislation that will most likely impact Department activities are the Alberta *Environmental Protection and Enhancement Act*, the Alberta *Water Act* enforced by AENV, and the federal *Fisheries Act* and *Canadian Environmental Protection Act* enforced by Fisheries and Oceans Canada and Environment Canada. The respective personnel charged with the responsibility of enforcing the environmental legislation will likely require and request some degree of assistance. What follows are suggestions regarding future interactions with regulatory inspectors/investigators.

Regulatory Inspection Procedures

1. The Department representative should not, under any circumstances, interfere with or impede any investigation or inspection. If there are questions posed to you that are beyond your authority to answer or beyond your knowledge, politely advise the environmental officer of that fact.
2. An open and cooperative attitude is recommended.
3. At the start of either an inspection or investigation by a regulatory agency, ask the regulatory officer for his/her identification and a business card.
4. Inquire as to the nature of the visit by the regulatory officer. You may request information about what incident or work is being inspected. The regulatory officer

may not be obliged to advise what offence, if any, is being investigated, but a polite request may result in the information being given.

5. A Department representative should accompany the regulatory officer. The Departmental representative should take notes of the nature of the inspection and details of any sampling or testing procedure used by the regulatory officer.

The Departmental representative should request a copy of the results of any analysis or test. This request may or may not be granted. If practical or possible, the Departmental representative should take similar samples to those taken by regulatory officer. These samples should be labeled, kept sound and referred to the counsel appointed to deal with charges, if any that may be filed.

6. If the regulatory officer takes photographs, request copies of those photographs. Again, this request may or may not be granted. If it is practical to do so, take similar photographs or additional photographs that show the context of the investigation.
7. If the regulatory officer requests a statement from you or any Department employee, ask the officer for a copy of the statement at the start of the interview. If this request is refused, take a verbatim transcript of the interview as best you can under the circumstances. If possible provide the statement in the presence of a third party.
8. If the regulatory officer wishes to review Departmental records:
 - a. Ask under what authority the officer wishes to review the documents.
 - b. If the regulatory officer has a court order or search warrant, do not interfere or obstruct the search in any way. If the environmental officer asks for assistance, you may wish to provide this assistance.
 - c. If the regulatory officer does not have a warrant or court order, and wants to take documents, request that the officer take copies. If this is refused, request an opportunity to take copies.
 - d. If the regulatory officer wishes to take documents that you think are privileged, such as documents to and from legal counsel, place these documents in a sealed envelope marked "Privileged: DO NOT OPEN without a Court Order." Give this envelope to the regulatory officer.
 - e. Keep good notes that describe the investigation or inspection. These should identify the time, date, and place of the investigation, and the activities of the regulatory officer.
9. If a directive or enforcement order, either verbal or written, is issued they should be followed as soon as possible. Take immediate action and report to the appropriate Construction Manager, Operations Manager and Environmental Management

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Services. Track all costs related to the directive or enforcement order and any other suggestion put forth by the regulatory officer.

10. If a "Warning" has been issued by the enforcement agency, request any background information that led to the issuance of the "warning."

In all of the foregoing, it is important to remember that there are legislative requirements to be cooperative. Therefore, it is also important you avoid any conduct that could lead to charges of obstructing or interfering with an investigation.

Project Sponsor Procedures

If a warning has been issued for your project, or you anticipate the receipt of one please complete the following:

1. Inform the Director of Environmental Management Services and provide a copy of the warning or other documentation. The Director may inform legal counsel of the warning.
2. On receipt of a request from legal counsel compile all relevant facts relating to the incident in the enforcement action and particularly evidence that can be used to rebut the allegations. This could include illustrated maps and diagrams, dated and annotated photographs, meeting minutes, documentary evidence. Also, provide environmental audits, inspection and monitoring results, and the significance of this data. You should also include recollections of conversations between Department staff or agents and the regulatory authorities.
3. Write an account of the incident clearly explaining the facts and sequence of events leading to the incident and the responsibilities of the individuals involved. If the offence was an accident or not committed intentionally, the adverse environmental affect was limited, or due diligence was exercised, this should be clearly stated. Obtain similar accounts from other Department staff as appropriate.
4. Provide the evidentiary package to the Director of Environmental Management Services for filing.

6.2.3 Corrective & Preventive Action

Corrective action is the process for identifying the underlying causes of the incident and implementing mitigation measures, and while not all incidents require corrective action each environmental incident should be evaluated to determine whether corrective action is required. *Preventive action* is the process of preventing the re-occurrence of a potential non-conformance. Part of having an effective preventive action program includes a systematic effort to identify potential problems. These efforts include inspections, monitoring, and a periodic review of records to identify trends.

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The Project Sponsors are responsible for determining the appropriate corrective and preventive actions in the event of an environmental incident where an adverse environmental effect has occurred. Environmental Management Services will provide assistance as requested in these matters. The corrective and preventive actions will identify responsibility for the development and implementation of necessary actions and reasonable time frames for completion. These actions may include revising in-house procedures or mitigation measures. Environmental Management Services keeps track of all reportable incidents.

Copies of all pertinent documentation related to the incident are to be maintained in the project file.

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7.0 Inspection and Monitoring

7.1 INTRODUCTION

This chapter outlines Alberta Transportation's processes for inspection and monitoring of the key characteristics of the Department's environmental activities. This includes tracking of the Department's environmental liabilities, regulatory monitoring, and site inspections. These activities allow the Department to establish its due diligence and evaluate its environmental performance on an annual basis.

7.2 DEFINITIONS

"Approvals" – an approval to conduct work issued under any Act (except for the federal Fisheries Act).

"Authorizations" – an authorization to conduct work issued under the Fisheries Act.

"Inspections" – work site visits conducted by Service Providers or Department staff to verify compliance and conformance to regulatory requirements and Department procedure.

"Monitoring" – periodic or continuous surveillance or testing to determine the level of compliance with statutory requirements as required by an approval or authorization.

"Regulatory Inspection" – work site visits conducted by regulatory authorities to confirm compliance.

7.3 MONITORING ACTIVITIES

7.3.1 Regulatory Approval Tracking

The federal *Fisheries Act* and *Navigation Protection Act*, and the provincial *Environmental Protection and Enhancement Act* and *Water Act* are examples of environmental legislative requirements that have provisions for approvals or authorizations. It is essential, prior to the commencement of work that project sponsors carefully consider all environmental legislation and obtain the necessary approvals and authorizations. However, obtaining these approvals/authorizations can be time consuming, confusing and complex, as the various regulatory authorities often require different information.

In order to effectively manage the application process, regulatory approval-tracking checklists are available to project sponsors. The checklists are designed to ensure that all

applicable approvals/authorizations are in place before the commencement of work. Completed checklists are to remain in the project file as documentation of the Department's due diligence efforts. The checklists are available in the Appendices.

Highway Projects

On highway projects that require approvals/authorizations from regulatory authorities the Department may be required to conduct monitoring and reporting activities as part of the conditions to proceed with work. These activities commonly include short-term monitoring and reporting requirements throughout the construction phase of the project as well as long-term monitoring and reporting during the operations phase. Service Providers conduct all regulatory monitoring and reporting requirements on the Department's behalf.

Water Projects

For water infrastructure projects most short-term monitoring and reporting activities specified in the approvals/authorizations are conducted by Service Providers on behalf of the Department during the construction phase of the project. As projects are completed and transferred to ESRD, all obligations for remaining monitoring and reporting are transferred with the structure.

7.3.3 ECO Plan Monitoring Provisions

On highway and bridge construction and rehabilitation projects Contractors must submit an Environmental Construction Operations Plan (ECO Plan) to the Consultant prior to the commencement of work. Within the ECO Plan there are provisions for monitoring and reporting activities required throughout the duration of the project. The Consultant also has ECO Plan monitoring responsibilities as identified in the Consultant Guidelines. This responsibility includes verifying the Contractor implements monitoring and reporting activities as documented in the ECO Plan. The Department will be conducting audits to verify ECO Plans are properly developed and implemented.

7.3.4 Environmental Management Plans

It is a requirement that Highway Maintenance Contractors (HMCs) develop Environmental Management Plans (EMPs) for highway maintenance yards. Within the EMP there are provisions for monitoring and reporting activities by the HMCs. The Department also may conduct audits to verify that EMPs are properly developed and implemented.

7.3.5 Total Suspended Solids Monitoring

Construction activities in water bodies have the ability to cause significant environmental damage therefore it is imperative that these activities are closely monitored. The Department has specifications in place for monitoring Total Suspended Solids (TSS) during in-stream activities to ensure that the environment is being protected at all times and to ensure that activities are being conducted within compliance of federal and provincial legislation/regulation. The project contract documents identify the requirement to monitor TSS on Department projects where in-stream activities are taking place. Please refer to the TSS monitoring specification for full details.

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Environmental Liabilities Tracking

7.3.7 Land and Aggregate Information System

In an effort to identify the Department's existing environmental liabilities associated with borrows and gravel pits the Department has established the Land and Aggregate Information System (LAIS). The LAIS allows the Department to formally record the existence of the liabilities and to document the environmental issues associated with the liability. Personnel from the Technical Standards Branch and Environmental Management Services maintain the information in the LAIS.

7.3.8 Contaminated Sites

In 2006 the responsibility of the management of contaminated sites was transferred to Alberta Transportation. Department coordination between Environmental Management Services and the Regions exists to prioritize the contaminated sites for securing adequate budget resources. Environmental Management Services maintains a liability list as well as progress reports of all contaminated sites that the Department has responsibility for. The Regions are responsible for the management of contaminated sites including remediation activities.

7.4 ENVIRONMENTAL SITE INSPECTIONS

Site inspection tours are conducted at all phases of a project (construction/operations/maintenance) to verify conformance to Department procedure and compliance to legislation. Site inspection reports are important records as they help to establish the Department's due diligence.

7.4.1 Department Inspections

The Consultant is responsible for day-to-day site inspections on project work sites. The purpose of the inspections is to verify that regulatory requirements and Department specifications are adhered to. The results of these inspections are to be documented in the weekly reports and discussed at regularly scheduled on-site meetings.

Site inspections are conducted by focusing on activities of potential significant environmental risk. The inspections focus on:

- adherence to legislation and Department specification,
- hazardous materials management,
- erosion and sediment control, and
- ensuring proper documentation is on site (ECO Plan/approvals/authorizations).

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7.4.2 Regulatory Authorities

Regulatory authority inspections can occur anywhere at any-time on Department projects. Regulatory authorities are not obliged to provide advance notice of inspections. ESRD and the DFO are just two of the regulatory authorities that regularly inspect Department projects. For procedures related to regulatory inspections and investigations, please refer to Chapter 6 of this Manual.

All identified issues, as a result of inspection activities, must be brought to the attention of the Project Sponsor immediately. The Project Sponsor ensures that the Consultant communicates with the Contractor to implement effective corrective action and preventive measures as required. Environmental Management Services tracks incidents through to completion. The original site inspection form will be retained in the project file and copies forwarded to the Environmental Management Services.

7.5 EQUIPMENT CALIBRATION PROCEDURES

All equipment used to measure environmental parameters must be adequately calibrated at all times. Please follow the manufacturer's specifications or generally accepted practices when calibrating equipment. Calibration logs are to be kept as records in the project file after the completion of the project – remember, where there are no calibration records there can be no confidence in the measurement and resulting data!

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8.0 Communication

INTRODUCTION

An EMS requires that an organization have in place a system of communication that ensures:

- Relevant employees within the organization are kept informed regarding the EMS and environmental issues associated with the organization's operations, and
- Communication from interested external parties is received and handled according to established procedures

The purpose of this chapter is to describe the Department's approach to the ongoing management of comments and information requests from internal and external stakeholders.

INTERNAL STAKEHOLDERS COMMUNICATION

Communication procedures for internal stakeholders (relevant Department employees and relevant Service Providers) are intended to meet two overarching goals:

1. Awareness of:
 - Roles and responsibilities under the EMS and
 - The overall performance of the EMS, including reporting the results of EMS monitoring, audit results and management reviews
2. Providing employees and Service Providers with the opportunity to voice their concerns about environmental issues and ensure these concerns have been effectively addressed.

The following practices and procedures will be in place to meet these goals.

Department Employees

1. Initial EMS awareness is provided to the Environmental Working Group membership. It is expected that the members will use this information to provide consistent leadership and direction with respect to environmental stewardship in their respective areas of responsibility.

2. Environmental Management Services communicates information to senior management and the Environmental Working Group membership regarding the EMS and general environmental performance.

Service Providers

1. The EMS Manual will be available on the Department's web site.
2. Industry associations (e.g., CEA, ARHCA, TAC) and their environmental committees are utilized to develop and disseminate environmental procedures and specifications.
3. For specific projects, environmental information is shared via:
 - Direct reporting relationships between the Department Project Administrators and Service Providers
 - ECO Plans
 - EMPs
 - Project start-up and pre-construction meetings
 - Weekly reports
 - Department specifications

Employee/Service Provider Comments Procedure

Employees and Service Providers can use the Department's Electronic Suggestion Box to submit comments, concerns and other feedback regarding the EMS or other environmental issues. Comments can be submitted anonymously and will be carefully considered. Once a request is approved it is processed and implemented in a timely manner. The address for the Electronic Suggestion Box can be found on the Department's intranet and internet web sites.

Environmental Management Services is also available to discuss issues related to the EMS or the environment.

EXTERNAL STAKEHOLDERS COMMUNICATION

With respect to external stakeholders, the Department encourages all employees and Service Providers as our agents on-site to ensure that any environmental comments they receive from external stakeholders (positive and negative) are managed in a responsive and respectful manner.

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Comments Procedures (#1)

The Department has been able to take advantage of the numerous communications procedures and methods already in place, and the services offered by the Department's Communications Branch.

- *Alberta Connects* (available on the Department's web page or general Government of Alberta web page) and the *Alberta Transportation Information Line* are available for all external stakeholders to provide comments or concerns or to request information.
- The Department's internet web-site, e-mails, letters, open houses, media, newsletters, informal meetings, and approval advertisements are mechanisms the Department utilizes to ensure effective communication with interested external parties.
- For individual projects, regulators are able to contact Department staff directly. This allows for effective lines of communication to be established at the outset, ensuring vital information is exchanged as efficiently as possible. Environmental Management Services provides assistance with liaisons between the Department and the regulatory authorities as required.

External Stakeholders Comments Procedure (#2)

To assist the Department in tracking its on-going stakeholder input, Project Administrators and Service Providers are encouraged to record relevant stakeholder comments. Only those communications that are considered to be outside of the ordinary scope of daily business should be recorded and forwarded to Environmental Management Service for consideration. Examples of these types of communications include concerned citizens or discussions with regulators regarding non-compliance issues.

Recording the following key information would be helpful:

- Who initially received the comment and responded on behalf of the Department
- Contact information for the party providing the comment (especially important if the person commenting wants the Department to follow up on something)
- A summary of the comment, including whether the comment relates to an environmental impact and whether the comment relates to a complaint of some sort
- Describe any follow up required and any follow up measures undertaken

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NOTE:

Stakeholders indicate that one of the key factors determining whether they develop a positive or negative impression of an organization they have contacted with a concern or question is the extent to which they receive a timely response from someone who is knowledgeable. In addition, Stakeholders often also indicate that an organization's reputation depends on whether it follows through on any follow up actions. Remember: Nothing damages trust like saying you will look into things and never reporting back to the person.

Environmental Management Services, with input and advice from the Communications Branch, is available to assist employees and Service Providers in responding to comments from stakeholders that require more detailed technical, environmental or corporate responses.

Media Requests

Media requests for information generally are routed through the Communications Branch. When any staff member responds to a media request, a Media Contact Sheet must be filled out and sent within two hours to the Minister's Executive Assistant, Appointment Secretary, the Deputy Minister, the appropriate Assistant Deputy Minister, the Communications Branch, and any other relevant Department staff. Only staff members who have taken media training courses should directly address the media.

9.0 Training and Competence

9.1 INTRODUCTION

The goal of environmental training is to make Department staff and Service Providers aware of their roles and responsibilities as outlined in the EMS, and for all personnel to have a basic understanding of the environmental issues associated with the Department's operations, while personnel whose work may directly affect environmental performance will be competent to complete their tasks.

The purpose of this chapter is to identify the environmental training responsibilities and to outline the skills-based training opportunities required to maintain and potentially improve the Department's environmental performance.

9.2 SKILLS-BASED TRAINING RESPONSIBILITIES

9.2.1 Department Staff

Skills-based training is required for specific duties that are directly related to the Department's activities or operations that can have an impact on the environment. The intent of skills-based training is to ensure that Department employees who have such duties are knowledgeable about the environmental issues involved in their day-to-day activities. Examples of skills-based training may include spill/release reporting requirements, erosion and sediment control procedures and best management practices. To support the Department's EMS and to meet the Department's environmental performance, skills-based training may be required for specific Department personnel.

It is the responsibility of the individual employee and their supervisor to identify relevant skill-specific environmental based training during completion of the annual Learning and Development planning process. Records of skills-based training efforts are maintained by ACSC Training & Development.

9.2.2 Service Providers

As the Department's representatives on site, Service Providers play an integral role in helping the Department fulfill its commitment to environmental protection. Therefore, it is essential that the Department's Service Providers are competent by possessing the appropriate knowledge and expertise necessary to meet their environmental responsibilities. Skills-based training is required for all Service Providers with "front-line"

responsibilities that are involved in operating equipment or machinery, or supervising/monitoring workers on site.

It is the responsibility of the Service Provider to ensure all staff and sub-contractors have the relevant skill-specific based training prior to conducting work on behalf of the Department. Records of skills-based training efforts must be maintained by the Service Provider and must be available for review upon request.

The Department has three avenues in which to determine Service Provider competency:

1. The Department can request evidence of Service Provider experience and ability prior to a contract being awarded.
2. The Department considers the Service Provider's competency while evaluating the ECO Plans for specific projects. It is the Department's expectation that ECO Plans submitted to the Consultant for review are completed in a manner that showcases the Service Providers knowledge and expertise with regards to environmental protection.
3. The site inspection and monitoring process (described in Chapter 7 of this manual) is another tool the Department utilizes to evaluate Service Provider competency at the work site.

9.3 ENVIRONMENTAL AWARENESS/TRAINING OPPORTUNITIES

Departmental Initiatives

Environmental awareness sessions coincide with annual meetings, workshops/seminars, and at industry functions in order to reach the largest number of Department employees and Service Providers as possible. Environmental awareness topics at these functions may include discussion introducing new departmental specifications, guidelines or BMPs, updates regarding Departmental environmental performance, and/or recent regulatory trends to name a few.

Third Party Opportunities

There are numerous organizations and associations throughout Alberta that provide excellent skill-specific training courses, workshops, and seminars tailored to almost every environmental discipline. Department staff and Service Providers are encouraged to take advantage of these opportunities in order to maintain a high standard of environmental awareness on the job site. Records of these courses must be retained by the employer.

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10.0 Environmental Audit Programs

10.1 INTRODUCTION

One of the requirements of an EMS is to have in place programs and procedures for auditing environmental performance. The environmental audit has two goals. The first goal is to determine whether the appropriate procedures, processes and plans are in place to ensure good environmental stewardship. The second is to determine if these processes are being properly implemented. The results of the audits are presented to management so that department environmental performance may be evaluated.

10.2 ALBERTA TRANSPORTATION ECO PLAN AUDIT PROGRAM

The environmental audit program will consist of the following components:

- Audits conducted by certified third parties auditors to assess the Department's ECO Plans and Environmental Management Plans.
- Management reviews designed to provide a general assessment of the on-going effectiveness and suitability of the Department's environmental specifications and guidelines.

10.2.1 ECO Plan Audit Procedures

Scope

The scope of the audit program is to:

- Determine if ECO Plans are being properly implemented and maintained;
- Assess if the environmental requirements within the construction contract and the Consultant Service Agreement are being adhered to;
- Determine if identified Departmental specifications and guidelines are being adhered to;
and
- Survey the level of compliance to relevant environmental legislation.

Methodology

Audits will be undertaken using tools/protocols chosen by agreement with the external auditor and Environmental Management Services.

Responsibilities

- Audits are co-coordinated and scheduled by Environmental Management Services.
- Environmental Management Services will appoint a Lead Auditor. The Lead Auditor will appoint an audit team who will perform the audit in accordance with the audit plan prepared by the Lead Auditor.
- The audit team identifies all non-conformances/non-compliances and communicates these to Environmental Management Services via an approved audit report format.
- Environmental Management Services is responsible for ensuring that significant audit findings are reported to the Divisional Executive. The Divisional Executive will be responsible for reviewing and responding to the significant audit findings identified by Environmental Management Services.
- Audit results are maintained by Environmental Management Services as records.

Reporting

Audit findings will be communicated in an audit report format that has been approved by Environmental Management Services. It should be noted that some audit findings (particularly those where liability and/or potential regulatory/legal action could be involved) may be provided directly to the Department's legal counsel.

Frequency

Environmental audits will be undertaken on an annual basis.

10.2.2 Management Review

Scope

The Management reviews will include:

- An assessment of the continuing suitability, adequacy and effectiveness of the departments environmental specifications and guidelines
- An assessment of the Department's environmental performance over the past year

Methodology

Management reviews will be based on a review of site audits and input from Environmental Management Services generated since the last management review. The Director of Environmental Management Services is tasked with the responsibility of providing Divisional Executive Committee the relevant information required to allow them to provide adequate future direction. The management review will consist of analysis of the items established under the scope section above.