



Freedom To Create. Spirit To Achieve.

# Environment

Annual Report  
2010 – 2011

**Government of Alberta** ■

# Environment

## Annual Report 2010 - 11

### CONTENTS

<b>Preface</b>	<b>2</b>
<b>Minister's Accountability Statement</b>	<b>5</b>
<b>Message from the Minister</b>	<b>6</b>
<b>Management's Responsibility for Reporting</b>	<b>7</b>
<b>Results Analysis</b>	<b>8</b>
Ministry Overview	8
Review Engagement Report	11
Performance Measures Summary Table	12
Discussion and Analysis of Results	15
Ministry Expense by Function	53
<b>Financial Information</b>	<b>54</b>
Financial Statements	55
<b>Other Information</b>	<b>108</b>

# Preface

---

The Public Accounts of Alberta are prepared in accordance with the *Financial Administration Act* and the *Government Accountability Act*. The Public Accounts consist of the annual report of the Government of Alberta and the annual reports of each of the 24 Ministries.

The annual report of the Government of Alberta contains Ministers' accountability statements, the consolidated financial statements of the Province and *The Measuring Up* report, which compares actual performance results to desired results set out in the government's business plan.

**This annual report of the Ministry of Environment contains the Minister's accountability statement, the audited consolidated financial statements of the Ministry and a comparison of actual performance results to desired results set out in the Ministry business plan. This Ministry annual report also includes:**

- the financial statements of entities making up the Ministry including the Department of Environment and the Climate Change and Emissions Management Fund, for which the Minister is responsible;
- other financial information as required by the *Financial Administration Act* and *Government Accountability Act*, either as separate reports or as a part of the financial statements, to the extent that the Ministry has anything to report, and
- financial information relating to Environmental Protection Security Fund.

# **Transformation:**

**Changing the way we  
do business.**

**For Albertans.**

**For the better**

This past year saw a marked change in the way Alberta Environment does business.

The ministry continued its transition to a cumulative effects management system, making significant headway in the Lower Athabasca and South Saskatchewan regions as well as the Industrial Heartland of the province. Internally, the ministry reorganized its business units to support the cumulative effects approach.

On the regulatory front, the ministry initiated meaningful engagement with stakeholders resulting in regulatory alignment and enhancement. It reached out to external experts to develop an environmental monitoring system for the oil sands that will be a model for the province and the world.

Alberta Environment also harnessed technology to do its work better. An online data warehouse was established to store and link information from diverse sources. Staff developed new systems, including the database described under Goal 5, "Sorting out water supply and consumption." Changes to the Alberta Environment website provide current information to the public on topics like water quality, and substantial progress has been made on an oil sands information portal to provide transparent data on oil sands environmental management to a broad audience.

This annual report details the initiatives shaping the "new" Alberta Environment. The following pages outline the major accomplishments of the fiscal year 2010-11, telling the stories of some staff, and with the support of the entire ministry, changing the way we do business.

At Alberta Environment we are truly in a period of transformation.

For Albertans.

For the better.

# Minister's Accountability Statement

---

The ministry's annual report for the year ended March 31, 2011, was prepared under my direction in accordance with the *Government Accountability Act* and the government's accounting policies. All of the government's policy decisions as at June 11, 2011 with material economic or fiscal implications of which I am aware have been considered in the preparation of this report.

*Original signed by*

*Honourable Rob Renner  
Minister of Environment*

## Message from the Minister

---



Albertans are passionate about our province and environment. As Alberta continues to grow and develop, we are mindful of the continued quality of our air, land, water and biodiversity. Alberta Environment's business goals reflect the need to strike the right balance between environmental protection and maintaining a high quality of life. In order to achieve those goals, the ministry must deliver the right programs in the right way at the right time.

While Alberta Environment has a proud history of achievements, during the last fiscal year, the ministry has transformed the manner in which it conducts its business. We're moving away from evaluating the environmental impacts of development on a project-by-project basis. Instead, we have adopted a cumulative effects management approach; a holistic viewpoint that considers environmental outcomes on a regional scale. To support this shift, we have implemented regional plans supported by sound science, monitoring practices, strategic policies and regulatory tools.

This transformation in our environmental management shows once again how Alberta is demonstrating leadership that is recognized within and beyond our borders. By adopting this innovative approach, the ministry continues to develop and deliver the right environmental programs and services required in the Alberta of today and tomorrow. This change is important because it continues to respect the delicate balance between development and environmental protection in our province, so that future generations of Albertans will continue to enjoy the many benefits of living in our province.

To support our transition to cumulative effects management, we are continuing to strengthen our legislation, governance models and ministry structures. This evolution represents a significant change in how we ensure environmental protection in this province, and the results of this shift are realized through the ministry's accomplishments documented in this annual report.

This is an exciting time for Alberta Environment, as we move forward with focused environmental actions that support our province's prosperity. There are many challenges still to be met and our work will continue to be essential to building, strengthening and maintaining a strong foundation for Alberta's future.

*Original signed by*

*Honourable Rob Renner  
Minister*

# Management's Responsibility for Reporting

---

The Ministry of Environment includes the department, the Environmental Appeals Board, and the Climate Change and Emissions Management Fund.

The executives of the individual entities within the Ministry have the primary responsibility and accountability for the respective entities. Collectively, the executives ensure the Ministry complies with all relevant legislation, regulations and policies.

Ministry business plans, annual reports, performance results and the supporting management information are integral to the government's fiscal and strategic plan, annual report, quarterly reports and other financial and performance reporting.

Responsibility for the integrity and objectivity of the consolidated financial statements and performance results for the Ministry rests with the Minister of Environment. Under the direction of the Minister, I oversee the preparation of the Ministry's annual report, including consolidated financial statements and performance results. The consolidated financial statements and the performance results, of necessity, include amounts that are based on estimates and judgments. The consolidated financial statements are prepared in accordance with Canadian public sector accounting standards. The performance measures are prepared in accordance with the following criteria:

- Reliability – Information agrees with the underlying data and the sources used to prepare it.
- Understandability and Comparability – Current results are presented clearly in accordance with the stated methodology and are comparable with previous results.
- Completeness – Performance measures and targets match those included in Budget 2010.

As Deputy Minister, in addition to program responsibilities, I am responsible for the Ministry's financial administration and reporting functions. The Ministry maintains systems of financial management and internal control which give consideration to costs, benefits, and risks that are designed to:

- provide reasonable assurance that transactions are properly authorized, executed in accordance with prescribed legislation and regulations, and properly recorded so as to maintain accountability of public money;
- provide information to manage and report on performance;
- safeguard the assets and properties of the Province under Ministry administration;
- provide Executive Council, the President of Treasury Board, the Minister of Finance and Enterprise and the Minister of Environment information needed to fulfill their responsibilities; and
- facilitate preparation of Ministry business plans and annual reports required under the *Government Accountability Act*.

In fulfilling my responsibilities for the Ministry, I have relied, as necessary, on the executives of the individual entities within the Ministry.

*Original signed by*

*Jim Ellis*

*Deputy Minister of Environment*

June 11, 2011



## Ministry Overview

The ministry of Environment consists of the department, the Environmental Appeals Board and the Climate Change and Emissions Management Fund. In addition, three Delegated Administrative Organizations report to the Minister and operate within separate board governance and financial management: the Alberta Recycling Management Authority, the Beverage Container Management Board and the Alberta Used Oil Management Association.

The ministry's authority to carry out its mandate is primarily based on the *Environmental Protection and Enhancement Act*, the *Water Act* and the *Climate Change and Emissions Management Act*.

In December 2010, the ministry of Environment was reorganized into five main business divisions. This repositioning will support the department's transformation to a cumulative effects management system.

## Environmental Appeals Board

*Justice Delmar Perras, Chair*

The Environmental Appeals Board (EAB) is a quasi-judicial board that operates at arm's length from Alberta Environment and reports directly to the Minister of Environment. Consistent with the principles of natural justice, the EAB provides fair, impartial and efficient resolution of appeals that are received under the *Environmental Protection and Enhancement Act*, the *Water Act*, the *Climate Change and Emissions Management Act* and the *Government Organization Act*. The EAB's preferred method of resolving appeals is mediation; however, when an appeal proceeds to a hearing, the EAB, in most cases, provides recommendations to the Minister, who makes the final decision. On preliminary matters and in certain types of appeals the EAB makes the final decision. The EAB issues its own annual report at [www.eab.gov.ab.ca/publications.htm](http://www.eab.gov.ab.ca/publications.htm).

## Alberta Environment

*Jim Ellis, Deputy Minister*

Alberta Environment oversees policies and initiatives associated with air quality, water management, waste management, environmental emergencies, land reclamation and climate change. Alberta Environment manages the provincial environmental regulatory process and develops cumulative effects management criteria. The department supports and directs environmental emergency management in cooperation with partners and coordinates public education on conservation and environmental protection. Alberta Environment is also responsible for environmental monitoring and compliance programs to enforce Alberta's environmental legislation and regulations. The department is organized into five main business divisions: Corporate, Monitoring and Science, Operations, Policy, and Strategy. These divisions are supported by Communications and Legal Services.

## Department Divisions

### Corporate

*Al Sanderson, Assistant Deputy Minister*

Corporate division shapes and serves Alberta Environment and the Government of Alberta. It provides strategic leadership for departmental processes and approaches, manages the corporation effectively and efficiently and advances the department's strategic agenda within the Alberta Public Service. It mobilizes the department's people, resources and corporate systems to achieve strategic intent and it houses and ensures appropriate use of internal communications and staff engagement business processes.

### Monitoring and Science

*Bob Barraclough, Assistant Deputy Minister*

Monitoring and Science division deals with the scientific and technical evidence that informs us whether our intended environmental outcomes are being met. This division leads and supports all aspects of environmental monitoring, evaluation and science support functions. It is the catalyst for the creation of a knowledge and performance management system that can support policy design, development, implementation and evaluation. It supports the work of the department at all levels and is integrated with all components of the cumulative effects management system.

### Operations

*Rick Brown, Assistant Deputy Minister*

Operations division uses place based knowledge to deliver policy, plans and frameworks. It delivers, in an integrated manner, the department's overall programs, regulatory responsibilities and non-regulatory activities. It develops and maintains regional partnerships in support of achieving environmental outcomes. It plans, develops, operates and maintains provincial water management infrastructure in support of meeting environmental objectives. It also provides effective environmental emergency management through planning, response and crisis management.

### Policy

*Ernie Hui, Assistant Deputy Minister*

Policy division designs and develops environmental policy that aligns with the strategic intent of the Government of Alberta. This division understands the nuances on the ground, in the air and at the watershed, so each policy becomes a welcome instrument to shape approvals, licences and other decisions.

### Strategy

*Beverly Yee, Assistant Deputy Minister*

Strategy division sets the direction to achieve Alberta Environment's preferred future state and strategic intent. It mobilizes and optimizes current and future relationships and pursues potential points of influence. The Strategy division provides oversight of the system, and ensures that the collective actions of the department are aligned with strategic intent by coordinating the implementation of strategies such as *Water for Life*.

## Department Support Areas

### Communications

*Erin Carrier, Acting Director*

The Communications Branch provides the ministry with the resources to build open communication between the ministry and Albertans. The branch provides a range of communications support to department initiatives, programs and services. It also works in partnership with government ministries, other orders of government and community and industry organizations to plan, publicize and execute key events and initiatives. Communications provides support for strategic and newsworthy department actions and serves as a media spokesperson for the ministry on emerging issues.

### Legal Services

*Darin Stepaniuk, Director*

Legal services are primarily provided to the ministry by the Environmental Law Section (ELS) of Alberta Justice. The ELS supports the ministry by providing timely, effective advice to the Minister and all levels of the ministry using a corporate counsel model. The director of the ELS is a member of the ministry's executive committee and is the ministry's senior legal adviser. The ministry's legal services are shared with Sustainable Resource Development and the Parks Division of Tourism, Parks and Recreation.

# Review Engagement Report



To the Members of the Legislative Assembly

I have reviewed the performance measures identified as “Reviewed by Auditor General” in the *Ministry of Environment’s 2010-11 Annual Report*. These performance measures are the responsibility of the Ministry and are prepared based on the following criteria:

- Reliability – Information agrees with the underlying data and with sources used to prepare it.
- Understandability and Comparability – Current results are presented clearly in accordance with the stated methodology and are comparable with previous results.
- Completeness – Performance measures and targets match those included in Budget 2010.

My review was made in accordance with Canadian generally accepted standards for review engagements and, accordingly, consisted primarily of enquiry, analytical procedures and discussion related to information supplied to my Office by the Ministry. My review was not designed to provide assurance on the relevance of these performance measures.

A review does not constitute an audit and, consequently, I do not express an audit opinion on the performance measures.

Based on my review, nothing has come to my attention that causes me to believe that the “Reviewed by Auditor General” performance measures in the Ministry’s 2010-11 Annual Report are not, in all material respects, presented in accordance with the criteria of reliability, understandability, comparability, and completeness as described above. However, my review was not designed to provide assurance on the relevance of these performance measures.

Original signed by

Merwan N. Saher, CA  
Auditor General

May 12, 2011  
Edmonton, Alberta

# Performance Measures Summary Table

Core Business/Goal/Performance Measure(s)		Prior Year Actuals				Target	Current Actual
<b>Core Business One: Leading and enabling the achievement of environmental outcomes</b>							
<b>1</b>	<b>Environmental outcomes and objectives are established with Albertans, communities, government and industry</b>						
1.a	Place-based Environmental Management Objectives – Measures the percentage of the province (by area) that has established “place-based” environmental management objectives.	Under Development					
<b>2</b>	<b>Albertans, communities, governments and industry are good stewards of the environment to achieve identified environmental outcomes</b>						
2.a**	Municipal Solid Waste to Landfills – Measures Alberta’s progress towards reducing the amount of municipal solid waste disposed of in landfills as measured in kilograms of waste per capita.	818 kg per capita (2006)	838 kg per capita (2007)	841 kg per capita (2008)	757 kg per capita (2009)	800 kg per capita	738 kg per capita (2010)
2.b*	Personal Engagement Indicator – Measures the percentage of Albertans who describe themselves as actively engaged in energy, waste or water conservation.						
	Energy Conservation			87%	87%	88%	90%
	Waste Conservation			87%	90%	90%	90%
	Water Conservation			83% (2008)	84% (2009)	86%	85% (2010)

# Performance Measures Summary Table

Core Business/Goal/Performance Measure(s)	Prior Year Actuals			Target	Current Actual	
<b>Core Business Two: Assuring a healthy environment</b>						
<b>3 The Ministry has effective policies, regulatory and non-regulatory tools to manage cumulative effects on the environment</b>						
3.a** River Water Quality Index <sup>1</sup> – Measures the water quality of six major Alberta rivers at key sites, based on data on four groups of variables (metals, bacteria, nutrients and pesticides), which are averaged to provide an overall water quality rating	Two out of six river systems have “good” to “excellent” water quality (2005-06)	Five out of six river systems have “good” to “excellent” water quality (2006-07)	Five out of six river systems have “good” to “excellent” water quality (2007-08)	Six out of six river systems have “good” to “excellent” water quality (2008-09)	Six out of six river systems have “good” to “excellent” water quality	Five out of six river systems have “good” to “excellent” water quality (2009-10)
3.b Air Quality Index <sup>2</sup> – Measures the quality of Alberta’s air based on five major pollutants: carbon monoxide, nitrogen dioxide, ozone, sulphur dioxide, and fine particulate matter – PM <sub>2.5</sub>				n/a (2009)	-	“Good” air quality days 93% of the time (2010)
3.c Total Greenhouse Gas Emissions – Measures the success in meeting the greenhouse gas emissions growth targets measured in million tonnes of CO <sub>2</sub> e, as outlined in <i>Alberta’s 2008 Climate Change Strategy</i>			247 (2007)	244 (2008)	241	234 (2009)
<b>4 The Ministry has effective risk management processes, preparation and responses to events and emerging issues</b>						
4.a* Environmental Emergencies Response Indicator – Measures the response by Alberta Environment to environmental emergencies within established timelines			85% responded to within 50 minutes (2008-09)	80% responded to within 50 minutes (2009-10)	90% responded to within 50 minutes	88% responded to within 50 minutes (2010-11)

## Performance Measures Summary Table

Core Business/Goal/Performance Measure(s)	Prior Year Actuals				Target	Current Actual
<b>Core Business Three: Leading and supporting the development and maintenance of environmental infrastructure</b>						
<b>5 Environmental infrastructure is developed and maintained to meet the Government of Alberta agreed upon outcomes</b>						
<b>5.a Effective Water Management Infrastructure<sup>3</sup> -</b>						
Measures the:						
Utilization	99.80%	99.80%	99.50%	99.2%	99%	-
Functional Adequacy	95.10%	95.10%	94.50%	93.7%	95%	-
Physical Condition (PC) of provincially-owned water management infrastructure <sup>4</sup>	Good: 97.0%	Good: 96.5%	Good: 94.9%	Good: 94.2%	Good 93%	-
	Fair: 2.9%	Fair: 3.4%	Fair: 4.8%	Fair: 4.7%	Fair: 7%	-
	Poor: 0.1%	Poor: 0.1%	Poor: 0.3%	Poor: 1.1%	Poor: 0%	-
	(2006-07)	(2007-08)	(2008-09)	(2009-10)		(2010-11)
<b>5.b Drinking Water Safety Indicator</b>						
Facility Design Standards –	81%	85%	87%	90%	92%	92%
Measures the percentage of facilities meeting the newer (1997 or 2006) standards, as applicable	(2006-07)	(2007-08)	(2008-09)	(2009-10)		(2010-11)
Facility Operational Requirements –	32	41	26	56	19	25
Measures the number of incidents where regulatory requirements have not been met and that could lead to water quality incidents	(2006)	(2007)	(2008)	(2009)		(2010)
Drinking Water Quality Incidents –	51	42	37	36	34	32
Measures the number of incidents involving drinking water not meeting specified quality requirements	(2006)	(2007)	(2008)	(2009)		(2010)

### Notes:

1 In 2009-10, summer flow volume in the Oldman River peaked on several occasions. The occurrence of episodic rainfall events likely contributed non-point source runoff to the river. Such events could have led to an increase in the number and magnitude of water quality guideline exceedances resulting in a lower River Water Quality Index rating downstream of Lethbridge.

2 The methodology has been enhanced and therefore results are no longer comparable to the target or historical data.

3 Current data is not available, as 2009-10 is the final year of reporting using the current methodology.

4 Good means infrastructure is adequate for intended use and expected to provide continued service life with average maintenance. Fair means aging components are nearing the end of their life cycle and require additional expenditure for renewal or refurbishing. Poor means upgrading is required to comply with minimum codes or standards and deterioration has reached the point where major repairs or replacement are necessary.

### \*Indicates Performance Measures that have been reviewed by the Office of the Auditor General

These measures were selected for review by ministry management based on the following criteria established by government:

1 Enduring measures that best represent the goal and mandated initiatives,

2 Measures that have well established methodology,

3 Measures for which new data is available.

### \*\*Indicates Performance Measures also included in Measuring Up 2010-11 under goal three. Data was audited by the Auditor General for the following years as indicated in the Measuring Up Auditors' Report:

1 Municipal Solid Waste to Landfills – 2009 and 2010

2 River Water Quality Index – 2008-09 and 2009-10

For more detailed information see Performance Measure Data Sources and Methodology in the Discussion and Analysis of Results section of the annual report on the 'About page' of Alberta Environment's website: [www.environment.alberta.ca/](http://www.environment.alberta.ca/).

For changes to performance measures refer to page 46 of the annual report.

## Discussion and Analysis of Results

Business as usual? The past year was anything but usual. The ministry accelerated its movement towards a cumulative effects management system, which sets environmental objectives for defined regions of the province and managed human activity accordingly. This approach differed from the existing regulatory system which focuses mainly on individual projects.

Cumulative effects management also recognizes that there is a balance between environmental quality, social values and the intensity of economic activities. All factors - environmental, economic and social - are considered when developing plans and tools to achieve our objectives. Since cumulative effects management moves us beyond our traditional work, many of the developments of the past year are transformative.

To support cumulative effects management, every ministry program and activity was reviewed. The department was restructured to create five divisions: Corporate; Monitoring and Science; Operations; Policy; and Strategy. In addition to the change in structure, four key business processes were identified: policy development; outreach and engagement; internal communication; and environmental planning. These changes position the ministry to implement cumulative effects management by making it more strategic, more responsive and better coordinated.

New systems were developed to empower employees to take full advantage of the knowledge and information available. The Environmental Management System was upgraded, and spatial information is now available through a web application called GeoDiscover Alberta, which went online in January 2011. A new Integrated Risk Management policy helps staff prioritize and make decisions.

Externally, the ministry also worked more extensively with its stakeholders:

- The Regulatory Alignment Project was established to identify ways to increase effectiveness, efficiency and coordination in the regulatory system.
- An enhanced approval process was developed for mineral surface leases, licences of operation, pipeline agreements and pipeline installation leases.
- New programs were introduced to reduce emissions from commercial truck fleets, commercial lighting and home appliances.

In addition, the ministry is supporting a five-year research project to examine how Albertans understand and act on climate change, and how governments engage the public on tough environmental issues.

During the year, the ministry received frank and constructive feedback on development in the oil sands region, most notably in December 2011 from the Royal Society of Canada and from the Federal Oil Sands Advisory Panel. Minister Renner established a Panel of independent experts to provide detailed action items on how best to set up, operate and govern a world-class environmental monitoring, evaluation and reporting system for Alberta's oil sands and how to expand such a system throughout the province. The group is expected to report back to the Minister by June 2011.

In January 2011, the report of the Regulatory Enhancement Task Force was accepted by the Government of Alberta. The Task Force looked at ways to improve Alberta's regulatory system for upstream oil and gas, while maintaining Alberta's strong commitment to environmental management, public safety and responsible resource development. Notably, the Task Force recommended the establishment of a single regulatory body for the oil and gas sector. The current system involves multiple regulatory bodies, each with different processes. Simplifying the structure and using consistent processes will improve the system's efficiency and transparency.

This is today's Alberta Environment.



GOAL 1: **Linked to Core Business 1 – Leading and Enabling the Achievement of Environmental Outcomes**

**Environmental outcomes and objectives are established with Albertans, communities, government and industry**

*“Alberta’s transition to an outcomes-focused cumulative effects management system addresses the impacts of development and ongoing activities on land, air, water and biodiversity. Within the system, environmental outcomes are defined and become the focus for management actions. Objectives are measurable targets or thresholds set to achieve the outcomes.”*

*Alberta Environment Business Plan 2010-13*

---

**Moving forward with cumulative effects management**

Our future well-being depends on how we manage the whole of our activities so they do not exceed the capacity of our environment. Alberta Environment is shifting from a project-by-project regulatory approach to a cumulative effects management approach consistent with Alberta’s [Land-use Framework](#). Cumulative effects management recognizes that the combined impact of individually regulated projects, in conjunction with activities not directly regulated, need to be considered to understand their effects on the environment.

Transforming to a cumulative effects management system is both a tremendous challenge and an exciting opportunity. It requires implementation of a knowledge-based system that goes beyond traditional ministry boundaries. It is also our best chance to achieve environmental outcomes balanced with social and economic factors.

This year Alberta Environment focused on developing plans for the [Lower Athabasca](#) and [South Saskatchewan](#) land use regions. The [Industrial Heartland](#) Project also transitioned to an operating cumulative effects management system in the Capital Region.

For the Lower Athabasca Regional Plan:

- The ministry supported public and stakeholder consultation for the *Lower Athabasca Regional Advisory Council’s Advice to the Government of Alberta Regarding a Vision for the Lower Athabasca Region*. A series of open houses and workshops were held in nine locations across the province, which approximately 760 people attended. Almost 1100 Albertans provided feedback through online or hardcopy survey workbooks. In addition, 108 written submissions were received.
- The public and stakeholder feedback informed government’s drafting of the regional plan. The ministry will support public and stakeholder consultation on the draft regional plan from April to June 2011.
- The ministry also engaged stakeholders in the development of management frameworks for air, surface water quality and groundwater in the Lower Athabasca Region. These stakeholders included the federal government, First Nations, Metis, industry, environmental non-government organizations and multi-stakeholder groups.

For the South Saskatchewan Regional Plan:

- The ministry assisted the South Saskatchewan Regional Advisory Council to assess alternative development scenarios and make recommendations that balance economic development with environmental and social values.
- These recommendations were submitted to the government as the document called *South Saskatchewan Regional Advisory Council's Advice to the Government of Alberta Regarding a Vision for the South Saskatchewan Regional Plan*. They were posted for public and stakeholder review in March 2011.
- The ministry supported the implementation of environmental frameworks (air, water, sulphur and groundwater).
- Stakeholder forums were established to share information and discuss issues.
- A number of reports and studies were completed such as Phase 1 of an *Engineering Study for Evaluation of Industrial Water Supply and Wastewater Treatment Alternatives*; the *Industrial Heartland Wetland Assessment* report; and *Midstream Upset Flaring* study.

**Other 2010-11 accomplishments under Goal 1 include:**

- The ministry supported the Continental Climate Policy by tracking, analyzing and providing strategic direction to protect Alberta's interests and promote the province's approaches to greenhouse gas management.
- In the spring and summer of 2010, the ministry supported Premier Stelmach and Minister Renner at high-profile appearances in the United States: in Washington, D.C. (Premier Stelmach) May 3 to 7, and in discussions with northeastern U.S. policy makers (Minister Renner), June 13 to 17. Premier Stelmach, Minister Renner and other elected officials attended the Pacific NorthWest Economic Region annual summit in Calgary, June 16 to 20. At all meetings, the government amplified its efforts to correct misperceptions about oil sands development and to increase understanding of its strategic importance.
- The ministry supported Minister Renner at the United Nations 16<sup>th</sup> annual climate change conference (COP 16) in Cancun, December 6 to 10. The Minister played a constructive role in the meetings and government officials met with 10 international delegations. COP 17 preparations are currently underway.
- The ministry supported the Minister's meetings with policy makers in London, Strasbourg and Brussels in May 2010. Discussions focused on clean energy initiatives.
- The ministry began a five-year project to study how Albertans understand and act on climate change, and to transform how municipalities and the provincial government engage citizens on tough environmental issues.
- The ministry continued working with other Government of Alberta ministries in supporting and coordinating Clean Energy initiatives.

## Popular support for cumulative effects management

The process of cumulative effects management demands the participation of stakeholders through the development and implementation of regional plans under the Land-use Framework.

Kate Rich, lead of Alberta Environment's Land-use Framework team, has watched the stakeholders move forward with their assessments and recommendations for regional plans, particularly in the Lower Athabasca and South Saskatchewan regions.

She says the plans, once complete, will identify regional environmental objectives and associated ambient targets and thresholds. "The question being asked is not 'How much can we pollute?' but 'What is the quality we want for our air, water and land?'" The answer brings with it two new approaches that are supporting a transformation in how the ministry intervenes in activity that affects the environment. These approaches have had strong support from the stakeholders.

The first approach is to set ambient limits - as well as trigger points along the way - that signal a change in the environment. "The objective is to avoid reaching environmental limits by taking action to reverse negative trends when they emerge," says Rich. "This is consistent with our process of continuous improvement and adopting best management practices."

For example, high levels of sulphur dioxide in the air can be harmful to human health. A region might set an ambient limit for sulphur dioxide as well as trigger points that signal when environmental conditions have changed and when the level of sulphur dioxide is approaching that limit. At the trigger point, responders will verify the monitoring information, determine the source and take action as needed.

A second approach that has had strong support is the option of using a range of both regulatory and non-regulatory tools to achieve regional objectives:

- Regulatory tools include acts, regulations and binding codes of practice – also known as "command and control".
- Non-regulatory tools include incentives, the promotion of stewardship and voluntary actions, and the sharing of risks and responsibilities with partners.

Traditionally Alberta has functioned using both sets of tools on a provincial basis, but for the first time the full range of tools will be used to achieve regional objectives. The ministry will continue to work with stakeholders to find innovative approaches to achieve regional objectives and resolve issues.

"Cumulative effects management allows flexibility – working through incentives or regulation based on the situation and the level of risk," says Rich. "There's support for such flexibility on a regional basis, as all stakeholders have shared responsibility for the environment, including industry, agriculture and municipalities."

*Ambient refers to the air or water around us. The quality of air and water is directly affected by development and, in turn, affects the health of humans and our ecosystems.*

*An ambient limit identifies when the risk of negative effects on air or water are becoming too great.*

## **Goal 1 Performance Measures**

### 1a. *Place-based Environmental Management Objectives* – Under development

The Place-based Environmental Management Objectives measures the percentage of the province (by area) that has established “place-based” environmental management objectives.

## GOAL 2: **Linked to Core Business 1 - Leading and Enabling the Achievement of Environmental Outcomes**

### **Albertans, communities, governments and industry are good stewards of the environment to achieve identified environmental outcomes**

*“Shared responsibility in action is the key to achieving established environmental outcomes. Alberta Environment works in a wide variety of partnerships with other ministries, municipalities, public and private organizations, regulators and regulated parties and individuals to achieve outcomes. Success in developing a culture of stewardship rests on increasing the knowledge, motivation and capacity of stewards through collaboration, shared governance, voluntary action, clear rules, a level playing field and compliance.”*

*Alberta Environment Business Plan 2010-13*

---

### **Developing a culture of stewardship**

At Alberta Environment, we understand that natural resources contribute to our high quality of life, as well as the livelihood of Albertans. At the same time, pressures on the environment from development are steadily increasing. We need to sustain our environment and our resources for future generations. That is why environmental stewardship is a responsibility shared by all of us – citizens, communities, government and industry.

Alberta Environment and its partners are leading Alberta’s transformation to a cumulative effects management system that addresses the impact of development on land, air, water and biodiversity. The ministry is also giving Albertans more information and tools to become better stewards of the environment:

- Alberta Environment reorganized its external [website](#) to better reflect how the public searches for information.
- The ministry revamped the [State of the Environment](#) section of its website to provide accessible, accurate and detailed information about the current state of Alberta’s land, air, water and biodiversity.
- More information was posted online, including reports on [drinking water quality](#) and environmental compliance and enforcement.
- The Governments of Alberta and British Columbia invested in the BlueSky Western Smoke Forecasting System. The system gives residents of the two provinces up to 48 hours notice of smoke from forest fires. (This project is described further under Goal 4.)
- Alberta Environment approved phase one of the Lesser Slave Water Management Plan which was prepared by the Lesser Slave Watershed Council. Ministry staff consulted with First Nations and local stakeholders before modifying the existing weir to achieve higher minimum flows in the Lesser Slave River. This modification will protect the downstream aquatic ecosystem.
- With the assistance of ministry staff, the newly-formed Athabasca Watershed Council completed phase one of its State of the Watershed Report.
- The Mighty Peace Watershed Alliance was designated as the 11<sup>th</sup> Watershed Planning Advisory Council in Alberta under the provincial [Water for Life strategy](#).

### Other 2010-11 accomplishments under Goal 2 include:

- The Government of Alberta and four of Canada's major retail associations, representing more than 90 per cent of retail sales in Alberta, took a significant step to reduce the use of plastic bags in the province. The parties reached an [agreement](#) that will cut the number of bags used annually from 900 million to 450 million by 2013.
- Charges brought forward by the ministry in 2008 regarding waterfowl deaths on Syncrude's Aurora tailings pond were resolved with a sentence of \$3 million agreed upon in provincial court. Minister Renner expressed [support](#) for the sentence, which will fund several stewardship initiatives:
  - research by the University of Alberta on avian protection
  - purchase of important habitat for migrating and nesting waterfowl east of Edmonton
  - Keyano College's efforts to develop curriculum for a diploma program for wildlife management technicians in Fort McMurray
- [Climate Change Central](#), a public-private partnership, celebrated 10 years of engagement with Albertans on issues of climate change. Most significantly, the organization manages the carbon offset program and the Alberta Emissions Offset Registry. This program has seen nearly eight million tonnes of offset credits created and used in Alberta.
- Beginning June 1, 2010, the Government of Alberta offered rebates to commercial truck owners and operators who installed energy-efficient technologies in their vehicles. The [initiative](#), administered through Climate Change Central, also offered fleet analysis and educational workshops on how to reduce fuel use.
- In its first two years, the [provincial energy efficiency rebate program](#) delivered more than \$26 million in rebates to 110,000 homeowners. Their purchases helped prevent more than 815,000 tonnes of greenhouse gas emissions from entering into the atmosphere - the equivalent of taking 163,000 cars off the road for a year.
- On August 9, 2010, the ministry announced [Light It Right](#), a program to provide rebates between \$37,500 and \$375,000 to restaurants, offices, warehouses and other businesses that installed energy-efficient lighting.
- On June 30, 2010, the Alberta Stewardship Network, funded by Alberta Environment, published the final report on its [2009 Grants Program](#), in support of partnerships which are a key component of the *Water for Life* strategy. It disbursed nearly \$250,000 to 34 different watershed stewardship groups across 11 of Alberta's major watersheds. Their projects included hosting workshops, installing interpretive signage, coordinating shoreline cleanups, assessing riverbanks, erecting fencing, monitoring water quality and soil nutrients, and restoring fish passage for spawning.
- The Government of Alberta granted \$2 million to the Alberta Urban Municipalities Association, the Alberta Association of Municipal Districts and Counties and the Alberta Motor Transport Association to establish the [Municipal Climate Change Action Centre](#). The centre has provided technical assistance and expertise to municipalities on actions to increase the energy efficiency of their operations and to improve community-wide conservation.
- On August 19, 2010, the [Canadian Energy Efficiency Alliance](#) released its report card on all the provinces and territories for the previous two years. Alberta was among the most improved provinces, moving up from a grade of D to a B+.
- Alberta's [tire recycling program](#) was expanded to include industrial and off-road tires, with recycling fees now applying to those tires when purchased. More than 60 million tires have been recycled since the program began in 1992.

- Albertans have set a new record in [beverage container recycling](#) – 83 per cent of containers were recycled in 2010, an increase of six per cent in the last two years. This is in part because of an increase in deposit-refund amounts, incorporation of dairy containers in the system and the ongoing commitment of Albertans to reduce their environmental footprint.
- The Alberta Environment Support and Emergency Response Team participated in the City of Edmonton's *Get Ready in the Park* event during National Emergency Preparedness Week.
- Environment Week was celebrated from May 30 to June 5, 2010. 59 Green Stops were registered in 16 communities. The [Green Stops](#) included nature walks, talks, and clean-ups, organized by local citizens and community groups to educate, empower and engage community members.
- Albertans continued to adopt One Simple Act practices: saving energy, reducing waste and conserving water. As part of its conservation efforts, the program is now delivered exclusively through the Internet. Success stories from actions at home, at work, in communities and at schools can be found at [One Simple Act](#).
- In 2010-2011, the [Working Well](#) program held 27 workshops reaching 683 well owners in over 20 municipalities across Alberta. Since 2008 the Working Well program has held 75 workshops and has reached over 2,500 well owners. Since attending these workshops, 28 per cent of participants have taken steps to have old wells plugged and 72 per cent of participants have inspected or looked at their well.
- Alberta Environment published a [Water Measurement Guidebook](#) to assist unmetered licence holders to more accurately measure their water diversions (*Water for Life*, Action 3.3). While water meters are a preferred method of measuring water diversion because of their accuracy, the unmetered methods outlined in the guidebook help licence holders improve the consistency and accuracy of their measurement. Accurate water information can be used to establish baseline numbers against which improvements in conservation, efficiency, and productivity can be measured.
- The Facts About Water book was updated and released for use by teachers, students and the general public (*Water for Life*, Action 4.1). It is available online through Alberta Environment's [Information Centre](#).

## Bow River Basin Council goal: “one of the best managed watersheds in the world”

The Bow River Basin, spanning the Rocky Mountains through Calgary to the Eastern Irrigation District by Brooks, supplies water to over one million people. It is an area with limited water and unprecedented growth, making supplying water a major environmental challenge.

For many years, the Bow River Basin Council has worked with the province and other key decision-makers to protect this resource (it was formally recognized as the watershed planning and advisory council for the Bow River Basin in 2004). The Council is made up of organizations and individuals who share a common belief that the water resources within the basin represent their lifeline.

The challenge the Council faces is daunting, but is surpassed by its own ambitions. Its goal is to participate in or promote activities that will help the Bow River Basin achieve the best water quality of any highly populated river basin in Canada. The Council wants to establish the Bow River Basin as one of the best managed watersheds in the world.

Rob Wolfe, Council board member and environmental planner with Alberta Environment, is proud of the progress the Council has made toward these goals, specifically in developing:

- The Bow River Basin Watershed Management Plan. The completed first phase focuses on water quality and phase two focuses on land use, headwaters, wetlands and the land bordering water bodies.
- A [State of the Watershed tool](#) which gives website visitors a current environmental assessment of the Bow River Basin.

“The State of the Watershed tool completes the performance management loop. The indicators of quality are evaluated with a good, fair or poor rating,” Wolfe says, “and as phase two of the plan is finalized, we will have transformed all the pieces into a true performance management system.”

The Council is one of 11 [watershed planning and advisory councils](#). Others in southern Alberta, including the Milk River Watershed Council, the Oldman Watershed Council and the Southeast Alberta Watershed Alliance are following similar planning processes.

Wolfe notes that some of the Council’s work was ahead of its time. “The collaboration amongst members to come up with water quality objectives that were environmentally sound, but also considered social and economic realities, was amazing. This work was completed and implemented before regional planning, with its focus on cumulative effects, had even started.”

*In 2010, the Alberta Emerald Foundation presented the **Bow River Basin Council** the community group award for implementation of its watershed management plan. It also received an award from the Alberta Stewardship Network for best supporting agency.*

***Innovative Pipeline Strategies**, a component of Alberta Environment’s Partners in Resource Excellence Program, also won an Emerald Award in 2010 for excellence in integrated land management, considerably reducing the environmental footprint of pipeline companies’ construction practices. This undertaking is another excellent example of collaboration between stakeholders towards a common purpose. This program was described on page 41 of the [Alberta Environment Annual Report 2009-10](#).*



## Goal 2 Performance Measures

### 2a. *Municipal Solid Waste to Landfills*

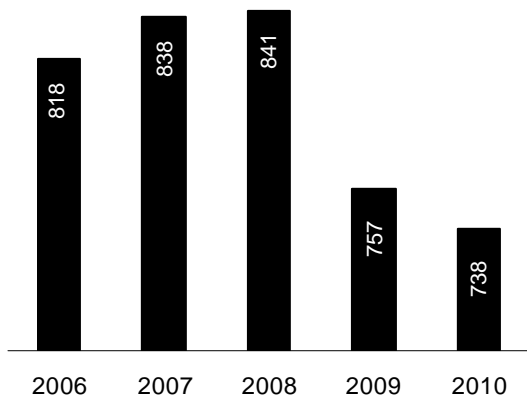
The amount of municipal solid waste sent to landfills indicates Alberta's progress toward reducing the annual amount of municipal solid waste disposed of in landfills as measured in kilograms of waste per capita per year.

#### Target

- 800 kilograms per capita

**Figure 1**

Municipal Solid Waste to Landfills  
(kilograms per capita)



#### Results Analysis

Municipal solid waste disposed of in landfills decreased from 757 kilograms per capita in 2009 to 738 kilograms per capita in 2010 exceeding the target. A number of factors can influence this measure including government or private sector waste reduction initiatives and the overall state of Alberta's economy. Several municipalities implemented new residential recycling programs which may have resulted in a decrease in residential waste sent to landfills. Innovative approaches will be necessary in the coming years to continue reducing the amount of waste disposed in Alberta landfills.

## 2b. Personal Engagement Indicator

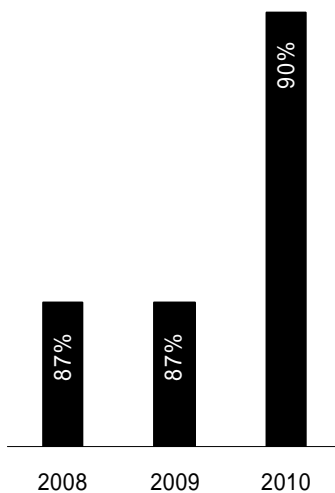
Personal Engagement Indicator measures the percentage of Albertans that describe themselves as actively engaged in energy, waste or water conservation.

### Target

- Energy Conservation: 88 per cent
- Waste Conservation: 90 per cent
- Water Conservation: 86 per cent

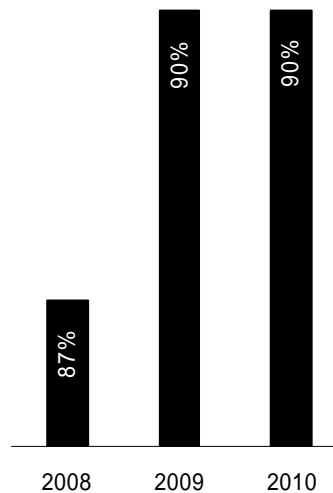
**Figure 2**

Energy Conservation  
(percentage of Albertans  
that describe themselves  
as actively engaged)



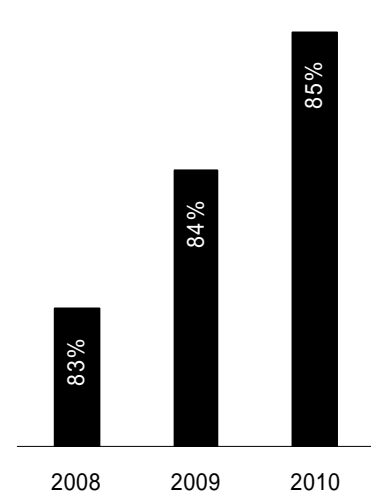
**Figure 3**

Waste Conservation  
(percentage of Albertans  
that describe themselves  
as actively engaged)



**Figure 4**

Water Conservation  
(percentage of Albertans  
that describe themselves  
as actively engaged)



### Results Analysis

In 2010, there was an overall increase in the percentage of Albertans describing themselves as actively engaged in energy and water conservation. The percentage of Albertans describing themselves as actively engaged in energy conservation is 90 per cent. This exceeds the target of 88 per cent, and may reflect the three year Energy Efficiency Rebate program launched in 2009. The percentage of Albertans describing themselves as actively engaged in waste conservation is 90 per cent, which remains the same as 2009. The 85 per cent of Albertans that described themselves as actively engaged in water conservation exceeds the 84 per cent level achieved in 2009.

## GOAL 3 Linked to Core Business 2 - Assuring a Healthy Environment

### **The ministry has effective policies, regulatory and non-regulatory tools to manage cumulative effects on the environment**

*“Diverse traditional and innovative management tools are required as Alberta Environment manages the cumulative effects of development over a variety of ecosystems with rapidly changing environmental challenges.”*

*Alberta Environment Business Plan 2010-13*

---

#### **Leading the way**

The ministry made significant progress over the past year by increasing the effectiveness of tools used in the cumulative effects process:

- Between August and November, the ministry held 39 sessions with stakeholders to discuss the development of new tools and approaches to manage cumulative impacts at multiple spatial and temporal scales, including management frameworks, cumulative effects directives and performance-based approaches. A range of stakeholders participated including municipal associations, environmental groups, the industrial sector and partner organizations like the Clean Air Strategic Alliance and Air Shed Zones. The ministry is reviewing its legislation to determine if changes are needed to implement new tools and approaches.
- The ministry began developing an outcomes-based authorization for industry. As part of this approach, applicants must submit information about the environmental impact of their industrial activity and demonstrate their ability to contribute to established outcomes. In addition, applicants must prepare a continuous improvement plan outlining how over time they intend to optimize their performance and further reduce their impact. The department has begun prototyping this approach within the industrial sector.
- The Enhanced Approval Process was developed in September 2010 with the Canadian Association of Petroleum Producers. It covers four disposition types: mineral surface lease, licence of operation, pipeline agreement and pipeline installation lease. This approval process features up-front planning tools to identify landscape sensitivities; standards, conditions, guidelines and pre-application information; reduced application processing timelines; and a focus on compliance assurance instead of upfront field review.
- Twelve independent experts have been chosen to help create a world-class environmental monitoring system for Alberta, beginning with the oil sands area. Recommendations will be provided for the establishment of a first-rate environmental monitoring system for air, land, water and biodiversity in northeastern Alberta - and how such a system can expand throughout the province. The Provincial Environmental Monitoring Panel will report back to the Minister of Environment by June 2011.
- An Environmental Performance Management approach was implemented to collect monitoring and reporting information. A pilot project was used to begin to understand how to use performance metrics to not only collect information but to also inform management actions needed to address environmental effects.

- An oil sands information portal is being developed to provide information to the public on the oil sands, including environmental monitoring, reclamation activities, and information related to air, climate change, water, land and biodiversity. The portal will be launched in summer 2011. It will ensure ready access to information - at home and globally - about activities underway to develop the oil sands in an environmentally sustainable manner. The Provincial Environmental Monitoring Panel will also make recommendations on how data should be handled and shared with the public.
- In conjunction with the Institute of Agriculture, Forestry and the Environment, the ministry started developing a policy framework for ecosystem service markets.
- The [Environmental Site Assessment Repository](#) (ESAR) added 126,780 documents online for free public access.
- A review of practices outside of Alberta indicates that regional strategic assessment holds great promise within a system of cumulative effects management. The ministry has begun a review of the current environmental assessment process to improve its efficiency and effectiveness, and Alberta is working to adopt these principles and approaches in regional planning.
- The Regulatory Alignment Project identified numerous specific ways to improve the current oil and gas regulatory system without compromising regulatory oversight. Several of these recommendations have been implemented:
  - a single pre-disturbance assessment is now required for an oil sands project, rather than an additional assessment for every new road, pipeline or facility. Alberta Environment now provides clear guidelines and rules for operators, and follows up with random audits.
  - the *Environmental Protection and Enhancement Act* approval template was updated.
  - a new Energy Resources Conservation Board directive that describes the regulatory process for proposed modifications to commercial in situ oil sands projects was released.
  - an [Upstream Oil and Gas Authorizations and Consultation Guide](#) was developed to provide industry with a central reference tool that clearly lays out Alberta's requirements for the development of upstream oil and gas.
- Regulatory enhancements were made to reinforce timelines and certainty of remediation, abandonment, and reclamation of upstream oil and gas wells and well sites.
- New administrative procedures were introduced to increase coordination and sharing of information between the Energy Resources Conservation Board and Alberta Sustainable Resource Development for First Nations consultations.
- The approval process for in-situ oil sands development was streamlined.
- Led by a Task Force of Parliamentary Assistants, Alberta Environment also worked in concert with Alberta Energy, Alberta Sustainable Resource Development and the Energy Resources Conservation Board and stakeholders to develop system-wide changes that would improve the overall system of upstream oil and gas regulation while maintaining Alberta's strong commitment to environmental management, public safety and responsible resource development. In January 2011, the Minister of Energy accepted the [report of the Regulatory Enhancement Task Force](#). The Task report made six recommendations, and work is underway to implement those recommendations.

**Other 2010-11 accomplishments under Goal 3 include:**

- *Alberta's Specified Gas Emitters Regulation Program* accomplished the following:
  - In 2010, a reduction of 6.5 million tonnes of greenhouse gas emissions in Alberta was achieved from large facilities under the province's mandatory reduction program and over \$70 million was contributed into the [Climate Change and Emissions Management Fund](#). When added to previous results, greenhouse gas reductions now total 23.8 million tonnes and \$257 million have been invested in the Climate Change and Emissions Management Fund.
  - Alberta has allocated \$57 million in support of clean energy research, including \$25 million to a research partnership between the University of Alberta and the Helmholtz Association of German Research Centres, \$25 million to Carbon Management Canada and a research network of energy, environmental and social science researchers from 21 Canadian universities that will develop technology and insights to reduce carbon emissions in Canada's fossil fuel energy sector.
  
- Alberta continued to lead the nation in investment for clean energy. The Climate Change and Emission Management Corporation funded the following projects in support of energy efficiency:
  - Evergreen Energy Technologies (\$250,000) for Power Pod, a reliable power system for remote locations;
  - Ruben May Technologies, linked to 3M Canada, (\$569,704) for a thermally driven refrigeration system employing a binary fluid injector;
  - Genalta Power (\$1.84 million) for waste energy to power a Genalta Power amine facility;
  - Great Northern Power (\$1.57 million) for conversion of waste heat from reciprocating engines into electricity, using an expander system;
  - Nova Chemicals (\$700,000) for reduction of the energy footprint in ethylene manufacturing;
  - Suncor Energy (\$790,905) for a roadmap for energy efficiency and Alberta oil sands (fixed) greenhouse gas mitigation;
  - NRGreen Power Limited (\$7 million) for the Whitecourt Energy Efficiency Project to use industrial waste to generate electricity;
  - ConocoPhillips (\$7 million) for installation of new energy efficient technologies at approximately 400 of their facilities;
  - Weyerhaeuser Company Limited - Grande Prairie Evaporator Project (\$5 million) to significantly reduce greenhouse gas emissions at its Grande Prairie pulp mill generating 23 megawatts of green power for export to the Alberta Power Grid;
  - Cenovus Energy (\$3.6 million) to install air/fuel ratio controllers and vent capture systems at 37 gas compression facilities in Alberta. Combined, the technologies are expected to reduce carbon dioxide equivalent emissions by approximately 61,000 tonnes each year, and
  - Quantiam Technologies Inc. (\$2.225 million) to advance and test technology aimed at reducing emissions and improving efficiency in the manufacture of olefins using ethane feedstock.
  
- The Climate Change and Emissions Management Corporation also funded projects to reduce greenhouse gas emissions:
  - invested \$4.8 million in carbon capture and storage research and demonstration projects:
    - HTC Purenergy Inc. (\$315,000) for its Carbon Dioxide Capture Feed Study for the Devon Jackfish Steam Assisted Gravity Drainage Facility;
    - General Electric (\$2 million) for its ceramic membrane-based technology for hydrogen sulphide production with carbon capture and sequestration, and
    - Suncor Energy Inc. (\$2.5 million) for Once-Through Steam Generators Oxy-Fuel Demonstration project.
  - issued a third call for proposals in September 2010 with 13 applicants being invited to submit full project proposals. Approval for this group of projects is expected by June 2011.

- The Government of Alberta invested in projects that helped reduce greenhouse gas emissions or improve air quality, with its portion of the federal ecoTrust fund:
  - invested \$3 million in the Medicine Hat Concentrating Solar Thermal Energy Demonstration Project, the first in Canada to add a solar-powered steam generation system to an existing power plant.
  - invested \$1 million into the CO<sub>2</sub> Slurry Pipeline Project. The pipeline would transport sulphur, petroleum coke and limestone from the Fort McMurray area to local and international markets. After having served its purpose as a slurry agent, the carbon dioxide would be stored underground in a manner similar to carbon capture and storage projects. The funding will demonstrate proof of concept and technical viability.
  
- The ministry continued to implement the *Water for Life* strategy:
  - With the help of several Alberta Environment staff, the Oldman Watershed Council completed its State of the Watershed Report , and the South East Alberta Watershed Alliance completed a web-based State of the Watershed reporting tool, all in support of watershed management planning and the cumulative effects management system.
  - The province completed conservation, efficiency, and productivity plans for the irrigation and municipal sectors. It also established the Athabasca and Peace Watershed Planning and Advisory Councils. The Oldman Watershed Council completed its State of the Watershed report, which is a key component of the Alberta Integrated Watershed Management Plan now under development.
  - The [Bow Habitat Station](#) in Calgary was refurbished and reopened as a centre of excellence for aquatic ecosystem learning.
  - The ministry continued development of the [Alberta Wetland Policy](#) through preliminary stakeholder engagement. As well, it continued to enhance the wetland inventory, and it completed a base layer for the provincial wetland map.
  - Alberta Environment, partnering with Alberta Geological Survey, performed a second airborne geophysical survey for the [Provincial Groundwater Program](#). The fly-over area comprised over 18,000 square kilometres from Calgary and Drumheller to Fort Macleod and Vauxhall. The previous survey in 2008 mapped the Edmonton-Calgary corridor.
  - A protocol for watershed management planning in Alberta is being developed. It will incorporate recommendations from the Alberta Water Council and elements of the cumulative effects management system, which supports the key direction of Partnerships in *Water for Life*.
  - Alberta has evaluated options for improved access to water between the province and Montana, with input from the Milk River Watershed Council Canada, and final recommendations are being negotiated.
  - Alberta, together with British Columbia, Northwest Territories and Saskatchewan, completed a guidance document, agreed to a work plan, and hired a consultant to manage the negotiation process to establish bilateral agreements between the four jurisdictions.
  
- At the request of the Government of Alberta, the Clean Air Strategic Alliance provided recommendations for a renewed Clean Air Strategy to address future challenges. A cross-government team is reviewing the recommendations and developing a renewed strategy and action plan.
  - The ministry continued to play a leadership role in the development of the new national air quality management system:
    - The Canadian Council of Ministers of the Environment agreed to move forward with a new, collaborative air quality management system for Canada. The major elements of the system will be developed in 2011 with implementation of the system beginning in 2013.

- This includes agreement on:
  - the first Canadian Ambient Air Quality Standards, starting with particulate matter and ozone;
  - Base-Level Industrial Emission Requirements (BLIERS); delineation of regional air sheds and provincially managed air zones;
  - regulatory assurance for the BLIERS, and
  - the requirements for a related monitoring and reporting system.
- The ministry assessed the urban air monitoring stations that will be reporting the proposed Air Quality Health Index. Results indicate the current network responds well to the variation of pollutant concentrations involved.
- The ministry continued to implement the *Too Good to Waste strategy* by reviewing all related regulations, and any amendments will be consider in conjunctions with the regulatory review.

## Environmental monitoring: creating a credible, robust, world-class system

A panel of experts is helping to create a world-class environmental monitoring system for Alberta. The system needs to be adaptable and able to respond quickly to change, while anticipating and monitoring areas where future cumulative environmental impacts may occur.

The panel is made up of scientists, academics, health experts, economists, business representatives and others. It will make recommendations for monitoring all areas of the environment – air, land, water and bio-diversity – in northeast Alberta. It will then expand its recommendations to the rest of the province.

Alberta Environment recognizes the enormity of the panel's task. The experts are looking for ways to transform our monitoring system – its quality, credibility, coordination, recording and reporting. To do so, they must consider a number of questions: How do we ensure absolute scientific credibility? What kind of relationships do we need? What will make our system world class? The task is difficult, but incredibly important.

The panel began deliberations in early 2011 and will consult with stakeholder and Aboriginal groups, as well as the general public, as it moves forward. It will focus on three areas in designing the monitoring system:

- **governance**, including funding, assurance and operating responsibilities;
- **information**, including system data and reporting, and
- **science**, including evaluation of results, certification, accreditation and credibility.

Fortunately, the panel is not starting its work from scratch. Alberta Environment had begun work on a new monitoring system in 2009 with the development of an Integrated Monitoring, Evaluation and Reporting Framework. The panel will review this material, as well as the findings of the federal oil sands advisory panel, the recommendations of the joint government team which examined surface water quality monitoring, and the report of the water data review committee.

The panel will report to Minister Renner in June 2011.

*Alberta Environment also assembled a committee of independent scientists to examine water monitoring data collected from Alberta's oil sands region – from both government and academic research findings. The committee submitted its report to the Minister in March 2011. Its findings will be used by the environmental monitoring panel.*



### Goal 3 Performance Measures

#### 3a. River Water Quality Index

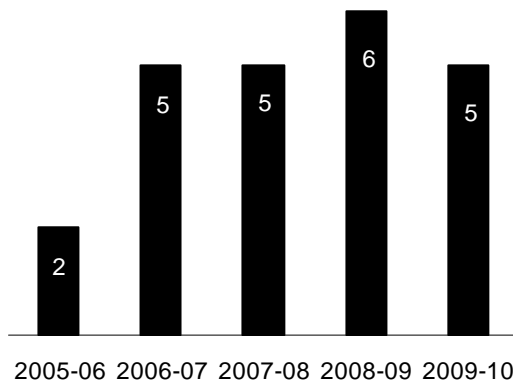
The River Water Quality Index measures the water quality of six major Alberta rivers at key sites, based on data on four groups of variables (metals, bacteria, nutrients and pesticides), which are combined to provide an indication of overall water quality.

#### Target

- Six out of six rivers systems have 'good' to 'excellent' water quality

#### Figure 5

River Water Quality Index  
(good to excellent water quality)



#### Results Analysis

In 2009-2010, five out of six river systems assessed as part of the Alberta River Water Quality Index demonstrated 'good' to 'excellent' water quality. This is slightly below the target. Various natural and human factors, including flow volume, degree of development in the basin, point source effluent discharges, and non-point source runoff (e.g., from agricultural fields), can influence the River Water Quality Index. In 2009-10, summer flow volume in the Oldman River peaked on several occasions. The occurrence of episodic rainfall events likely contributed non-point source runoff to the river. Such events could have led to an increase in the number and magnitude of water quality guideline exceedances, resulting in a lower River Water Quality Index rating downstream of Lethbridge.

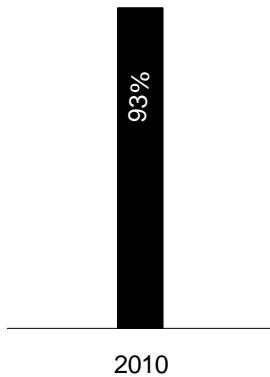
The Alberta River Water Quality Index examines a very broad range of water quality parameters, many of which tend to fluctuate over time. Hence, a small level of inter-annual variability in index ratings is expected and typically observed.

### 3b. Air Quality Index<sup>1</sup>

The Air Quality Index measures the quality of Alberta's air based on five major pollutants: carbon monoxide, nitrogen dioxide, ozone, sulphur dioxide and fine particulate matter – PM<sub>2.5</sub>.

**Figure 6**

Air Quality Index  
(percentage of good days)



#### Results Analysis

In 2010, Alberta had 'good' air quality days 93 per cent of the time. The results reflect an increased frequency of wintertime smog caused by stagnant weather conditions in January, February and December and substantial forest fire smoke that persisted in several locations in Alberta during August. The results also reflect the new monitoring technology implemented at eight air monitoring stations across Alberta which better accounts for total PM<sub>2.5</sub> concentration. This initiative is part of the National Air Pollution Surveillance Program being implemented across Canada. Air quality is influenced by a number of factors including vehicle emissions, weather patterns, wildfires and intensity of industrial development.

Note 1: The methodology has been enhanced (new monitoring instrumentation which better accounts for PM<sub>2.5</sub> concentration), therefore results are no longer comparable to the target or historical data.

### 3c. Total Greenhouse Gas Emissions

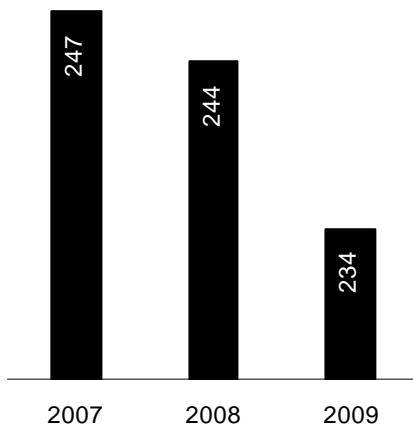
This performance measure tracks the success in meeting the greenhouse gas emissions growth targets measured in million tonnes of CO<sub>2</sub>e, as outlined in [Alberta's 2008 Climate Change Strategy](#).

#### Target

- 241 million tonnes

**Figure 7**

Total Greenhouse Gas Emissions  
(million tonnes)



#### Results Analysis

The results for 2009 reflect lower overall emissions than previous periods. This is largely due to the economic slowdown experienced across many industrial sectors in the province. Key factors contributing to the more recent decrease in emissions include a slowdown in oil and gas activity and a reduction in the contribution of coal to provincial power generation.

## GOAL 4 Linked to Core Business 2 – Assuring a Healthy Environment

### **The ministry has effective risk management processes, preparation and responses to events and emerging issues.**

*“The ministry and its partners need to be aware of and manage environmental risks and opportunities. To do this, the ministry advises other ministries across the Government of Alberta, municipalities and Albertans about emerging environmental issues and related threats to environmental and public health and safety. To respond to these issues, the ministry works with partners to update or develop new policies and programs. In addition, Alberta Environment works with the Alberta Emergency Management Agency to prepare for and respond to environmental incidents.”*

*Alberta Environment Business Plan 2010-13*

---

### **New risk management policy**

This past year, the Integrated Risk Management Team presented a new risk management policy to Alberta Environment. It changes the way the ministry does business by using structured risk management as a tool to help prioritize and make decisions. Its consistent and integrated approach to risk management allows information from one area to be used in another. It empowers staff at all levels to make decisions with confidence, knowing that they have considered all the risks in accordance with ministry policy. The Integrated Risk Management team has held workshops with staff to test and apply the new approach.

#### **Other 2010-11 accomplishments under Goal 4 include:**

- The Governments of Alberta and British Columbia are investing in the BlueSky Western Smoke Forecasting System. The system gives residents of the two provinces up to 48 hours notice of smoke from forest fires. It combines forest fire information with weather forecasts and air quality dispersion computer models. During forest fire season, the forecasts are produced daily and shown as hour-by-hour animations of the locations and concentrations of smoke plumes available at: <http://environment.alberta.ca/03117.html>.
- Alberta Environment continues to lead a government-wide climate change risk assessment project that will inform a broader provincial adaptation strategy (to be developed by December 2011).
- The ministry is developing an emergency air monitoring and assessment system to quantify the extent of contaminants from unplanned emergency air releases in the oil sands. It will allow first responders, municipal officials and government staff to make timely decisions in the interest of public safety. The ministry completed phase 1 (design feasibility) and phase 2 (prototype, detail design and options) this year. Phase 3 (implementation) is scheduled for 2011-12.

The ministry is completing the Comprehensive Contaminant Load Study, an investigation of water quality, quantity, air quality, emissions, deposition, soil accumulation and water use in the oil sands. This study is intended to:

- complement existing assurance and compliance monitoring in the oil sands region as required by law under *Environmental Protection and Enhancement Act* approvals;
- build on previous provincial and federal reports to assist in understanding the implications of contaminants to the ecosystem, and
- act as a template to support the world-class monitoring system being developed by the ministry and the federal government.

The study completed the naphthenic acid quantification paper, the mine water-use models and report, and the groundwater discharge and seepage report. The current focus is on completion of the sediment core program and a synthesis of water quality data.

## Rains test risk management system

The spring rains of 2010 severely tested Alberta's flood management strategies in the southern part of the province.

High waters caused properties near rivers and creeks to flood. The Trans-Canada Highway near Medicine Hat was closed for a week.

Southeast of Lethbridge, water was draining off the north ridge of the Milk River into a reservoir 14 kilometres long. Terrence Lazarus, Manager of Water Operations in the Oldman Basin, watched closely as reservoir levels rose. Lazarus is responsible for water infrastructure in that part of the province – dams, canals, weirs, reservoirs and more.

"The Milk River Ridge Reservoir is an earth dam reservoir," Lazarus explains. "Earth dams are susceptible to failure if the water overtops the dam. To prevent this, operators must be vigilant and ensure that the reservoir level does not exceed the top of the dam. Plans are in place to fill the reservoir to a maximum which is below the top of the dam. Managed water levels are established to allow filling of this reservoir with a reasonable management of risk. There are also emergency plans to prevent overtopping."

On June 22, reservoir levels peaked at the highest level ever, and then they started to drop. This was a victory for the government's risk management system, says Lazarus. "Early on we were ready to anticipate and manage the risk."

Lazarus' team was already meeting with stakeholders to determine water needs, well before the spring rains. As the weather progressed, weekly meetings turned into daily discussions. The focus changed from that of maximizing water storage in the reservoir to drawing off as much water as possible.

"Usually the question is: how much water do you want?" says Lazarus. "This year it was: how much can you take?"

In addition to monitoring water levels and consulting daily with stakeholders, Lazarus' team communicated operational decisions to local authorities to safely manage flood events. By working together, staff and stakeholders were able to manage water levels and preserve vital infrastructure.

Lazarus says that the pattern of the 2010 storms provides a good forecast of what's to come, so the team will be even more prepared this year. "We are looking at how to manage the Milk River Ridge Reservoir differently, keeping water in upper regions and not moving it down until later in the season."

As well, the ministry allocated \$200,000 for new flood hazard mapping studies (first done in the early 1990s) starting in the Cypress Hills area. Over the next two years \$1.5 million will be allocated to expand the studies to other communities throughout the province. These studies will help to further predict flood-prone areas and ensure public safety.

## Goal 4 Performance Measures

### 4a. Environmental Emergencies Response Indicator

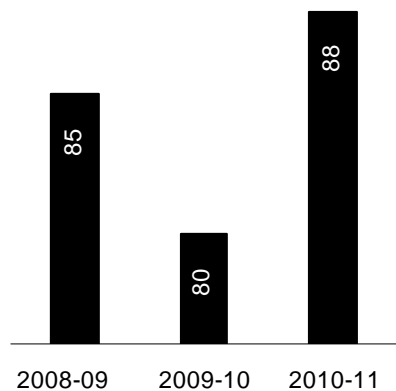
The performance measure tracks the time from when Alberta Environment Support and Emergency Response Team (ASERT) receives information of an environmental emergency incident to when the ASERT Duty Officer requests a regional responder to deploy. Minimization of response time can reduce the extent of environmental damage by ensuring the responsible party is doing all that is necessary to mitigate the issues as soon as possible.

#### Target

- 90 per cent responded to within 50 minutes

#### Figure 7

Environmental Emergencies Response Indicator  
(percentage of environmental emergency incidents responded to within 50 minutes)



#### Results Analysis

For the 2010-11 fiscal year, 88 per cent of the environmental emergencies were responded to within 50 minutes, which exceeded last year by eight per cent. This improvement may be attributed to the implementation of the ASERT Incident Management Standard Operating Procedure and better communication and understanding of response requirements amongst regional responders.

GOAL 5 **Linked to Core Business 3 – Leading and Supporting the Development and Maintenance of Environmental Infrastructure**

**Environmental infrastructure is developed and maintained to meet the Government of Alberta agreed upon outcomes**

*“Albertans depend on a variety of environmental infrastructure to support their quality of life. Environmental infrastructure includes the facilities, equipment and associated monitoring and management systems required for the protection and wise use of water, land, air and ecosystems, the management of waste and environmental hazards management. Some environmental infrastructure systems, such as drinking water, are critical to public health and safety. Other systems such as water management infrastructure (i.e. dams, canals, weirs, diversions, drains) have important economic significance and are critical to the achievement of Water for Life: Alberta’s Strategy for Sustainability objectives.”*

*Alberta Environment Business Plan 2010-13*

---

**Supporting our environment and our economy**

Alberta Environment is responsible for developing and maintaining a variety of environmental infrastructure, both on its own and through its partners. This environmental infrastructure is important to our environment, to public health and to our safety. It can also have economic significance, such as the infrastructure supported by the ministry’s water operations group.

This year, a Premier’s Award of Excellence went to Alberta Environment staff who managed the rehabilitation of the Carseland-Bow River Main Canal and McGregor Dam. This complex water delivery and storage system comprises a 65-kilometre main canal and a 40-kilometre reservoir. It provides irrigation to 236,850 acres of farmland and water for industry, recreation, wildlife and towns within the Bow River Irrigation District. The \$150 million project began in 1992, and was completed in the summer of 2009.

The story at the end of this section, “Sorting out our water supply and consumption,” is an example of how the ministry is transforming the way it does business. Using information technology to understand water licences under the *Water Act* and approvals under the *Environmental Protection and Enhancement Act*, the ministry is now able to better link water supply to consumption and help municipalities plan their water needs.

**Other 2010-11 accomplishments under Goal 5 include:**

- In June 2010, the Environmental Management System, used by 75 per cent of Alberta Environment staff, was upgraded to a web application to improve its reliability in connection with new computing products.
- Data used by the Water Information System was expanded to now include groundwater.
- The *Water Act* Temporary Diversion License Electronic Review System pilot project successfully demonstrated the feasibility of applying internet technology to automate the reviewing and issuing of licences under the *Water Act*. This establishes the foundation for future business efficiencies within the ministry while maintaining environmental outcomes.

- The Enterprise Data Strategy will use an enterprise-wide data warehouse to store and link information from diverse sources. It will support both everyday tactical decision-making and long-term business strategizing.
- The Bow Habitat Station was redeveloped in partnership with Alberta Sustainable Resource Development (*Water for Life*, Action 2.4).



## Sorting out water supply and consumption

Adjacent to a coulee, water sprays from pipes over an expanse of green. While a scene of serenity to many, ministry hydrologists Anil Gupta and Werner Herrera and drinking water operations specialist Aaron Janzen see things differently. To them, every wet drop is part of an administrative tangle they've spent the past two years sorting out.

Their challenge has been to determine precisely how much water municipalities are using from the South Saskatchewan River Basin, and for what purposes.

The question is an important one. Given the development of regional water pipelines, communities are increasingly linked.

Herrera gives the following example: "The City of Lethbridge has three licences to divert and treat surface water from the Oldman River so it can supply water to its residents. At the same time, the City supplies treated water to other municipalities which have one or more licences of their own. As a result, it can be very difficult to know precisely how much water per capita each municipality is using, especially in small towns and cities."

"If there is a shortage of drinking water, it is crucial to know who else on the line will be affected and how much water will be required to supply the whole integrated system," adds Janzen.

Gupta, Herrera and Janzen stepped in to sort out supply and consumption, and calculate per capita net use. They designed a database to store critical data and establish links between the information. In doing so, the team created a database that can be used throughout the province.

Along the way, they noted that every municipality had its own process for reporting water-related information. The team took things a step further. They created a web-based application that can be installed on municipal computers to ensure all municipalities record water information the same way. There is also a live link between the application and the database which is stored on a web server.

Gupta says, "the beauty of the program is that it tells the municipality how much water it has left in its water licences and what the priority is of those licences. As well, municipalities can run their own scenarios of growth, conservation and efficiency to determine how much water they will need 20, 30 or 50 years into the future." A pilot project is in the works for this phase to support however the regions might choose to transform themselves in the future.

*In Alberta, water is allocated for a variety of uses including drinking, irrigation, and industrial use. This water comes from rivers, lakes, reservoirs and the ground. Water allocations are managed through a system of [water licences](#) issued by Alberta Environment under the [Water Act](#).*

*Municipalities, private companies, individuals and others can apply for a water licence.*

*Approvals for water and wastewater plants are issued under the [Environmental Protection and Enhancement Act](#). Water returns from wastewater plants are also accounted for in the new database.*

## **Goal 5 Performance Measures**

### **5a. *Effective Water Management Infrastructure***

Effective Water Management Infrastructure (EWMI) includes physical assets such as dams, canals and control structures. It measures the three aspects of provincially-owned and operated water management infrastructure as required by the government's Capital Planning Initiative. Reporting of various levels of infrastructure performance for each measure in EWMI is based on the percentage of the replacement value of the infrastructure being assessed.

Quality infrastructure is a key factor in ensuring a clean and safe environment and is an essential building block to support economic development.

#### **Physical Condition**

This is an assessment of the state of physical fitness or readiness for use, based on established standards for the type of infrastructure asset. The physical condition is a critical factor involved in the decision to maintain, rehabilitate or replace the infrastructure.

#### **Functional Adequacy**

The assessment of whether the asset is able to meet program requirements or provide an adequate level of service demonstrates functional adequacy. While the asset may be in good physical condition with sufficient available capacity to meet demand, poor physical layout, inefficient design or inability to meet code requirements can make it functionally inadequate.

#### **Utilization**

This is an assessment of the ability of an asset to carry out its intended function based on current standards or practices, independent of physical condition. Significant over-utilization or under-utilization may indicate the need to construct, reconstruct, rehabilitate, dispose or re-evaluate the need for the asset.

### **Target**

- Physical Condition: Good – 93.0 per cent, Fair – 7.0 per cent, Poor – 0.0 per cent
- Functional Adequacy: 95.0 per cent
- Utilization: 99.0 per cent

**Table 2**

## Effective Water Management Infrastructure

Physical Condition	2006-07	2007-08	2008-09	2009-10	2010-11
Good	97.0%	96.5%	94.9%	94.2%	-
Fair	2.9%	3.4%	4.8%	4.7%	-
Poor	0.1%	0.1%	0.3%	1.1%	-
Functional Adequacy	2006-07	2007-08	2008-09	2009-10	2010-11
Adequate	95.1%	95.1%	94.5%	93.7%	-
Inadequate	4.9%	4.9%	5.5%	6.3%	-
Utilization	2006-07	2007-08	2008-09	2009-10	2010-11
Good	99.8%	99.8%	99.5%	99.2%	-
Fair	0.2%	0.2%	0.2%	0.2%	-
Poor	0.0%	0.0%	0.3%	0.6%	-

**Results Analysis**

The Effective Water Management Infrastructure 2009-10 results is the final year of reporting using the current methodology. A new performance measure to replace Effective Water Management Infrastructure is currently under development.

**5b. Drinking Water Safety Indicator**

The Drinking Water Safety Indicator measures the ability of regulated facilities to provide safe drinking water to Albertans. This indicator measures the success of Alberta's drinking water program, ensuring Albertans will continue to enjoy safe drinking water. The indicator is comprised of three sub-measures that measure the performance of the program:

**Facility Design Standards**

The percentage of facilities meeting the newer (1997 or 2006) standards, as applicable.

**Facility Operational Requirements**

The number of incidents where regulatory requirements have not been met and that could lead to water quality incidents.

**Drinking Water Quality Incidents**

The number of incidents involving drinking water not meeting specified quality requirements.

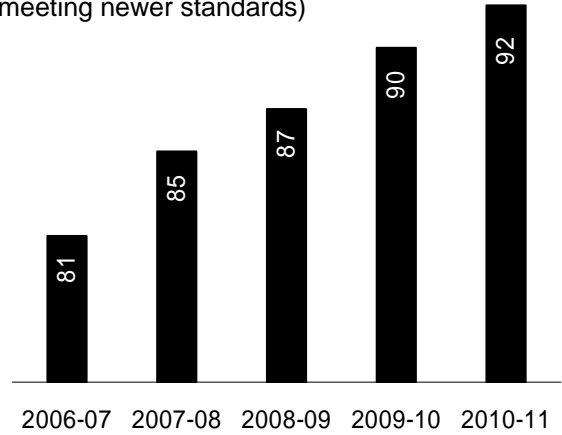
### Targets

- Facility Design Standards: 92 per cent
- Facility Operational Requirements: 19 incidents
- Water Quality: 34 incidents

### Figure 8

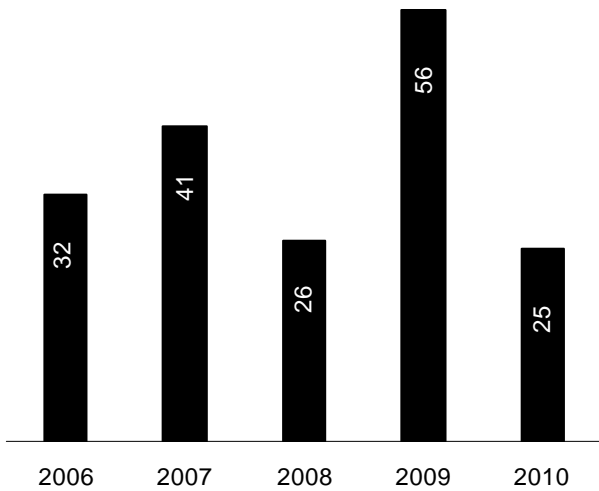
Drinking Water Safety Indicator<sup>1</sup>

Facility Design Standards  
(percentage of facilities meeting newer standards)



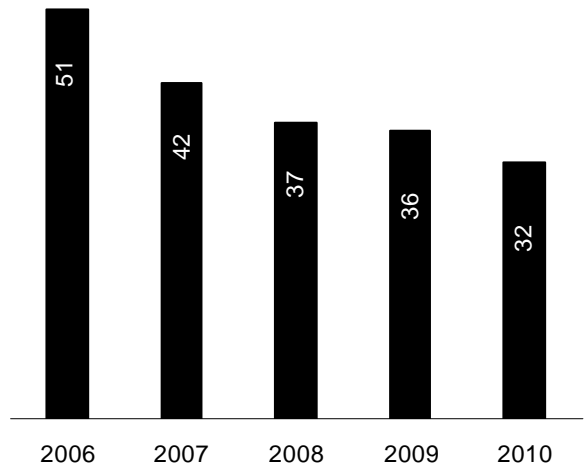
### Figure 9

Facility Operational Requirements  
(number of incidents)



### Figure 10

Drinking Water Quality Incidents  
(number of incidents)



#### Note:

<sup>1</sup> Data does not include waterworks facilities at industrial sites.

## **Results Analysis**

Results show continued improvement in the infrastructure of regulated drinking water facilities. The results also indicate the number of incidents related to not meeting operational requirements returned to lower levels, closer to the target. Program elements such as abatement, education and enforcement continue to address facility operation challenges and the resulting water quality.

### **Facility Design Standards**

In 2010-2011, 92 per cent of regulated systems had treatment technology in place meeting newer facility standards. This is an improvement in water quality technology, at two percent of facilities, over the previous year. The remaining facilities meet an older standard and will require upgrading over time.

### **Facility Operational Requirements**

Compliance with meeting facility operational requirements saw a decrease in the number of incidents in 2010, with 25 incidents in 22 facilities. These results are slightly higher than the acceptable variance from the target of 19 incidents but are still in the range experienced since the measure was created. Various initiatives, such as abatement and compliance education, have been continued to assist facility operators in complying with operational challenges to reduce the number of incidents.

### **Drinking Water Quality Incidents**

In 2010, 32 water quality incidents occurred at 27 facilities. Advisories were issued where necessary, and Alberta Environment staff assisted in addressing the problems. The results were slightly better than the target, which was set at 34. The decrease in the number of incidents is, in part, the result of upgrading facilities to newer standards as well as operators following Facility Operational Requirements. Continuous improvement in upgrading facilities and addressing operational challenges is expected to further reduce these types of incidents in the future.

## Changes to Performance Measures Information

As Alberta Environment continues to implement strategies to improve its role as an environmental manager and steward, performance measures are reviewed for effectiveness in charting the ministry's progress toward its goals. Alberta Environment is committed to developing, monitoring and reporting on the best measures available to reflect whether the ministry is having an effect in improving environmental outcomes.

The following changes made since the 2009-10 Annual Report will ensure the current measures are more appropriate either because they better reflect the ministry's evolving role and goals or because they conform better to standards for business planning and reporting.

- Client satisfaction with information provided through Environment's Information Centre, Environmental Awareness Indicator, Beverage Container Return Rate, Used Oil Recovery Rate, Electronic Recycling, Paint Recycling and Facilities Recognized as EnviroVista Leaders were discontinued.
- Place-based Environmental Management Objectives (Under Development) will be reported in 2012-15.
- Total 2007 Greenhouse Gas Emissions results were updated to 247 million tonnes.
- Air Quality Index methodology has been enhanced and therefore 2010 results is no longer comparable to the target or historical data. The 2010 results reflect the new monitoring technology implemented at eight air monitoring stations across Alberta which better accounts for total PM<sub>2.5</sub> concentrations. This initiative is part of the National Air Pollution Surveillance Program being implemented across Canada.
- Current data is not available for Effective Water Management Infrastructure, as 2009-10 results is the final year of reporting using the current methodology. A new performance measure to replace Effective Water Management Infrastructure is currently under development.

## Performance Measures — Data Sources and Notes

### Performance Measure 1.a Place-based Environmental Management Objectives

Under development

### Performance Measure 2.a Municipal Solid Waste to Landfills

**Source:** Environment

**Note(s):** This measure indicates Alberta's progress towards reducing the amount of municipal solid waste disposed of in municipal landfills, as measured in kilograms of waste per capita. Waste from the residential sector; the industrial, commercial, and institutional sector; and the construction, renovation, and demolition sector collected at municipal landfills is included in this measure.

The calculation is based on the kilograms of municipal solid waste sent to each landfill divided by the population (as reported in most current Municipal Affairs' official provincial populations list) served by each landfill. Approximately 84 per cent of Alberta's population is served by reporting landfills. Estimates are used for the remaining population.

### Performance Measure 2.b Personal Engagement Indicator

**Source:** Ipsos Reid

**Note(s):** An independent consultant conducts an annual telephone survey with a random sample of 800 Albertans aged 18 or older. The margin of error for the total sample of 800 is +/- 3.5 percentage points, 19 times out of 20, had the entire population of Albertans 18 or older been polled according to 2006 Census data.

The Personal Engagement Indicator is calculated by the number of survey respondents who describe themselves as actively engaged in energy, waste or water conservation divided by the total number of survey respondents. Survey respondents who describe themselves as actively engaged in energy, waste or water conservation include both "very active" and "somewhat active" survey responses.

### Performance Measure 3.a River Water Quality Index

**Source:** Environment

**Note(s):** River water quality is based on the Oldman River, Bow River, Red Deer River, North Saskatchewan River, Smoky/Peace Rivers and Athabasca River. Various natural and human factors, including flow volume, degree of development in the basin, point source effluent discharges, and non-point source runoff (e.g., from agricultural fields), can influence the River Water Quality Index. In 2009-10, summer flow volume in the Oldman River peaked on several occasions. This suggests the occurrence of episodic rainfall events which may have contributed non-point source runoff to the river. Such events could have led to an increase in the number and magnitude of water quality guideline exceedances, resulting in a lower River Water Quality Index rating downstream of Lethbridge.

The index reported is based on the measurement of four groups of variables (metals, bacteria, nutrients and pesticides) present in the river water. The measurement is assigned a rating based on the following guidelines: 96-100 Almost always met; Best Quality (Excellent); 81-95 Occasionally exceeded, but usually by small amounts; threat to quality is minimal (Good); 66-80 Sometimes exceeded by moderate amounts;

quality occasionally departs from desirable levels (Fair); 46-65 Often exceeded, sometimes by large amounts; quality is threatened, often departing from desirable levels (Marginal); 0-45 Almost always exceeded by large amounts; quality is significantly impaired and is well below desirable levels; Worst Quality (Poor). Both upstream and downstream monitoring stations must achieve a minimum rating of good for the river to receive an overall score of good to excellent.

### **Performance Measure 3.b Air Quality Index**

**Source:** Environment, Parkland Airshed Management Zone, Calgary Region Airshed Zone and Lakeland Industry and Community Association

**Note(s):** In 2010, the AQI was calculated hourly at eight continuous monitoring stations, three each in Edmonton and Calgary, and one each in Red Deer and Cold Lake. Measurements of at least four of the five pollutants must be available to calculate the AQI, and PM<sub>2.5</sub> must be one of the pollutants. The pollutant that gives the highest AQI measure for each hour determines the AQI for that hour. The hourly AQI number is compared to AQI ranges that represent good (0-25), fair (26-50), poor (51-100), and very poor (>100) air quality. The total number of hours of good, fair, poor and very poor air quality for all locations in the year are divided by the number of days in the year and expressed as a percentage. These categories are derived using formulas based on air quality objectives under the *Environmental Protection and Enhancement Act* and the National Ambient Air Quality Objectives.

In agreement with the National Air Pollution Surveillance Program, Alberta Environment implemented a change in the PM<sub>2.5</sub> monitoring instrumentation (analyzers) in nine monitoring stations where by the sample is dried rather than heated to better account for the total PM<sub>2.5</sub> concentration. Using previous technology, when a sample was heated some chemicals were volatilized (evaporated) and the concentration of PM<sub>2.5</sub> was under predicted. The 2010 results reflect the data collected from the new monitoring technology.

### **Performance Measure 3.c Total Greenhouse Gas Emissions**

**Source:** Environment Canada

**Note(s):** As a signatory to the United Nations Framework Convention on Climate Change (UNFCCC), Canada is obligated to prepare and submit an annual national greenhouse gas (GHG) inventory covering anthropogenic emissions by sources and removals by sinks. Environment Canada is responsible for preparing Canada's official national inventory with input from numerous experts and scientists across Canada. The National Inventory Report (NIR) contains Canada's annual greenhouse gas emission estimates dating back to 1990.

Alberta Environment reports on Alberta's total emissions as reported in the National/Provincial/Territorial Tables. Canada's Inventory can be found here: <http://www.ec.gc.ca/ges-ghg/default.asp?lang=En&n=83A34A7A-1>

### **Performance Measure 4.a Environmental Emergencies Response Indicator**

**Source:** Environment

**Note(s):** The Environmental Emergency Response Indicator is calculated by dividing the number of calls that meet the response timelines (50 minutes) by the total number of calls received in which a Regional Responder is deployed for an environmental emergency. The response timelines are measured as the time that Alberta Environment Support and Emergency Response Team (ASERT) receives the information of an environmental emergency incident to the time that the ASERT Duty Officer notifies the Regional Responder and requests deployment.



### **Performance Measure 5.a Effective Water Management Infrastructure**

**Source:** Environment

**Note(s):** The Effective Water Management Infrastructure (EWMI) measure is an assessment of three aspects of an asset: physical condition, utilization and functional adequacy of provincially owned water management infrastructure. Assets include dams, canals and control structures. Reporting of various levels of infrastructure performance for each measure in EWMI is based on the percentage of the replacement value of the infrastructure being assessed.

The Effective Water Management Infrastructure 2009-10 results is the final year of reporting using the current methodology. A new performance measure to replace Effective Water Management Infrastructure is currently under development.

### **Performance Measure 5.b Drinking Water Safety Indicator**

**Source:** Environment

**Note(s):** This indicator measures the ability of regulated facilities in delivering safe drinking water to Albertans. The indicator is comprised of three sub-measures:

#### Facility Design Standards

The measure is an assessment of an approved drinking water facility's performance requirement against newer Environment standards. In January 2006, new standards were introduced and have been utilized for the facilities to which they apply. The reported results indicate the number of facilities that have been maintained or upgraded to meet newer requirements. Staff members at Environment update these assessments throughout the year and report the results annually. The reported results indicate if continuous improvement and upgrading is occurring at the regulated facilities.

#### Facility Operational Requirements

Approved drinking water facilities operate under conditions of an approval or registration issued under the *Environmental Protection and Enhancement Act*. The Facility Operation Requirements data show incidents where approval conditions have not been met and could lead to water quality concerns. Facilities are required to self-report non-compliance and, in addition, Environment staff annually inspects approved facilities and report the number of non-compliance incidents.

#### Drinking Water Quality Incidents

Regulated drinking water facilities must report on the quality of the treated water against specified limits. Alberta has adopted the health-related limits of the Guidelines for Canadian Drinking Water Quality published by Health Canada as well as establishing treatment performance requirements. This measure reports the number of incidents where a quality parameter exceeded the limits and identifies the total number of these non-compliance incidents on a provincial basis.

## **Continuing our Transformation:**

**Engaging our stakeholders.**

**Aligning our strategies.**

**Supporting our knowledge  
and science.**

## Integrated Results Analysis

In response to economic realities, Alberta Environment found savings without impacting essential business or strategic priorities. Resources were focused on priority areas such as the transition to a cumulative effects management system; climate change and clean energy initiatives; and the *Water for Life* strategy.

The department implemented the cumulative effects management framework in Alberta's Industrial Heartland to enforce environmental thresholds and build collaborative partnerships with stakeholders. The development of three regional plans continue to take place under the Land-use Framework to address the impacts of development on land, air, water and biodiversity, at a regional and provincial level.

In the two years since being introduced in April 2009, the \$36 million three-year provincial energy efficiency rebate program has delivered more than \$26 million to Albertans who invested in environmental upgrades. Consumers took advantage of rebates offered for energy-efficient household improvements such as installing new furnaces and energy-saving washing machines. Albertans who operate restaurants, offices, warehouses, and other businesses took advantage of the commercial lighting retrofit incentive program when energy-efficient lighting was installed in their businesses. Commercial vehicle operators who installed energy-efficient technologies in their vehicles were offered a fuel-efficiency incentive program aimed at reducing 97,000 tonnes of the sector's greenhouse gas emissions.

The Climate Change and Emissions Management Fund reported \$76.1 million in revenue during the 2010-2011 fiscal year and collected \$70.0 million for the 2010 compliance period (based on a calendar year). When added to previous results, \$257 million has been invested in the Climate Change and Emissions Management Fund. The fund provides grant payments to the Climate Change and Emissions Management Corporation, an independent not-for-profit organization. This corporation invests in initiatives and projects that support developing and implementing transformative technologies that reduce greenhouse gas emissions and improve our province's ability to adapt to climate change.

Alberta Environment has focused efforts on the cumulative effects of oil sands development on air, water and land by improving oil sands tailings management, advanced reclamation methods, greenhouse gas reduction technologies, and renewable energy projects.

The ministry's *Water for Life* strategy and water plans continued to move forward via the *Water for Life* action plan, which outlined the policies, goals, and key directions that government was taking to manage the province's water resources.

Alberta Environment is delivering on the ministry's strategic priorities despite fiscal constraints, while ensuring the environmental protection of Alberta's air, land and water.

## **Comparison of 2010-2011 Budget to 2010-2011 Actuals**

The following list provides an explanation of the major program variances:

### **Ministry Support Services**

Program spending was higher than the budgeted amount by \$7 million. This was because funding was reallocated to support Business Application Development aimed at modernizing and integrating department information for: regulatory business support applications; cross-ministry information and knowledge-sharing systems; and departmental business support systems supporting the transition to cumulative effects management.

### **Air and Land Policy**

Program spending in this area was higher than the budget amount by \$3 million because of spending on air quality initiatives, policy development and a reclamation criteria review.

### **Climate Change**

Program spending was lower than the budget amount by \$28 million primarily because of the deferral of initiatives under Canada ecoTrust for Clean Air and Climate Change. In addition, funding was reallocated to support cumulative effects management.

### **Water for Life**

Program spending was lower than the budgeted amount by \$6 million because funding was reallocated to support cumulative effects management.

### **Approvals**

Program expenditures are \$5 million lower than the budgeted amount because of credit or recovery shortfalls. Fewer applications were received for reclamation and remediation certificates, resulting in fewer site audits being conducted.

### **Water Operations**

Program spending exceeded the budgeted amount by \$11 million primarily because of the payment of the Bassano Dam legal settlement with the Siksika First Nation.

### **Resource Management**

Program spending was lower than the budgeted amount by \$2 million. This was because of the deferred activities in Alberta's Industrial Heartland that focussed on supporting Alberta's continuing transition to an outcomes-focused cumulative effects management system.

## **Comparison of 2010-2011 Actuals to 2009-2010 Actuals**

The following list provides an explanation of the major program variances:

### **Climate Change**

Program spending in 2010-11 is \$11 million lower than in 2009-10 because fewer projects were approved under the Canada ecoTrust for Clean Air and Climate Change programs and there was reduced spending for energy efficiency and conservation initiatives.

### **Oil Sands Innovation and Policy**

Program spending in 2010-11 is \$3 million lower than in 2009-10 because of spending allocated to cumulative effects management initiatives for regional plans occurring in other programs.

### **Environmental Relationships, Partnerships and Strategies**

Program spending is \$9 million lower than in 2009-10 due to \$8 million in grant payments in support of landfill development under the Alberta Waste Management Assistance Program in 2009-2010.

### **Resource Management**

Program spending is \$3 million higher than in 2009-10 because additional resources were required to support the development of three regional plans under the Land-use Framework, and to address the cumulative effects of development on Alberta's environment.

### **Water Operations**

Program spending is \$10 million higher than in 2009-10 because of the payment of the Bassano Dam legal settlement with the Siksika First Nation.

### **Climate Change and Emissions Management**

Program spending in 2010-2011 is \$16 million higher than in 2009-10 because of increased revenues to the fund, collected through contributions by facilities to meet their net emissions intensity limits.

## Ministry Expense by Function

Table 3

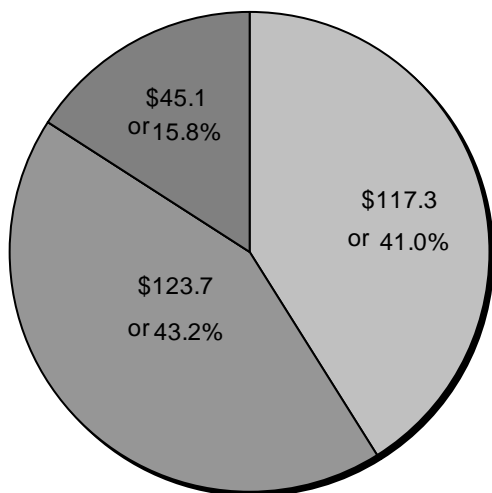
### Ministry Expense by Core Business

Year ended March 31, 2011 (unaudited)  
(in thousands)

	2011		2010
	Budget	Actual	Actual
Leading and Enabling the Achievement of Environmental Outcomes	\$ 125,886	\$ 117,300	\$ 110,922
Assuring a Healthy Environment	145,259	123,735	135,866
Leading and Supporting the Development and Maintenance of Environmental Infrastructure	36,788	45,130	35,108
<b>Total Ministry Expense</b>	<b>\$ 307,933</b>	<b>\$ 286,165</b>	<b>\$ 281,896</b>

Note: The total ministry expense is included in only one function, Environment.

Figure 13  
2010-2011 Ministry Expense by Core Business  
(in millions)



● **Core Business: Leading and Enabling the Achievement of Environmental Outcomes**

*Programs*

- Water for Life
- Resource Management
- Conservation and Education
- Environmental Relationships, Partnerships and Strategies
- Climate Change and Emissions Management

● **Core Business: Assuring a Healthy Environment**

*Programs*

- Monitoring, Reporting and Innovation
- Approvals
- Compliance and Enforcement
- Emergency Response
- Ministry Support Services
- Climate Change
- Air and Land Policy
- Reclamation and Emergency Preparedness
- Oil Sands Innovation and Policy

● **Core Business: Leading and Supporting the Development and Maintenance of Environmental Infrastructure**

*Programs*

- Water Operations
- Amortization

## **Annual Report Financial Information 2010 - 11**

### CONTENTS

<b>Ministry of Environment - Financial Statements</b>	<b>55</b>
<b>Department of Environment - Financial Statements</b>	<b>77</b>
<b>Climate Change and Emissions Management Fund - Financial Statements</b>	<b>99</b>

Ministry of Environment

Consolidated Financial Statements

Year Ended March 31, 2011



## Independent Auditor's Report

To the Members of the Legislative Assembly



### Report on the Consolidated Financial Statements

I have audited the accompanying consolidated financial statements of the Ministry of Environment, which comprise the consolidated statement of financial position as at March 31, 2011, and the consolidated statements of operations and cash flows for the year then ended, and a summary of significant accounting policies and other explanatory information.

### Management's Responsibility for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with Canadian public sector accounting standards, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

### Auditor's Responsibility

My responsibility is to express an opinion on these consolidated financial statements based on my audit. I conducted my audit in accordance with Canadian generally accepted auditing standards. Those standards require that I comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my audit opinion.

### Opinion

In my opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Ministry of Environment as at March 31, 2011, and the results of its operations and its cash flows for the year then ended in accordance with Canadian public sector accounting standards.

Original signed by

Merwan N. Saher, CA  
Auditor General

June 2, 2011  
Edmonton, Alberta

## Consolidated Statement of Operations

Year ended March 31, 2011  
(in thousands)

	2011		2010
	Budget (Schedule 4)	Actual	Actual
<b>Revenues (Schedule 1)</b>			
Internal Government Transfers	\$ 2,774	\$ 1,224	\$ 1,401
Transfers from Government of Canada	45,644	24,767	32,410
Premiums, Fees and Licenses	5,465	2,494	2,122
Climate Change and Emissions Management Fund	78,000	76,141	60,449
Other Revenue	3,248	2,606	1,437
	135,131	107,232	97,819
<b>Expenses - Directly Incurred (Note 2(b) and Schedule 7) Voted (Schedules 3 and 5)</b>			
Ministry Support Services	19,108	25,982	25,800
Environmental Assurance:			
Monitoring, Reporting and Innovation	12,095	13,567	13,209
Air and Land Policy	4,956	8,071	8,398
Climate Change	63,445	35,769	46,718
Oil Sands Innovation and Policy	4,018	5,320	7,894
Environmental Stewardship:			
Environmental Relationships, Partnerships and Strategies	6,487	6,956	15,864
Conservation and Education	2,982	3,493	5,379
Water for Life	18,926	13,203	14,513
Environmental Management:			
Resource Management	19,491	17,507	14,717
Approvals	26,508	21,117	19,920
Compliance and Enforcement	11,448	11,320	10,918
Water Operations	14,427	25,355	15,019
Emergency Response	1,308	1,358	1,531
Amortization of Tangible Capital Assets	22,361	19,775	20,089
	227,560	208,793	219,969
<b>Statutory Programs (Schedules 3 and 5)</b>			
Land Reclamation Program	550	315	562
Emergency Spills and Cleanups	1,324	294	339
Drought and Flood Emergencies	400	115	-
Valuation Adjustments			
Provision for Doubtful Accounts	-	60	(6)
Provision for Vacation Pay	99	476	607
Provision for Remediation and Reclamation	-	(29)	(24)
Climate Change and Emissions Management Corporation	78,000	76,141	60,449
	80,373	77,372	61,927
<b>Total Expenses</b>	<b>307,933</b>	<b>286,165</b>	<b>281,896</b>
Gain (Loss) on Disposal of Tangible Capital Assets	-	(100)	-
<b>Net Operating Results</b>	<b>\$ (172,802)</b>	<b>\$ (179,033)</b>	<b>\$ (184,077)</b>

The accompanying notes and schedules are part of these financial statements

## Consolidated Statement of Financial Position

As at March 31, 2011  
(in thousands)

	2011	2010
<b>ASSETS</b>		
Cash	\$ 69,078	\$ 46,932
Accounts Receivable (Note 3)	24,377	33,747
Prepayment of Settlement (Note 4)	12,803	-
Tangible Capital Assets (Note 5)	849,376	864,194
	<b>\$ 955,634</b>	<b>\$ 944,873</b>
<b>LIABILITIES</b>		
Accounts Payable and Accrued Liabilities (Note 6)	\$ 147,701	\$ 103,081
Unearned Revenue (Note 7)	99,776	124,454
	<b>247,477</b>	<b>227,535</b>
<b>NET ASSETS</b>		
Net Assets at Beginning of Year	717,338	684,352
Net Operating Results	(179,033)	(184,077)
Net Financing Provided from General Revenues	169,852	217,063
Net Assets at End of Year	<b>708,157</b>	<b>717,338</b>
	<b>\$ 955,634</b>	<b>\$ 944,873</b>

Contractual obligations and contingent liabilities (Notes 8 and 9).  
The accompanying notes and schedules are part of these financial statements.

## Consolidated Statement of Cash Flows

Year ended March 31, 2011

(in thousands)

	2011	2010
<b>Operating Transactions</b>		
Net Operating Results	\$ (179,033)	\$ (184,077)
Non-cash items included in Net Operating Results		
Amortization (Schedule 3)	19,775	20,089
Loss (Gain) on Disposal of Tangible Capital Assets	100	-
Valuation Adjustments	508	576
	(158,650)	(163,412)
Decrease in Accounts Receivable	9,310	21,185
Decrease (Increase) in Prepayments of Settlement	(12,803)	-
Increase (Decrease) in Accounts Payable and Accrued Liabilities	44,171	(72,093)
Decrease in Unearned Revenue	(24,678)	(32,068)
Cash Applied to Operating Transactions	(142,650)	(246,388)
<b>Capital Transactions</b>		
Acquisition of Tangible Capital Assets	(2,751)	(780)
Proceeds of Disposition of Tangible Capital Assets	5	39
Transfer of Tangible Capital Assets from other Government Entities	(2,310)	(14,584)
Cash Applied to Capital Transactions	(5,056)	(15,325)
<b>Financing Transactions</b>		
Net Financing Provided from General Revenues	169,852	217,063
<b>Increase (Decrease) in Cash</b>	<b>22,146</b>	<b>(44,650)</b>
<b>Cash, Beginning of Year</b>	<b>46,932</b>	<b>91,582</b>
<b>Cash, End of Year</b>	<b>\$ 69,078</b>	<b>\$ 46,932</b>

The accompanying notes and schedules are part of these financial statements.

## Notes to the Consolidated Financial Statements (in thousands)

### Note 1 Authority and Purpose

The Ministry of Environment operates under the authority of the Government Organization Act, Chapter G-10, Revised Statutes of Alberta 2000.

The purpose of the ministry is to ensure that Alberta's environment sustains a high quality of life.

#### Climate Change and Emissions Management Fund

The CCEMF operates as follows:

- Revenues in the CCEMF are primarily from purchases of fund units (\$15 per tonne) used in meeting net emissions intensity limits. Facilities can also make improvements to their operations, purchase Alberta based offsets, or use emission performance credits. Emissions intensity is the ratio of greenhouse gas emissions to facilities' production for the period.
- Emissions measurement involves the use of different methodologies including estimation techniques and use of emission factors. Such techniques can involve using equipment with varying degrees of precision. Use of different techniques and emission factors will produce different results.
- Management has provided guidance to facilities and verifiers for the calculation and verification of emissions intensity. Every facility submitting a compliance report is required to have a third party verify the report at a limited level of assurance. In a limited level of assurance engagement, verifiers perform procedures with the objective of assessing whether the information reported by facilities is plausible within the framework of the guidance provided by management.

The systems and processes including the offsets purchased by facilities are new and complex. Management believes that as the system evolves, and more guidance is developed, the calculation of emissions intensity will be refined through improved methodologies and data quality.

Management's guidance to the tillage offset verifiers allows the verifiers to rely on the offset project developers' written attestations and records as evidence that the offsets are valid. Management is in the process of revising its guidance to require verifiers to collect sufficient evidence to support claims for tillage offsets beginning with the 2012 compliance period.

### Note 2 Summary of Significant Accounting Policies and Reporting Practices

These financial statements are prepared in accordance with Canadian public sector accounting standards.

#### **(a) Reporting Entity**

The Ministry of Environment administers the organizations listed below. The authority under which each organization operates is also listed. Together, these organizations form the Ministry of Environment and constitute the reporting entity.

#### **Organization**

Department of Environment  
Climate Change and Emissions Management Fund (CCEMF)

#### **Authority**

*Government Organization Act*  
*Climate Change and Emissions Management Act*

## Notes to the Consolidated Financial Statements (in thousands)

### Note 2 Summary of Significant Accounting Policies and Reporting Practices

#### **(b) Basis of Financial Reporting** ***Revenues and Measurement Uncertainty***

##### **Department**

All revenues under the department are reported on the accrual basis of accounting. Cash received for which goods or services have not been provided by year end is recorded as unearned revenue.

##### **Climate Change and Emissions** **Management Fund – Revenue**

All revenues under CCEMF are reported on the accrual basis of accounting.

##### **i) Facility Purchases of Fund Units**

These revenues are measured from amounts assessed by management and from estimates of amounts not yet assessed based on cash received from facilities that relates to compliance period ended December 31. Revenues also include adjustments between the revenue estimates for previous years and actual amounts. Revenues do not include an estimate of adjustments to amounts not yet assessed because it cannot be reliably determined.

Management has adopted a regulatory threshold on emissions and production reported per facility when calculating emissions intensity. This threshold requires facilities to correct and re-verify submissions where errors exceed the threshold. Management can require errors below the threshold to be corrected. Uncorrected errors below the threshold have not been quantified.

##### **ii) Completeness of Revenues from Facility**

##### **Purchases of Fund Units**

Facilities submitting compliance reports are expected to understand and comply with the relevant legislation. This has an impact on the completeness of revenue when facilities do not fully meet the legislative requirements and, for example, report inaccurate or incomplete emissions or production data. Management has implemented systems and processes to detect and correct situations where facilities have not complied with the legislation. These systems and controls, based on areas of highest risk, include performing verifications of facility and offset project records. Management does not estimate the effect of misreported revenue.

##### **Climate Change and Emissions Management** **Fund – Measurement Uncertainty**

Measurement uncertainty exists when there is a variance between the recognized or disclosed amount and another reasonably possible amount. The preparation of these financial statements requires management to make estimates and assumptions that affect the amounts of assets, liabilities, revenues and expenses reported.

The Revenues from Facility Purchases of Fund Units and accounts receivable in these financial statements are subject to measurement uncertainty because methodologies including estimation techniques and emission factors are used in emissions measurement.

Revenues not yet assessed by management and the related accounts receivable are recorded based on cash received from facilities

## Notes to the Consolidated Financial Statements (in thousand)

## Note 2

### Summary of Significant Accounting Policies and Reporting Practices

#### (b) Basis of Financial Reporting (continued)

Revenues and accounts receivable also include an estimate of \$18,371 for the revenues owing for the period January 1 to March 31, 2011 (2010 - \$16,078). Management estimated this amount as 25% of revenues for the 2010 compliance period. Actual results could vary by a material amount.

#### Internal Government Transfers

Internal government transfers are transfers between entities within the government reporting entity where the entity making the transfer does not receive any goods or services directly in return. Internal government transfers are recognized as revenue when received.

#### Transfers from Government of Canada

Transfers from Government of Canada are recognized as revenue when authorized by federal legislation or federal/provincial agreements, eligibility criteria if any are met and a reasonable estimate of the amounts can be made.

#### Credit or Recovery

Credit or Recovery initiatives provide a basis for authorizing spending. Credits or Recoveries are shown in the details of the Government Estimates for a supply vote. If budgeted revenues are not fully realized, spending is reduced by an equivalent amount. If actual credit or recovery amounts exceed budget, the ministry may, with the approval of the Treasury Board Committee, use the excess to fund additional expenses of the program. Schedule 2 discloses information on the ministry's credit or recovery initiatives.

#### *Expenses*

##### Directly Incurred

Directly incurred expenses are those costs the ministry has primary responsibility and accountability for, as reflected in the Government's budget documents.

In addition to program operating expenses such as salaries, supplies, etc., directly incurred expenses also include:

- Amortization of tangible capital assets.
- Pension costs, which are the cost of employer contributions for current service of employees during the year.
- Valuation adjustments which include changes in the valuation allowances used to reflect financial assets at their net recoverable or other appropriate value. Valuation adjustments also represent the change in management's estimate of future payments arising from obligations relating to vacation pay.

Grants are recognized as expenses when authorized, eligibility criteria, if any, are met and a reasonable estimate of the amount can be made.

##### Incurred by Others

Services contributed by other entities in support of the ministry operations are not recognized and are disclosed in Schedule 6 and allocated to programs in Schedule 7.

##### *Assets*

Financial assets are assets that could be used to discharge existing liabilities or finance future operations and are not for consumption in the normal course of operations. Financial assets of the ministry are limited to financial claims, such as advances to and receivables from other organizations, employees and other individuals.

## Notes to the Consolidated Financial Statements (in thousands)

## Note 2

### Summary of Significant Accounting Policies and Reporting Practices

#### (b) Basis of Financial Reporting (continued)

Assets acquired by right are not included. Tangible capital assets of the ministry are recorded at historical cost and amortized on a straight-line basis over the estimated useful lives of the assets. The threshold for capitalizing new systems development is \$250 and the threshold for major system enhancements is \$100. The threshold for all other tangible capital assets is \$5. All land is capitalized.

#### Liabilities

Liabilities are recorded to the extent that they represent present obligations as a result of events and transactions occurring prior to the end of the fiscal year. The settlement of liabilities will result in sacrifice of economic benefits in the future.

Environmental liabilities arise from the obligation to clean up contaminated sites (remediation) or to return disturbed land to an equivalent use (reclamation). A remediation or reclamation liability is recognized when the ministry is obligated to incur such costs and an amount can be reasonably estimated.

## Note 3

### Accounts Receivable

	2011			2010
	Gross Amount	Allowance for Doubtful Accounts	Net Realizable Value	Net Realizable Value
Climate Change and Emissions Management Fund	\$ 22,326	\$ -	\$ 22,326	\$ 32,972
Other Sources	1,600	37	1,563	368
Transfer from the Environmental Protection and Enhancement Fund	488	-	488	407
	\$ 24,414	\$ 37	\$ 24,377	\$ 33,747

Accounts receivable are unsecured and non-interest bearing.



## Notes to the Consolidated Financial Statements (in thousands)

### Note 4 Prepayment of Settlement

The amount of \$12,803 represents a prepayment for future access rights under the Bassano Dam settlement agreement with the Siksika Nation. The prepaid access rights will be expensed annually over the next fourteen years as follows: \$1,088 annually for the next three years, \$1,537 in the fourth year and \$1,025 annually for the remaining ten years.

### Note 5 Tangible Capital Assets

	Buildings	Equipment*	Computer Hardware & Software	Land Improvements	Bridges	Dam & Water Management Structures **	2011 Total	2010 Total
<b>Estimated Useful Life</b>	10 years	3-10 years	5-10 years	40 years	50 years	25-80 years		
<b>Historical Cost***</b>								
Beginning of year	\$ 4	\$ 14,775	\$ 20,692	\$ 110	\$ 469	\$ 1,182,743	\$ 1,218,793	\$ 1,203,468
Additions	-	2,019	456	184	13	2,389	5,061	15,364
Disposals, including write downs	-	(94)	(614)	-	-	(8)	(716)	(39)
	\$ 4	\$ 16,700	\$ 20,534	\$ 294	\$ 482	\$ 1,185,124	\$ 1,223,138	\$ 1,218,793
<b>Accumulated Amortization</b>								
Beginning of year	\$ 1	\$ 7,549	\$ 18,061	\$ 10	\$ 103	\$ 328,875	\$ 354,599	\$ 334,510
Amortization Expense	1	1,605	(45)	7	10	18,197	19,775	20,089
Effect of disposals	-	(90)	(521)	-	-	-	(611)	-
	\$ 2	\$ 9,064	\$ 17,495	\$ 17	\$ 113	\$ 347,072	\$ 373,763	\$ 354,599
<b>Net Book Value at March 31, 2011</b>	\$ 2	\$ 7,636	\$ 3,039	\$ 277	\$ 369	\$ 838,052	\$ 849,375	
<b>Net Book Value at March 31, 2010</b>	\$ 3	\$ 7,226	\$ 2,631	\$ 99	\$ 366	\$ 853,869		\$ 864,194

\* Equipment includes vehicles, office, laboratory, heavy equipment and mobile equipment.

\*\* Dams and water management structures include dams, reservoirs, weirs, canals, dykes, ditches, channels, diversions, cut-offs, pump houses and erosion protection structures, which are constructed by the Ministry of Transportation and transferred to the Ministry of Environment upon their completion.

\*\*\*Historical cost includes work-in-progress at March 31, 2011 totalling \$3,067 comprised of: equipment \$1,598 (2010 - \$335); computer hardware and software \$1,406 (2010 - \$1,471); and dam improvements \$63 (2010 - \$9,491).

## Notes to the Consolidated Financial Statements (in thousands)

### Note 5 Tangible Capital Assets (continued)

Changes to tangible capital assets were as follows:

	2011	2010
Net Book Value at Beginning of Year	\$ 864,194	\$ 868,958
Purchase of Tangible Capital Assets	2,751	780
Net Book Value of Disposals and Write Downs	(105)	(39)
Transfer with Other Government Entities	2,310	14,584
Amortization of Tangible Capital Assets	(19,775)	(20,089)
Net Book Value at End of Year	\$ 849,375	\$ 864,194

### Note 6 Accounts Payable and Accrued Liabilities

As at March 31, 2011 the ministry has the following accounts payable and accrued liabilities:

	2011	2010
General Accounts Payable	\$ 2,898	\$ 3,766
Accrued Liabilities	133,000	87,899
Site Remediation and Reclamation Obligations	1,251	1,307
Hold Back Liability	119	152
Accrued Vacation Pay	10,433	9,957
	\$ 147,701	\$ 103,081

### Note 7 Unearned Revenue

As at March 31, 2011 the ministry has the following unearned revenues:

	2011	2010
Canada ecoTrust for Clean Air and Climate Change	\$ 98,683	\$ 123,450
Unearned Lease and Water Power Rental Agreement Revenues	605	622
Unearned Reclamation Certificates	488	382
	\$ 99,776	\$ 124,454

## Notes to the Consolidated Financial Statements (in thousands)

## Note 8

### Contractual Obligations

Contractual obligations are obligations of the ministry to others that will become liabilities in the future when the terms of those contracts or agreements are met.

As at March 31, 2011 the ministry has the following contractual obligations:

	2011	2010
Service contracts (a) (b) (c)	\$ 9,035	\$ 7,894
Long term leases (d)	329	1,243
Grants (e) (f)		
Waste Management Assistance Program	-	1,065
Canada ecoTrust for Clean Air and Climate Change	33,200	53,900
Various Other Programs	131	189
	\$ 42,695	\$ 64,291

(a) The ministry has a contractual obligation with the Piikani Nation of \$800 in 2011, and \$800 adjusted annually by the Consumer Price Index every year thereafter.

(b) The ministry has a contractual obligation with the Siksika Nation of \$127 based on 1984 constant dollars. This amount is adjusted annually by the preceding year's rate of change calculated from the GDP index every year thereafter.

(c) The ministry has multi-year service contract commitments as follows:

2011-12	\$ 7,848
2012-13	442
2013-14	447
2014-15	192
2015-16	6
Thereafter	100
<b>Total</b>	<b>\$ 9,035</b>

(d) The ministry leases certain equipment under operating leases that expire on various dates to 2013. The aggregate amounts payable for the unexpired terms of these leases are as follows:

2011-12	\$ 207
2012-13	122
<b>Total</b>	<b>\$ 329</b>

(e) The ministry has multi-year grant commitments as follows:

2011-12	\$ 25,366
2012-13	7,965
<b>Total</b>	<b>\$ 33,331</b>

(f) The ministry has a contractual grant obligation to pay grants out of the CCEMF to the Climate Change and Emissions Management Corporation until September 1, 2014. The annual grant amount is equal to the revenues from Facility Purchases of Fund Units for the calendar year compliance period adjusted for accumulated interest, changes to amounts assessed and the cost of verifications initiated by management.

## Notes to the Consolidated Financial Statements (in thousands)

### Note 9 Contingent Liabilities

At March 31, 2011, the ministry is a defendant in fifteen legal claims (2010 – twenty two legal claims). Eleven of these claims have specified amounts totalling \$235,049 and the remaining four have no specified amount (2010 – fifteen claims with specified amounts totalling \$295,985 and the remaining seven have no specified amount). Included in the total legal claims are five claims in which the ministry has been named as the sole defendant (2010 – three legal claims). All five claims have specified amounts totalling \$21,538 (2010 – three claims with specified amounts totalling \$18,446).

In addition, there are ten claims in which the ministry has been jointly named with other entities (2010 – seventeen legal claims). Six of these claims have specified amounts totalling \$213,511 (2010 – ten claims totalling \$277,283) including one claim totalling \$202,150 which is partially covered at 25 per cent by the Alberta Risk Management Fund (2010 – one claim totalling \$202,150). The remaining four claims have no specified amount (2010 – seven claims with no specified amount). No claims are fully covered by the Alberta Risk Management Fund (2010 – two claims with specified amounts totalling \$256).

The resulting loss, if any, from these claims cannot be determined.

### Note 10 Trust Fund Under Administration

The ministry administers a trust fund that is a regulated fund consisting of public money over which the Legislature has no power of appropriation. Because the Province has no equity in the fund and administers it for the purpose of the trust, it is not included in the ministry's financial statements.

At March 31, 2011, the trust fund under administration is as follows:

	2011	2010
Environmental Protection Security Fund	\$ 14,800	\$ 13,630

In addition to the above trust fund under administration, the ministry holds bank guarantees in the form of letters of credit and promissory notes in the amount of \$1,245,262 (2010 - \$1,260,107). The majority of these guarantees are held to assure satisfactory reclamation of coal and oil sands operations, sand and gravel pits, landfills, hazardous waste management and hazardous recyclable facilities.

## Notes to the Consolidated Financial Statements (in thousands)

### Note 11 Benefit Plans

The ministry participates in the multi-employer pension plans: Management Employees Pension Plan and Public Service Pension Plan. The ministry also participates in the multi-employer Supplementary Retirement Plan for Public Service Managers. The expense for these pension plans is equivalent to the annual contributions of \$9,530 for the year ended March 31, 2011 (2010 – \$8,418).

At December 31, 2010, the Management Employees Pension Plan reported a deficiency of \$397,087 (2009 – deficiency \$483,199) and the Public Service Pension Plan reported a deficiency of \$2,067,151 (2009 – deficiency \$1,729,196).

At December 31, 2010, the Supplementary Retirement Plan for Public Service Managers had a deficiency of \$39,559 (2009 – deficiency \$39,516).

The ministry also participates in two multi-employer Long Term Disability Income Continuance Plans. At March 31, 2011, the Bargaining Unit Plan reported an actuarial deficiency of \$4,141 (2010 – deficiency \$8,335) and the Management, Opted Out and Excluded Plan, an actuarial surplus of \$7,020 (2010 – surplus \$7,431). The expense for these two plans is limited to the employer's annual contributions for the year.

### Note 12 Comparative Figures

Certain 2010 figures have been reclassified to conform to the 2011 presentation.

### Note 13 Approval of Financial Statements

The financial statements were approved by the Senior Financial Officer and the Deputy Minister.

## Schedule to Financial Statements

## Revenues

## Schedule 1

Year ended March 31, 2011

(in thousands)

	2011		2010
	Budget	Actual	Actual
Internal Government Transfers			
Transfer from Environmental Protection and Enhancement Fund	\$ 2,274	\$ 724	\$ 901
Transfers from the Lottery Fund	500	500	500
Transfers from Government of Canada			
Canada ecoTrust for Clean Air and Climate Change	45,644	24,767	32,410
	48,418	25,991	33,811
Premiums, Fees and Licenses			
Land and Grazing	55	53	65
Reclamation Certificates	3,500	1,204	690
Water Power Rentals	650	706	777
Other	1,260	531	590
	5,465	2,494	2,122
Other Revenue			
Climate Change and Emissions Management Fund	78,000	76,141	60,449
Refunds of Expenditure	-	981	296
Water Resources	2,900	1,358	977
Other	348	267	164
	81,248	78,747	61,886
<b>Total Revenues</b>	<b>\$ 135,131</b>	<b>\$ 107,232</b>	<b>\$ 97,819</b>

## Schedule to Financial Statements

**Credit or Recovery****Schedule 2**

Year ended March 31, 2011

(in thousands)

	2011		
	Authorized	Actual	(Shortfall) / Excess
Reclamation Certificate	\$ 3,500	\$ 1,143	\$ (2,357)
Remediation Certificate	660	36	(624)
Water Management Infrastructure	2,900	1,104	(1,796)
	\$ 7,060	\$ 2,283	\$ (4,777) <sup>(1)</sup>

<sup>(1)</sup> Shortfall is deducted from current year's authorized budget, as disclosed in schedules 4 and 5 to the financial statements.

The Reclamation Certificate credit or recovery initiative refers to the costs of conducting audits at sites that are certified under the upstream oil and gas reclamation program. Revenues are received through a reclamation certificate application fee.

The Remediation Certificate credit or recovery initiative refers to the costs of conducting site audits that are certified under Alberta Environment's new Remediation Certificate Regulation. Revenues are received through a remediation site certificate application fee.

The Water Management Infrastructure credit or recovery initiative refers to the maintenance and upgrading of the provincial water management infrastructure system. Revenues are received through the Use of Works Agreements whereby developers pay an annual fee to the Province.

The credits or recoveries presented in this schedule are included in the ministry's Statement of Operations.

## Schedule to Financial Statements

**Expenses - Directly Incurred Detailed by Object**
**Schedule 3**

Year ended March 31, 2011

(in thousands)

	2011		2010
	Budget	Actual	Actual
<b>Voted:</b>			
Salaries, Wages and Employee Benefits	\$ 98,924	\$ 97,603	\$ 96,592
Supplies and Services	44,986	42,181	41,501
Grants	61,045	49,004	61,549
Financial Transactions and Other	244	230	238
Amortization of Tangible Capital Assets	22,361	19,775	20,089
	\$ 227,560	\$ 208,793	\$ 219,969
<b>Statutory:</b>			
Salaries, Wages and Employee Benefits	\$ -	\$ -	\$ 26
Supplies and Services	4,274	1,750	1,893
Grants	76,000	75,115	59,431
Valuation Adjustments			
Provision for Doubtful Accounts	-	60	(6)
Provision for Vacation Pay	99	476	607
Provision for Remediation and Reclamation	-	(29)	(24)
	\$ 80,373	\$ 77,372	\$ 61,927



## Schedule to Financial Statements

**Budget**Year ended March 31, 2011  
(in thousands)**Schedule 4**

	2010-2011 Estimates	Adjustment (a)	2010-2011 Budget	Authorized Supplementary (b)	2010-2011 Authorized Budget
<b>Revenues</b>					
Internal Government Transfers	\$ 2,774	-	\$ 2,774	\$ -	\$ 2,774
Transfers from Government of Canada	45,644	-	45,644	-	45,644
Premiums, Fees and Licenses	5,465	-	5,465	-	5,465
Climate Change and Emissions Management Fund	78,000	-	78,000	-	78,000
Other Revenue	3,248	-	3,248	-	3,248
	135,131	-	135,131	-	135,131
<b>Expenses - Directly Incurred</b>					
<b>Voted Expenses</b>					
Ministry Support Services	19,108	-	19,108	-	19,108
Environmental Assurance:					
Monitoring, Reporting and Innovation	12,095	-	12,095	-	12,095
Air and Land Policy	4,956	-	4,956	-	4,956
Climate Change	63,445	-	63,445	(7,869)	55,576
Oilsands Innovation and Policy	4,018	-	4,018	-	4,018
Environmental Stewardship:					
Environmental Relationships, Partnerships and Strategies	6,487	-	6,487	-	6,487
Conservation and Education	2,982	-	2,982	-	2,982
Water for Life	18,926	-	18,926	-	18,926
Environmental Management:					
Resource Management	19,491	-	19,491	-	19,491
Approvals	26,508	-	26,508	-	26,508
Compliance and Enforcement	11,448	-	11,448	-	11,448
Water Operations	14,427	-	14,427	9,539	23,966
Emergency Response	1,308	-	1,308	-	1,308
Amortization of Tangible Capital Assets	22,361	-	22,361	-	22,361
Credit or Recovery Shortfall (Schedule 2)	-	(4,777)	(4,777)	-	(4,777)
	227,560	(4,777)	222,783	1,670	224,453
Land Reclamation Program	550	-	550	-	550
Emergency Spills and Cleanups	1,324	-	1,324	-	1,324
Drought and Flood Emergencies	400	-	400	-	400
Valuation Adjustments					
Provision for Vacation Pay	99	-	99	-	99
Climate Change and Emissions Management Corporation	78,000	-	78,000	-	78,000
	80,373	-	80,373	-	80,373
	307,933	(4,777)	303,156	1,670	304,826
<b>Net Operating Results</b>	\$ (172,802)	\$ 4,777	\$ (168,025)	\$ (1,670)	\$ (169,695)
Equipment / Inventory Purchases	\$ 1,344	\$ -	\$ 1,344	\$ -	\$ 1,344
<b>Non-Budgetary Disbursements</b>	\$ 800	\$ -	\$ 800	\$ 12,803	\$ 13,603

(a) Adjustment includes Credit or Recovery Shortfall.

(b) Supplementary Estimates of \$1,670 (voted) and \$12,803 (non-budgetary) were approved on March 14, 2011. Treasury Board approval is pursuant to section 24(2) of the *Financial Administration Act*.

## Schedule to Financial Statements

**Comparison by Expenses – Directly Incurred, Equipment/Inventory Purchases, Statutory Expenses, and Non-Budgetary Disbursements by Element to Authorized Budget**

## Schedule 5

 Year ended March 31, 2011  
 (in thousands)

	2010-11 Estimates	Adjustments (a)	2010-11 Budget	Authorized Supplementary (b)	2010-11 Authorized Budget	2010-11 Actual Expense	Unexpended (Over Expended)
<b>Voted Expenses and Equipment / Inventory Purchases</b>							
<b>Ministry Support Services</b>							
1.0.1 Minister's Office	\$ 598	\$ -	\$ 598	\$ -	\$ 598	\$ 560	\$ 38
1.0.2 Cabinet Policy Committee on Resources and the Environment	135	-	135	-	135	194	(59)
1.0.3 Deputy Minister's Office	767	-	767	-	767	783	(16)
1.0.4 Communications	1,267	-	1,267	-	1,267	1,285	(18)
1.0.5 People Services	1,899	-	1,899	-	1,899	2,064	(165)
1.0.6 Legal Services	265	-	265	-	265	174	91
1.0.7 Finance and Administration	3,853	-	3,853	-	3,853	5,292	(1,439)
1.0.8 Strategic Support and Integration							
- Expense	9,289	-	9,289	-	9,289	13,867	(4,578)
- Equipment / Inventory Purchases	385	-	385	-	385	798	(413)
1.0.9 Corporate Costs	1,035	-	1,035	-	1,035	1,763	(728)
<b>TOTAL PROGRAM 1</b>	<b>19,493</b>	<b>-</b>	<b>19,493</b>	<b>-</b>	<b>19,493</b>	<b>26,780</b>	<b>(7,287)</b>
<b>Environmental Assurance</b>							
2.0.1 Monitoring, Reporting and Innovation	12,095	-	12,095	-	12,095	13,567	(1,472)
2.0.2 Air and Land Policy	4,956	-	4,956	-	4,956	8,071	(3,115)
2.0.3 Climate Change	63,445	-	63,445	(7,869)	55,576	35,769	19,807
2.0.4 Oil Sands Innovation and Policy							
- Expense	4,018	-	4,018	-	4,018	5,320	(1,302)
- Equipment / Inventory Purchases	-	-	-	-	-	268	(268)
<b>TOTAL PROGRAM 2</b>	<b>84,514</b>	<b>-</b>	<b>84,514</b>	<b>(7,869)</b>	<b>76,645</b>	<b>62,995</b>	<b>13,650</b>
<b>Environmental Stewardship</b>							
3.0.1 Environmental Relationships, Partnerships and Strategies	6,487	-	6,487	-	6,487	6,956	(469)
3.0.2 Conservation and Education							
- Expense	2,482	-	2,482	-	2,482	2,993	(511)
- Expense funded by Lotteries	500	-	500	-	500	500	-
3.0.3 Water For Life							
- Expense	18,926	-	18,926	-	18,926	13,203	5,723
- Equipment / Inventory Purchases	959	-	959	-	959	1,539	(580)
<b>TOTAL PROGRAM 3</b>	<b>29,354</b>	<b>-</b>	<b>29,354</b>	<b>-</b>	<b>29,354</b>	<b>25,191</b>	<b>4,163</b>

## Schedule to Financial Statements

**Comparison by Expenses – Directly Incurred, Equipment/Inventory Purchases, Statutory Expenses, and Non-Budgetary Disbursements by Element to Authorized Budget**
**Schedule 5  
(continued)**

 Year ended March 31, 2011  
(in thousands)

	2010-11 Estimates	Adjustments (a)	2010-11 Budget	Authorized Supplementary (b)	2010-11 Authorized Budget	2010-11 Actual Expense	Unexpended (Over Expended)
<b>Voted Expenses and Equipment / Inventory Purchases</b>							
<b>Environmental Management</b>							
4.0.1 Resource Management	19,491	-	19,491	-	19,491	17,507	1,984
4.0.2 Approvals	26,508	-	26,508	-	26,508	21,117	5,391
4.0.3 Compliance and Enforcement	11,448	-	11,448	-	11,448	11,320	128
4.0.4 Water Operations							
- Expense	14,427	-	14,427	9,539	23,966	25,355	(1,389)
- Equipment / Inventory Purchases	-	-	-	-	-	79	(79)
4.0.5 Emergency Response							
- Expense	1,308	-	1,308	-	1,308	1,358	(50)
- Equipment / Inventory Purchases	-	-	-	-	-	67	(67)
4.0.6 Amortization of Tangible Capital Assets	22,361	-	22,361	-	22,361	19,775	2,586
<b>TOTAL PROGRAM 4</b>	<b>95,543</b>	<b>-</b>	<b>95,543</b>	<b>9,539</b>	<b>105,082</b>	<b>96,578</b>	<b>8,504</b>
Credit or Recovery Shortfall (Schedule 2)	-	(4,777)	(4,777)	-	(4,777)	-	(4,777)
	\$ -	\$ (4,777)	\$ (4,777)	\$ -	\$ (4,777)	\$ -	\$ (4,777)
<b>Operating Expense Equipment / Inventory Purchases</b>	227,560	(4,777)	222,783	1,670	224,453	208,793	15,660
	1,344	-	1,344	-	1,344	2,751	(1,407)
	<b>\$ 228,904</b>	<b>\$ (4,777)</b>	<b>\$ 224,127</b>	<b>\$ 1,670</b>	<b>\$ 225,797</b>	<b>\$ 211,544</b>	<b>\$ 14,253</b>
<b>Statutory Expenses</b>							
Land Reclamation Program	\$ 550	\$ -	\$ 550	\$ -	\$ 550	\$ 315	\$ 235
Emergency Spills and Cleanups	1,324	-	1,324	-	1,324	294	1,030
Drought and Flood Emergencies	400	-	400	-	400	115	285
Valuation Adjustments	99	-	99	-	99	507	(408)
Climate Change and Emissions Management Corporation	78,000	-	78,000	-	78,000	76,141	1,859
	<b>\$ 80,373</b>	<b>\$ -</b>	<b>\$ 80,373</b>	<b>\$ -</b>	<b>\$ 80,373</b>	<b>\$ 77,372</b>	<b>\$ 3,001</b>
<b>Non-Budgetary Disbursements</b>							
Environmental Relationships, Partnerships and Strategies	700	-	700	-	700	700	-
Approvals	100	-	100	-	100	27	73
Water Operations	-	-	-	12,803	12,803	12,803	-
	<b>\$ 800</b>	<b>\$ -</b>	<b>\$ 800</b>	<b>\$ 12,803</b>	<b>\$ 13,603</b>	<b>\$ 13,530</b>	<b>\$ 73</b>

(a) Adjustments include Credit or Recovery shortfall.

(b) Supplementary Estimates of \$1,670 (voted) and \$12,803 (non-budgetary) were approved on March 14, 2011. Treasury Board approval is pursuant to section 24(2) of the *Financial Administration Act*.

## Schedule to Financial Statements

**Related Party Transactions****Schedule 6**

Year ended March 31, 2011

(in thousands)

Related parties are those entities consolidated or accounted for on the modified equity basis in the Province of Alberta's financial statements. Related parties also include management in the ministry.

The ministry and its employees paid or collected certain taxes and fees set by regulation for permits, licenses and other charges. These amounts were incurred in the normal course of business, reflect charges applicable to all users, and have been excluded from this Schedule.

The ministry had the following transactions with related parties recorded on the Statement of Operations and the Statement of Financial Position at the amount of consideration agreed upon between the related parties:

	Other Entities	
	2011	2010
Revenue		
Internal Government Transfers	\$ 1,224	\$ 1,401
	\$ 1,224	\$ 1,401
Expenses - Directly Incurred		
Grants	\$ 10,650	\$ 5,065
Other Services	3,141	3,730
	\$ 13,791	\$ 8,795
Tangible Capital Assets Transferred In	\$ 2,310	\$ 14,583
Payable to	\$ 618	\$ 393
Receivable from	\$ 488	\$ 407
Contractual Obligations	\$ 113	\$ 493

The ministry also had the following transactions with related parties for which no consideration was exchanged. The amounts for these related party transactions are estimated based on the costs incurred by the service provider to provide the service. These amounts are not recorded in the financial statements but are disclosed in Schedule 7.

	Other Entities	
	2011	2010
Expenses - Incurred by Others		
Accommodation	\$ 9,358	\$ 9,623
Legal	2,122	2,076
Water Management Infrastructure Maintenance	5,734	5,750
Other Services	253	215
Service Alberta	3,646	5,896
	\$ 21,113	\$ 23,560

# Schedule to Financial Statements

## Allocated Costs Year ended March 31, 2011 (in thousands)

## Schedule 7

Program	2011									2010
	Expenses <sup>(1)</sup>	Expenses - Incurred by Others				Valuation Adjustments			Expenses	Expenses
		Accommodation Costs <sup>(2)</sup>	Legal Services <sup>(3)</sup>	Water Management Infrastructure Maintenance	Other Services <sup>(4)</sup> and Service Alberta	Vacation Pay <sup>(5)</sup>	Doubtful Accounts	Remediation and Reclamation		
Ministry Support Services	\$ 25,982	\$ 1,732	\$ 579	\$ -	\$ 3,899	\$ (86)	\$ 60	\$ -	\$ 32,166	\$ 34,082
Monitoring, Reporting and Innovation	13,567	788	29	-	-	(20)	-	-	14,364	14,151
Air and Land Policy	8,071	630	12	-	-	(10)	-	-	8,703	8,993
Climate Change	35,769	158	134	-	-	67	-	-	36,128	47,016
Oil Sands Innovation and Policy	5,320	284	31	-	-	(130)	-	-	5,505	8,293
Reclamation & Emergency Preparedness	724	-	-	-	-	-	-	-	724	901
Environmental Relationships, Partnerships & Strategies	6,956	357	28	-	-	(55)	-	-	7,286	16,686
Conservation and Education	3,493	231	13	-	-	18	-	-	3,755	5,634
Water for Life	13,203	158	82	-	-	(120)	-	-	13,323	14,616
Resource Management	17,507	1,040	323	-	-	518	-	-	19,388	16,280
Approvals	21,117	1,786	440	-	-	239	-	(29)	23,553	22,227
Compliance and Enforcement	11,320	1,155	190	-	-	35	-	-	12,700	12,270
Water Operations	25,355	966	239	5,734	-	26	-	-	32,320	22,103
Emergency Response	1,358	73	22	-	-	(6)	-	-	1,447	1,667
Amortization of Tangible Capital Assets	19,775	-	-	-	-	-	-	-	19,775	20,089
Climate Change and Emissions Management Corporation	76,141	-	-	-	-	-	-	-	76,141	60,449
	<b>\$ 285,658</b>	<b>\$ 9,358</b>	<b>\$ 2,122</b>	<b>\$ 5,734</b>	<b>\$ 3,899</b>	<b>\$ 476</b>	<b>\$ 60</b>	<b>\$ (29)</b>	<b>\$ 307,278</b>	<b>\$ 305,457</b>

(1) Expenses - Directly incurred as per Statement of Operations, excluding valuation adjustments.

(2) Costs shown for Accommodation on Schedule 6, allocated by budgeted Full-Time Equivalent Employment.

(3) Costs shown for Legal Services on Schedule 6, allocated by estimated costs by each program.

(4) Costs shown for Other Services on Schedule 6 include charges for Air Transportation Services, GOA Learning Centre, and Corporate Internal Audit Services.

(5) Valuation Adjustments as per Statement of Operations. Vacation Pay is allocated by employee.

Department of Environment

Financial Statements

Year Ended March 31, 2011

## Independent Auditor's Report



To the Minister of Environment

### Report on the Financial Statements

I have audited the accompanying financial statements of the Department of Environment, which comprise the statement of financial position as at March 31, 2011, and the statements of operations and cash flows for the year then ended, and a summary of significant accounting policies and other explanatory information.

### Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with Canadian public sector accounting standards, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

### Auditor's Responsibility

My responsibility is to express an opinion on these financial statements based on my audit. I conducted my audit in accordance with Canadian generally accepted auditing standards. Those standards require that I comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my audit opinion.

### Opinion

In my opinion, the financial statements present fairly, in all material respects, the financial position of the Department of Environment as at March 31, 2011, and the results of its operations and its cash flows for the year then ended in accordance with Canadian public sector accounting standards.

Original signed by

Merwan N. Saher, CA  
Auditor General

June 2, 2011  
Edmonton, Alberta

## Statement of Operations

Year ended March 31, 2011 (in thousands)	2011		2010
	Budget (Schedule 4)	Actual	Actual
Revenues (Schedule 1)			
Internal Government Transfers	\$ 2,774	\$ 1,224	\$ 1,401
Transfers from Government of Canada	45,644	24,767	32,410
Premiums, Fees and Licenses	5,465	2,494	2,122
Other Revenue	3,248	2,606	1,437
	57,131	31,091	37,370
Expenses - Directly Incurred (Note 2(b) and Schedule 8)			
Voted (Schedules 3 and 5)			
Ministry Support Services	19,108	25,982	25,800
Environmental Assurance:			
Monitoring, Reporting and Innovation	12,095	13,567	13,209
Air and Land Policy	4,956	8,071	8,398
Climate Change	63,445	35,769	46,718
Oil Sands Innovation and Policy	4,018	5,320	7,894
Environmental Stewardship:			
Environmental Relationships, Partnerships and Strategies	6,487	6,956	15,864
Conservation and Education	2,982	3,493	5,379
Water for Life	18,926	13,203	14,513
Environmental Management:			
Resource Management	19,491	17,507	14,717
Approvals	26,508	21,117	19,920
Compliance and Enforcement	11,448	11,320	10,918
Water Operations	14,427	25,355	15,019
Emergency Response	1,308	1,358	1,531
Amortization of Tangible Capital Assets	22,361	19,775	20,089
	227,560	208,793	219,969
Statutory Programs (Schedules 3 and 5)			
Land Reclamation Program	550	315	562
Emergency Spills and Cleanups	1,324	294	339
Drought and Flood Emergencies	400	115	-
Valuation Adjustments			
Provision for Doubtful Accounts	-	60	(6)
Provision for Vacation Pay	99	476	607
Provision for Remediation and Reclamation	-	(29)	(24)
	2,373	1,231	1,478
Total Expenses	229,933	210,024	221,447
Gain (Loss) on Disposal of Tangible Capital Assets	-	(100)	-
Net Operating Results	\$ (172,802)	\$ (179,033)	\$ (184,077)

The accompanying notes and schedules are part of these financial statements.



## Statement of Financial Position

**As at March 31, 2011**  
**(in thousands)**

	2011	2010
<b>ASSETS</b>		
Cash	\$ 211	\$ 27
Accounts Receivable (Note 3)	2,051	1,793
Prepayment of Settlement (Note 4)	12,803	-
Tangible Capital Assets (Note 5)	849,376	864,194
	<b>\$ 864,441</b>	<b>\$ 866,014</b>
<b>LIABILITIES</b>		
Accounts Payable and Accrued Liabilities (Note 6)	\$ 56,508	\$ 24,222
Unearned Revenue (Note 7)	99,776	124,454
	<b>156,284</b>	<b>148,676</b>
<b>NET ASSETS</b>		
Net Assets at Beginning of Year	717,338	684,352
Net Operating Results	(179,033)	(184,077)
Net Financing Provided from General Revenues	169,852	217,063
Net Assets at End of Year	<b>708,157</b>	<b>717,338</b>
	<b>\$ 864,441</b>	<b>\$ 866,014</b>

Contractual obligations and contingent liabilities (Notes 8 and 9).

The accompanying notes and schedules are part of these financial statements.

## Statement of Cash Flows

**Year ended March 31, 2011**

<b>(in thousands)</b>	<b>2011</b>	<b>2010</b>
<b>Operating Transactions</b>		
Net Operating Results	\$ (179,033)	\$ (184,077)
Non-cash items included in Net Operating Results		
Amortization (Schedule 3)	19,775	20,089
Loss (Gain) on Disposal of Tangible Capital Assets	100	-
Valuation Adjustments	508	576
	<b>(158,650)</b>	<b>(163,412)</b>
Increase in Accounts Receivable	(318)	(959)
Decrease (Increase) in Prepayments of Settlement	(12,803)	-
Increase (Decrease) in Accounts Payable and Accrued Liabilities	31,837	(5,339)
Decrease in Unearned Revenue	(24,678)	(32,068)
Cash Applied to Operating Transactions	<b>(164,612)</b>	<b>(201,778)</b>
<b>Capital Transactions</b>		
Acquisition of Tangible Capital Assets	(2,751)	(780)
Proceeds of Disposition of Tangible Capital Assets	5	39
Transfer of Tangible Capital Assets from other Government Entities	(2,310)	(14,584)
Cash Applied to Capital Transactions	<b>(5,056)</b>	<b>(15,325)</b>
<b>Financing Transactions</b>		
Net Financing Provided from General Revenues	169,852	217,063
<b>Increase (Decrease) in Cash</b>	<b>184</b>	<b>(40)</b>
<b>Cash, Beginning of Year</b>	<b>27</b>	<b>67</b>
<b>Cash, End of Year</b>	<b>\$ 211</b>	<b>\$ 27</b>

The accompanying notes and schedules are part of these financial statements.

## Notes to the Financial Statements (in thousands)

### Note 1

#### Authority and Purpose

The Department of Environment operates under the authority of the Government Organization Act, Chapter G-10, Revised Statutes of Alberta 2000. The purpose of the department is to ensure that Alberta's environment sustains a high quality of life.

### Note 2

#### Summary of Significant Accounting Policies and Reporting Practices

These financial statements are prepared in accordance with Canadian public sector accounting standards.

##### **(a) Reporting Entity**

The reporting entity is the Department of Environment, which is part of the Ministry of Environment and for which the Minister of Environment is accountable. All departments of the Government of Alberta operate within the General Revenue Fund (the Fund). The Fund is administered by the Minister of Finance and Enterprise. All cash receipts of departments are deposited into the Fund and all cash disbursements made by departments are paid from the Fund. Net Financing provided from General Revenues is the difference between all cash receipts and all cash disbursements made.

##### **(b) Basis of Financial Reporting**

###### **Revenues**

All revenues are reported on the accrual basis of accounting. Cash received for which goods or services have not been provided by year end is recorded as unearned revenue.

###### **Internal Government Transfers**

Internal government transfers are transfers between entities within the government reporting entity where the entity making the transfer does not receive any goods or services directly in return. Internal government transfers are recognized as revenue when received.

###### **Transfers from Government of Canada**

Transfers from Government of Canada are recognized as revenue when authorized by federal legislation or federal/provincial agreements, eligibility criteria if any are met and a reasonable estimate of the amounts can be made.

###### **Credit or Recovery**

Credit or Recovery initiatives provide a basis for authorizing spending. Credits or Recoveries are shown in the details of the Government Estimates for a supply vote. If budgeted revenues are not fully realized, spending is reduced by an equivalent amount. If actual credit or recovery amounts exceed budget, the department may, with the approval of the Treasury Board Committee, use the excess to fund additional expenses of the program. Schedule 2 discloses information on the department's credit or recovery initiatives.

## Notes to the Financial Statements (in thousands)

### Note 2

## Summary of Significant Accounting Policies and Reporting Practices

### (b) Basis of Financial Reporting (continued)

#### **Expenses**

##### **Directly Incurred**

Directly incurred expenses are those costs the department has primary responsibility and accountability for, as reflected in the Government's budget documents.

In addition to program operating expenses such as salaries, supplies, etc., directly incurred expenses also include:

- Amortization of tangible capital assets.
- Pension costs, which are the cost of employer contributions for current service of employees during the year.
- Valuation adjustments which include changes in the valuation allowances used to reflect financial assets at their net recoverable or other appropriate value. Valuation adjustments also represent the change in management's estimate of future payments arising from obligations relating to vacation pay.

Grants are recognized as expenses when authorized, eligibility criteria, if any, are met and a reasonable estimate of the amount can be made.

##### **Incurred by Others**

Services contributed by other entities in support of the Department operations are disclosed in Schedule 7 and allocated to programs in Schedule 8.

##### **Assets**

Financial assets are assets that could be used to discharge existing liabilities or finance future operations and are not for consumption in the normal course of operations. Financial assets of the Department are limited to financial claims, such as advances to and receivables from other organizations, employees and other individuals.

Assets acquired by right are not included. Tangible capital assets of the department are recorded at historical cost and amortized on a straight-line basis over the estimated useful lives of the assets. The threshold for capitalizing new systems development is \$250 and the threshold for major system enhancements is \$100. The threshold for all other tangible capital assets is \$5. All land is capitalized.

##### **Liabilities**

Liabilities are recorded to the extent that they represent present obligations as a result of events and transactions occurring prior to the end of the fiscal year. The settlement of liabilities will result in sacrifice of economic benefits in the future.

Environmental liabilities arise from the obligation to clean up contaminated sites (remediation) or to return disturbed land to an equivalent use (reclamation). A remediation or reclamation liability is recognized when the department is obligated to incur such costs and an amount can be reasonably estimated.

##### **Net Assets/Net Liabilities**

Net assets/net liabilities represents the difference between the carrying value of assets held by the department and its liabilities.

## Notes to the Financial Statements (in thousands)

### Note 2 Summary of Significant Accounting Policies and Reporting Practices

#### (b) Basis of Financial Reporting (continued)

##### ***Valuation of Financial Assets and Liabilities***

Fair value is the amount of consideration agreed upon in an arm's length transaction between knowledgeable, willing parties who are under no compulsion to act.

The fair values of cash, accounts receivable, advances, and accounts payable and accrued liabilities are estimated to approximate their carrying values because of the short term nature of these instruments.

### Note 3 Accounts Receivable

	2011			2010
	Gross Amount	Allowance for Doubtful Accounts	Net Realizable Value	Net Realizable Value
Other Sources	\$ 1,600	\$ 37	\$ 1,563	\$ 1,386
Transfer from the Environmental Protection and Enhancement Fund	488	-	488	407
	\$ 2,088	\$ 37	\$ 2,051	\$ 1,793

Accounts receivable are unsecured and non-interest bearing.

## Notes to the Financial Statements (in thousands)

## Note 4 Prepayment of Settlement

The amount of \$12,803 represents a prepayment for future access rights under the Bassano Dam settlement agreement with the Siksika Nation. The prepaid access rights will be expensed annually over the next fourteen years as follows: \$1,088 annually for the next three years, \$1,537 in the fourth year and \$1,025 annually for the remaining ten years.

## Note 5 Tangible Capital Assets

	Buildings	Equipment* & Software	Computer Hardware & Software	Land Improvements	Bridges	Dam & Water Management Structures**	2011 Total	2010 Total
<b>Estimated Useful Life</b>	10 years	3-10 years	5-10 years	40 years	50 years	25-80 years		
<b>Historical Cost***</b>								
Beginning of year	\$ 4	\$ 14,775	\$ 20,692	\$ 110	\$ 469	\$ 1,182,743	\$ 1,218,793	\$ 1,203,468
Additions	-	2,019	456	184	13	2,389	5,061	15,364
Disposals, including write downs	-	(94)	(614)	-	-	(8)	(716)	(39)
	\$ 4	\$ 16,700	\$ 20,534	\$ 294	\$ 482	\$ 1,185,124	\$ 1,223,138	\$ 1,218,793
<b>Accumulated Amortization</b>								
Beginning of year	\$ 1	\$ 7,549	\$ 18,061	\$ 10	\$ 103	\$ 328,875	\$ 354,599	\$ 334,510
Amortization Expense	1	1,605	(45)	7	10	18,197	19,775	20,089
Effect of disposals	-	(90)	(521)	-	-	-	(611)	-
	\$ 2	\$ 9,064	\$ 17,495	\$ 17	\$ 113	\$ 347,072	\$ 373,763	\$ 354,599
<b>Net Book Value at March 31, 2011</b>	\$ 2	\$ 7,636	\$ 3,039	\$ 277	\$ 369	\$ 838,052	\$ 849,375	
<b>Net Book Value at March 31, 2010</b>	\$ 3	\$ 7,226	\$ 2,631	\$ 99	\$ 366	\$ 853,869		\$ 864,194

\* Equipment includes vehicles, office, laboratory, heavy equipment and mobile equipment.

\*\* Dams and water management structures include dams, reservoirs, weirs, canals, dykes, ditches, channels, diversions, cut-offs, pump houses and erosion protection structures, which are constructed by the Ministry of Transportation and transferred to the Ministry of Environment upon their completion.

\*\*\*Historical cost includes work-in-progress at March 31, 2011 totalling \$3,067 comprised of: equipment \$1,598 (2010 - \$335); computer hardware and software \$1,406 (2010 - \$1,471); and dam improvements \$63 (2010 - \$9,491).

## Notes to the Financial Statements (in thousands)

### Note 5 Tangible Capital Assets (continued)

Changes to tangible capital assets were as follows:

	2011	2010
Net Book Value at Beginning of Year	\$ 864,194	\$ 868,958
Purchase of Tangible Capital Assets	2,751	780
Net Book Value of Disposals and Write Downs	(105)	(39)
Transfer with Other Government Entities	2,310	14,584
Amortization of Tangible Capital Assets	(19,775)	(20,089)
Net Book Value at End of Year	\$ 849,375	\$ 864,194

### Note 6 Accounts Payable and Accrued Liabilities

As at March 31, 2011 the department has the following accounts payable and accrued liabilities:

	2011	2010
General Accounts Payable	\$ 2,898	\$ 3,766
Accrued Liabilities	41,807	9,040
Site Remediation and Reclamation Obligations	1,251	1,307
Hold Back Liability	119	152
Accrued Vacation Pay	10,433	9,957
	\$ 56,508	\$ 24,222

### Note 7 Unearned Revenue

As at March 31, 2011 the department has the following unearned revenues:

	2011	2010
Canada ecoTrust for Clean Air and Climate Change	\$ 98,683	\$ 123,450
Unearned Lease and Water Power Rental Agreement Revenues	605	622
Unearned Reclamation Certificates	488	382
	\$ 99,776	\$ 124,454

## Notes to the Financial Statements (in thousands)

### Note 8 Contractual Obligations

Contractual obligations are obligations of the department to others that will become liabilities in the future when the terms of those contracts or agreements are met.

As at March 31, 2011 the department has the following contractual obligations:

	2011	2010
Service contracts (a) (b) (c)	\$ 9,035	\$ 7,894
Long term leases (d)	329	1,243
Grants (e)		
Waste Management Assistance Program	-	1,065
Canada ecoTrust for Clean Air and Climate Change	33,200	53,900
Various Other Programs	131	189
	\$ 42,695	\$ 64,291

- (a) The department has a contractual obligation with the Piikani Nation of \$800 in 2011, and \$800 adjusted annually by the Consumer Price Index every year thereafter.
- (b) The department has a contractual obligation with the Siksika Nation of \$127 based on 1984 constant dollars. This amount is adjusted annually by the preceding year's rate of change calculated from the GDP index every year thereafter.
- (c) The department has multi-year service contract commitments as follows:

2011-12	\$ 7,848
2012-13	442
2013-14	447
2014-15	192
2015-16	6
Thereafter	100
<b>Total</b>	<b>\$ 9,035</b>

- (d) The department leases certain equipment under operating leases that expire on various dates to 2013. The aggregate amounts payable for the unexpired terms of these leases are as follows:

2011-12	\$ 207
2012-13	122
<b>Total</b>	<b>\$ 329</b>

- (e) The department has multi-year grant commitments as follows:

2011-12	\$ 25,366
2012-13	7,965
<b>Total</b>	<b>\$ 33,331</b>



## Notes to the Financial Statements (in thousands)

### Note 9 Contingent Liabilities

At March 31, 2011, the department is a defendant in fifteen legal claims (2010 – twenty two legal claims). Eleven of these claims have specified amounts totalling \$235,049 and the remaining four have no specified amount (2010 – fifteen claims with specified amounts totalling \$295,985 and the remaining seven have no specified amount). Included in the total legal claims are five claims in which the department has been named as the sole defendant (2010 – three legal claims). All five claims have specified amounts totalling \$21,538 (2010 – three claims with specified amounts totalling \$18,446).

In addition, there are ten claims in which the department has been jointly named with other entities (2010 – seventeen legal claims). Six of these claims have specified amounts totalling \$213,511 (2010 – ten claims totalling \$277,283) including one claim totalling \$202,150 which is partially covered at 25 per cent by the Alberta Risk Management Fund (2010 – one claim totalling \$202,150). The remaining four claims have no specified amount (2010 – seven claims with no specified amount). No claims are fully covered by the Alberta Risk Management Fund (2010 – two claims with specified amounts totalling \$256).

The resulting loss, if any, from these claims cannot be determined.

### Note 10 Trust Fund Under Administration

The department administers a trust fund that is a regulated fund consisting of public money over which the Legislature has no power of appropriation. Because the Province has no equity in the fund and administers it for the purpose of the trust, it is not included in the department's financial statements.

At March 31, 2011, the trust fund under administration is as follows:

	2011	2010
Environmental Protection Security Fund	\$ 14,800	\$ 13,630

In addition to the above trust fund under administration, the department holds bank guarantees in the form of letters of credit and promissory notes in the amount of \$1,245,262 (2010 - \$1,260,107). The majority of these guarantees are held to assure satisfactory reclamation of coal and oil sands operations, sand and gravel pits, landfills, hazardous waste management and hazardous recyclable facilities.

## Notes to the Financial Statements (in thousands)

### Note 11 Benefit Plans

The department participates in the multi-employer pension plans: Management Employees Pension Plan and Public Service Pension Plan. The department also participates in the multi-employer Supplementary Retirement Plan for Public Service Managers. The expense for these pension plans is equivalent to the annual contributions of \$9,530 for the year ended March 31, 2011 (2010 – \$8,418).

At December 31, 2010, the Management Employees Pension Plan reported a deficiency of \$397,087 (2009 – deficiency \$483,199) and the Public Service Pension Plan reported a deficiency of \$2,067,151 (2009 – deficiency \$1,729,196).

At December 31, 2010, the Supplementary Retirement Plan for Public Service Managers had a deficiency of \$39,559 (2009 – deficiency \$39,516).

The department also participates in two multi-employer Long Term Disability Income Continuance Plans. At March 31, 2011, the Bargaining Unit Plan reported an actuarial deficiency of \$4,141 (2010 – deficiency \$8,335) and the Management, Opted Out and Excluded Plan an actuarial surplus of \$7,020 (2010 – surplus \$7,431). The expense for these two plans is limited to the employer's annual contributions for the year.

### Note 12 Comparative Figures

Certain 2010 figures have been reclassified to conform to the 2011 presentation.

### Note 13 Approval of Financial Statements

The financial statements were approved by the Senior Financial Officer and the Deputy Minister.

## Schedule to Financial Statements

**Revenues**
**Schedule 1**

Year ended March 31, 2011

(in thousands)

	2011		2010
	Budget	Actual	Actual
Internal Government Transfers			
Transfer from Environmental Protection and Enhancement Fund	\$ 2,274	\$ 724	\$ 901
Transfers from the Lottery Fund	500	500	500
Transfers from Government of Canada			
Canada ecoTrust for Clean Air and Climate Change	45,644	24,767	32,410
	48,418	25,991	33,811
Premiums, Fees and Licenses			
Land and Grazing	55	53	65
Reclamation Certificates	3,500	1,204	690
Water Power Rentals	650	706	777
Other	1,260	531	590
	5,465	2,494	2,122
Other Revenue			
Refunds of Expenditure	-	981	296
Water Resources	2,900	1,358	977
Other	348	267	164
	3,248	2,606	1,437
<b>Total Revenues</b>	<b>\$ 57,131</b>	<b>\$ 31,091</b>	<b>\$ 37,370</b>

## Schedule to Financial Statements

**Credit or Recovery****Schedule 2**

Year ended March 31, 2011

(in thousands)

	2011		(Shortfall) / Excess
	Authorized	Actual	
Reclamation Certificate	\$ 3,500	\$ 1,143	\$ (2,357)
Remediation Certificate	660	36	(624)
Water Management Infrastructure	2,900	1,104	(1,796)
	\$ 7,060	\$ 2,283	\$ (4,777) <sup>(1)</sup>

- (1) Shortfall is deducted from current year's authorized budget, as disclosed in schedules 4 and 5 to the financial statements.

The Reclamation Certificate credit or recovery initiative refers to the costs of conducting audits at sites that are certified under the upstream oil and gas reclamation program. Revenues are received through a reclamation certificate application fee.

The Remediation Certificate credit or recovery initiative refers to the costs of conducting site audits that are certified under Alberta Environment's new Remediation Certificate Regulation. Revenues are received through a remediation site certificate application fee.

The Water Management Infrastructure credit or recovery initiative refers to the maintenance and upgrading of the provincial water management infrastructure system. Revenues are received through the Use of Works Agreements whereby developers pay an annual fee to the Province.

The credits or recoveries presented in this schedule are included in the department's Statement of Operations.

## Schedule to Financial Statements

### Expenses - Directly Incurred Detailed by Object

### Schedule 3

Year ended March 31, 2011

(in thousands)

	2011		2010
	Budget	Actual	Actual
<b>Voted:</b>			
Salaries, Wages and Employee Benefits	\$ 98,924	\$ 97,603	\$ 96,592
Supplies and Services	44,986	42,181	41,501
Grants	61,045	49,004	61,549
Financial Transactions and Other	244	230	238
Amortization of Tangible Capital Assets	22,361	19,775	20,089
	<b>\$ 227,560</b>	<b>\$ 208,793</b>	<b>\$ 219,969</b>
<b>Statutory:</b>			
Salaries, Wages and Employee Benefits	\$ -	\$ -	\$ 26
Supplies and Services	2,274	724	875
Grants	-	-	-
<b>Valuation Adjustments</b>			
Provision for Doubtful Accounts	-	60	(6)
Provision for Vacation Pay	99	476	607
Provision for Remediation and Reclamation	-	(29)	(24)
	<b>\$ 2,373</b>	<b>\$ 1,231</b>	<b>\$ 1,478</b>

## Schedule to Financial Statements

**Budget**Year ended March 31, 2011  
(in thousands)**Schedule 4**

	2010-2011 Estimates	Adjustment (a)	2010-2011 Budget	Authorized Supplementary (b)	2010-2011 Authorized Budget
<b>Revenues</b>					
Internal Government Transfers	\$ 2,774	-\$	2,774	\$ -	2,774
Transfers from Government of Canada	45,644	-	45,644	-	45,644
Premiums, Fees and Licenses	5,465	-	5,465	-	5,465
Other Revenue	3,248	-	3,248	-	3,248
	57,131	-	57,131	-	57,131
<b>Expenses - Directly Incurred</b>					
<b>Voted Expenses</b>					
Ministry Support Services	19,108	-	19,108	-	19,108
Environmental Assurance:					
Monitoring, Reporting and Innovation	12,095	-	12,095	-	12,095
Air and Land Policy	4,956	-	4,956	-	4,956
Climate Change	63,445	-	63,445	(7,869)	55,576
Oilsands Innovation and Policy	4,018	-	4,018	-	4,018
Environmental Stewardship:					
Environmental Relationships, Partnerships and Strategies	6,487	-	6,487	-	6,487
Conservation and Education	2,982	-	2,982	-	2,982
Water for Life	18,926	-	18,926	-	18,926
Environmental Management:					
Resource Management	19,491	-	19,491	-	19,491
Approvals	26,508	-	26,508	-	26,508
Compliance and Enforcement	11,448	-	11,448	-	11,448
Water Operations	14,427	-	14,427	9,539	23,966
Emergency Response	1,308	-	1,308	-	1,308
Amortization of Tangible Capital Assets	22,361	-	22,361	-	22,361
Credit or Recovery Shortfall (Schedule 2)	-	(4,777)	(4,777)	-	(4,777)
	227,560	(4,777)	222,783	1,670	224,453
Land Reclamation Program	550	-	550	-	550
Emergency Spills and Cleanups	1,324	-	1,324	-	1,324
Drought and Flood Emergencies	400	-	400	-	400
Valuation Adjustments					
Provision for Vacation Pay	99	-	99	-	99
	2,373	-	2,373	-	2,373
	229,933	(4,777)	225,156	1,670	226,826
<b>Net Operating Results</b>	<b>\$ (172,802)</b>	<b>\$ 4,777</b>	<b>\$ (168,025)</b>	<b>\$ (1,670)</b>	<b>\$ (169,695)</b>
Equipment / Inventory Purchases	\$ 1,344	-\$	1,344	-\$	1,344
<b>Non-Budgetary Disbursements</b>	<b>\$ 800</b>	<b>-\$</b>	<b>800</b>	<b>\$ 12,803</b>	<b>\$ 13,603</b>

(a) Adjustment includes Credit or Recovery Shortfall.

(b) Supplementary Estimates of \$1,670 (voted) and \$12,803 (non-budgetary) were approved on March 14, 2011. Treasury Board approval is pursuant to section 24(2) of the *Financial Administration Act*.

## Schedule to Financial Statements

**Comparison of Expenses - Directly Incurred, Equipment/Inventory Purchases, Statutory Expenses, and Non-Budgetary Disbursements by Element to Authorized Budget**

Schedule 5

Year ended March 31, 2011

(in thousands)

	2010-11 Estimates	Adjustments (a)	2010-11 Budget	Authorized Supplementary (b)	2010-11 Authorized Budget (c)	2010-11 Actual Expense	Unexpended (Over Expended)
<b>Voted Expenses and Capital Investment</b>							
<b>Voted Expenses and Equipment / Inventory Purchases</b>							
<b>Ministry Support Services</b>							
1.0.1 Minister's Office	\$ 598	\$ -	\$ 598	\$ -	\$ 598	\$ 560	\$ 38
1.0.2 Cabinet Policy Committee on Resources and the Environment	135	-	135	-	135	194	(59)
1.0.3 Deputy Minister's Office	767	-	767	-	767	783	(16)
1.0.4 Communications	1,267	-	1,267	-	1,267	1,285	(18)
1.0.5 People Services	1,899	-	1,899	-	1,899	2,064	(165)
1.0.6 Legal Services	265	-	265	-	265	174	91
1.0.7 Finance and Administration	3,853	-	3,853	-	3,853	5,292	(1,439)
1.0.8 Strategic Support and Integration							
- Expense	9,289	-	9,289	-	9,289	13,867	(4,578)
- Equipment / Inventory Purchases	385	-	385	-	385	798	(413)
1.0.9 Corporate Costs	1,035	-	1,035	-	1,035	1,763	(728)
<b>TOTAL PROGRAM 1</b>	<b>19,493</b>	<b>-</b>	<b>19,493</b>	<b>-</b>	<b>19,493</b>	<b>26,780</b>	<b>(7,287)</b>
<b>Environmental Assurance</b>							
2.0.1 Monitoring, Reporting and Innovation	12,095	-	12,095	-	12,095	13,567	(1,472)
2.0.2 Air and Land Policy	4,956	-	4,956	-	4,956	8,071	(3,115)
2.0.3 Climate Change	63,445	-	63,445	(7,869)	55,576	35,769	19,807
2.0.4 Oil Sands Innovation and Policy							
- Expense	4,018	-	4,018	-	4,018	5,320	(1,302)
- Equipment / Inventory Purchases	-	-	-	-	-	268	(268)
<b>TOTAL PROGRAM 2</b>	<b>84,514</b>	<b>-</b>	<b>84,514</b>	<b>(7,869)</b>	<b>76,645</b>	<b>62,996</b>	<b>13,650</b>
<b>Environmental Stewardship</b>							
3.0.1 Environmental Relationships, Partnerships and Strategies	6,487	-	6,487	-	6,487	6,956	(469)
3.0.2 Conservation and Education							
- Expense	2,482	-	2,482	-	2,482	2,993	(511)
- Expense funded by Lotteries	500	-	500	-	500	500	-
3.0.3 Water For Life							
- Expense	18,926	-	18,926	-	18,926	13,203	5,723
- Equipment / Inventory Purchases	959	-	959	-	959	1,539	(580)
<b>TOTAL PROGRAM 3</b>	<b>29,354</b>	<b>-</b>	<b>29,354</b>	<b>-</b>	<b>29,354</b>	<b>25,191</b>	<b>4,163</b>

## Schedule to Financial Statements

**Comparison of Expenses - Directly Incurred, Equipment/Inventory Purchases, Statutory Expenses, and Non-Budgetary Disbursements by Element to Authorized Budget**
**Schedule 5  
(continued)**
**Year ended March 31, 2011  
(in thousands)**

	2010-11 Estimates	Adjustments (a)	2010-11 Budget	Authorized Supplementary (b)	2010-11 Authorized Budget (c)	2010-11 Actual Expense	Unexpended (Over Expended)
<b>Environmental Management</b>							
4.0.1 Resource Management	19,491	-	19,491	-	19,491	17,507	1,984
4.0.2 Approvals	26,508	-	26,508	-	26,508	21,117	5,391
4.0.3 Compliance and Enforcement	11,448	-	11,448	-	11,448	11,320	128
4.0.4 Water Operations							
- Expense	14,427	-	14,427	9,539	23,966	25,355	(1,389)
- Equipment / Inventory Purchases	-	-	-	-	-	79	(79)
4.0.5 Emergency Response							
- Expense	1,308	-	1,308	-	1,308	1,358	(50)
- Equipment / Inventory Purchases	-	-	-	-	-	67	(67)
4.0.6 Amortization of Tangible Capital Assets	22,361	-	22,361	-	22,361	19,775	2,586
<b>TOTAL PROGRAM 4</b>	<b>95,543</b>	<b>-</b>	<b>95,543</b>	<b>9,539</b>	<b>105,082</b>	<b>96,578</b>	<b>8,504</b>
Credit or Recovery Shortfall (Schedule 2)	-	(4,777)	(4,777)	-	(4,777)	-	(4,777)
	\$ -	\$ (4,777)	\$ (4,777)	\$ -	\$ (4,777)	\$ -	\$ (4,777)
<b>Operating Expense</b>	227,560	(4,777)	222,783	1,670	224,453	208,793	15,660
<b>Equipment / Inventory Purchases</b>	1,344	-	1,344	-	1,344	2,751	(1,407)
	\$ 228,904	\$ (4,777)	\$ 224,127	\$ 1,670	\$ 225,797	\$ 211,544	\$ 14,253
<b>Statutory Expenses</b>							
Land Reclamation Program	\$ 550	\$ -	\$ 550	\$ -	\$ 550	\$ 315	\$ 235
Emergency Spills and Cleanups	1,324	-	1,324	-	1,324	294	1,030
Drought and Flood Emergencies	400	-	400	-	400	115	285
Valuation Adjustments	99	-	99	-	99	507	(408)
	\$ 2,373	\$ -	\$ 2,373	\$ -	\$ 2,373	\$ 1,231	\$ 1,142
<b>Non-Budgetary Disbursements</b>							
Environmental Relationships, Partnerships and Strategies	700	-	700	-	700	700	-
Approvals	100	-	100	-	100	27	73
Water Operations	-	-	-	12,803	12,803	12,803	-
	\$ 800	\$ -	\$ 800	\$ 12,803	\$ 13,603	\$ 13,530	\$ 73

(a) Adjustments include Credit or Recovery shortfall.

(b) Supplementary Estimates of \$1,670 (voted) and \$12,803 (non-budgetary) were approved on March 14, 2011. Treasury Board approval is pursuant to section 24(2) of the *Financial Administration Act*.



## Schedule to Financial Statements

## Salary and Benefits Disclosure

## Schedule 6

Year ended March 31, 2011

	2011				2010
	Base Salary <sup>(1)</sup>	Other Cash Benefits <sup>(2)</sup>	Other Non-cash Benefits <sup>(3)</sup>	Year-End Total	Year-End Total <sup>(7)</sup>
Deputy Minister <sup>(4)</sup>	\$ 264,576	\$ 1,750	\$ 63,905	\$ 330,231	\$ 324,784
Assistant Deputy Ministers					
Strategy <sup>(5)</sup>	185,472	1,750	43,913	231,135	228,466
Policy <sup>(5)</sup>	168,900	1,750	40,617	211,267	208,859
Monitoring and Science <sup>(5),(6)</sup>	22,375	1,750	7,569	31,694	-
Operations <sup>(5)</sup>	164,706	1,750	40,249	206,705	261,613
Corporate <sup>(5)</sup>	170,544	1,750	41,702	213,966	212,139
Executive Directors					
Finance and Administration Division	149,964	1,750	37,436	189,150	187,112
People and Learning <sup>(5)</sup>	147,172	1,750	36,224	185,146	188,644
Corporate Performance <sup>(5)</sup>	151,836	1,750	37,106	190,692	58,482
Information Management and Technology <sup>(5)</sup>	149,964	1,750	36,955	188,669	186,583

**Prepared in accordance with Treasury Board Directive 12/98 as amended.**

- (1) Base salary includes regular base pay.
- (2) Other cash benefits include bonuses, vacation payouts, overtime and lump sum payments. There were no bonuses paid in 2011.
- (3) Other non-cash benefits include government's share of all employee benefits and contributions or payments made on behalf of employees including pension, supplementary retirement plans, health care, dental coverage, group life insurance short and long term disability plans, professional memberships and tuition fees.
- (4) Automobile provided, no dollar amount included in other non-cash benefits.
- (5) A ministry realignment occurred on December 1, 2010. Strategy, Policy, Monitoring and Science, Operations, Corporate, People and Learning, Corporate Performance, and Information Management and Technology were formerly called Environmental Assurance, Environmental Stewardship, Environmental Management, Strategic Support and Integration, People Services, Performance Leadership, and Chief Information Officer and Integrated Information Solutions, respectively.
- (6) The incumbent became a part of the Executive Team on January 28, 2011.
- (7) The amounts previously reported have been restated due to a reporting error resulting from the change to bi-weekly payments.

## Schedule to Financial Statements

**Related Party Transactions**

Year Ended March 31, 2011

(in thousands)

**Schedule 7**

Related parties are those entities consolidated or accounted for on the modified equity basis in the Province of Alberta's financial statements. Related parties also include management in the department.

The department and its employees paid or collected certain taxes and fees set by regulation for permits, licences and other charges. These amounts were incurred in the normal course of business, reflect charges applicable to all users, and have been excluded from this Schedule.

The department had the following transactions with related parties recorded on the Statement of Operations and the Statement of Financial Position at the amount of consideration agreed upon between the related parties:

	Other Entities	
	2011	2010
Revenue		
Internal Government Transfers	\$ 1,224	\$ 1,401
	\$ 1,224	\$ 1,401
Expenses - Directly Incurred		
Grants	\$ 10,650	\$ 5,065
Other Services	3,141	3,730
	\$ 13,791	\$ 8,795
Tangible Capital Assets Transferred In	\$ 2,310	\$ 14,583
Payable to	\$ 618	\$ 393
Receivable from	\$ 488	\$ 407
Contractual Obligations	\$ 113	\$ 493

The department also had the following transactions with related parties for which no consideration was exchanged. The amounts for these related party transactions are estimated based on the costs incurred by the service provider to provide the service. These amounts are not recorded in the financial statements but are disclosed in Schedule 8.

	Other Entities	
	2011	2010
Expenses - Incurred by Others		
Accommodation	\$ 9,358	\$ 9,623
Legal	2,122	2,076
Water Management Infrastructure Maintenance	5,734	5,750
Other Services	253	215
Service Alberta	3,646	5,896
	\$ 21,113	\$ 23,560

## Schedule to Financial Statements

## Allocated Costs

 Year ended March 31, 2011  
 (in thousands)

## Schedule 8

Program	2011									2010
	Expenses <sup>(1)</sup>	Expenses - Incurred by Others				Valuation Adjustments			Expenses	Expenses
		Accommodation Costs <sup>(2)</sup>	Legal Services <sup>(3)</sup>	Water Management Infrastructure Maintenance	Other Services <sup>(4)</sup> and Service Alberta	Vacation Pay <sup>(5)</sup>	Doubtful Accounts	Remediation and Reclamation		
Ministry Support Services	\$ 25,982	\$ 1,732	\$ 579	\$ -	\$ 3,899	\$ (86)	\$ 60	\$ -	\$ 32,166	\$ 34,082
Monitoring, Reporting and Innovation	13,567	788	29	-	-	(20)	-	-	14,364	14,151
Air and Land Policy	8,071	630	12	-	-	(10)	-	-	8,703	8,993
Climate Change	35,769	158	134	-	-	67	-	-	36,128	47,016
Oil Sands Innovation and Policy	5,320	284	31	-	-	(130)	-	-	5,505	8,293
Reclamation & Emergency Preparedness	724	-	-	-	-	-	-	-	724	901
Environmental Relationships, Partnerships & Strategies	6,956	357	28	-	-	(55)	-	-	7,286	16,686
Conservation and Education	3,493	231	13	-	-	18	-	-	3,755	5,634
Water for Life	13,203	158	82	-	-	(120)	-	-	13,323	14,616
Resource Management	17,507	1,040	323	-	-	518	-	-	19,388	16,280
Approvals	21,117	1,786	440	-	-	239	-	(29)	23,553	22,227
Compliance and Enforcement	11,320	1,155	190	-	-	35	-	-	12,700	12,270
Water Operations	25,355	966	239	5,734	-	26	-	-	32,320	22,103
Emergency Response	1,358	73	22	-	-	(6)	-	-	1,447	1,667
Amortization of Tangible Capital Assets	19,775	-	-	-	-	-	-	-	19,775	20,089
	<b>\$ 209,517</b>	<b>\$ 9,358</b>	<b>\$ 2,122</b>	<b>\$ 5,734</b>	<b>\$ 3,899</b>	<b>\$ 476</b>	<b>\$ 60</b>	<b>\$ (29)</b>	<b>\$ 231,137</b>	<b>\$ 245,008</b>

(1) Expenses - Directly incurred as per Statement of Operations, excluding valuation adjustments.

(2) Costs shown for Accommodation on Schedule 7, allocated by budgeted Full-Time Equivalent Employment.

(3) Costs shown for Legal Services on Schedule 7, allocated by estimated costs by each program.

(4) Costs shown for Other Services on Schedule 7 include charges for Air Transportation Services, GOA Learning Centre, and Corporate Internal Audit Services.

(5) Valuation Adjustments as per Statement of Operations. Vacation Pay is allocated by employee.

Climate Change and  
Emissions Management Fund

Financial Statements

Year Ended March 31, 2011

## Independent Auditors Report



To the Minister of Environment

### Report on the Financial Statements

I have audited the accompanying financial statements of the Climate Change and Emissions Management Fund, which comprise the statement of financial position as at March 31, 2011, and the statements of operations and cash flows for the year then ended, and a summary of significant accounting policies and other explanatory information.

### Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with Canadian public sector accounting standards, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

### Auditor's Responsibility

My responsibility is to express an opinion on these financial statements based on my audit. I conducted my audit in accordance with Canadian generally accepted auditing standards. Those standards require that I comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my audit opinion.

### Opinion

In my opinion, the financial statements present fairly, in all material respects, the financial position of the Climate Change and Emissions Management Fund as at March 31, 2011, and the results of its operations and its cash flows for the year then ended in accordance with Canadian public sector accounting standards.

Original signed by

Merwan N. Saher, CA  
Auditor General

June 2, 2011  
Edmonton, Alberta

## Statement of Operations

Year ended March 31, 2011  
(in thousands)

	2011		2010
	Budget	Actual	Actual
Revenues (Note 2(b))			
Facility Purchases of Fund Units by Sector			
Mining, Oil and Gas Extraction	\$ 38,000	\$ 41,074	\$ 29,651
Utilities	29,000	25,065	21,870
Manufacturing	5,000	6,561	3,869
Transportation and Warehousing	6,000	3,076	4,301
Waste Management and Remediation	-	-	(134)
Investment Income	-	365	892
<b>Total Revenues</b>	<b>78,000</b>	<b>76,141</b>	<b>60,449</b>
Expenses (Note 2(b))			
Administration	2,000	1,026	1,018
Grant to the Climate Change and Emissions Management Corporation	76,000	75,115	59,431
<b>Total Expenses</b>	<b>78,000</b>	<b>76,141</b>	<b>60,449</b>
<b>Net Operating Results</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>

The accompanying notes are part of these financial statements.

## Statement of Financial Position

As at March 31, 2011  
(in thousands)

	2011	2010
<b>ASSETS</b>		
Cash (Note 3)	\$ 68,867	\$ 45,887
Accounts Receivable (Note 4)	22,326	32,972
	\$ 91,193	\$ 78,859
<b>LIABILITIES</b>		
Accounts Payable and Accrued Liabilities	\$ 91,193	\$ 78,859
	91,193	78,859
<b>NET ASSETS</b>		
Net Assets at Beginning of Year	-	-
Net Operating Results	-	-
Net Assets at End of Year	-	-
	\$ 91,193	\$ 78,859

The accompanying notes are part of these financial statements.

## Statement of Cash Flows

Year ended March 31, 2011  
(in thousands)

	2011	2010
<b>Operating Transactions</b>		
Net Operating Results	\$ -	\$ -
	-	-
Decrease in Accounts Receivable	10,646	21,126
Increase (Decrease) in Accounts Payable and Accrued Liabilities	12,334	(66,754)
Cash Provided (Applied to) by Operating Transactions	22,980	(45,628)
<b>Increase (Decrease) in Cash</b>	22,980	(45,628)
<b>Cash, Beginning of Year</b>	45,887	91,515
<b>Cash, End of Year</b>	\$ 68,867	\$ 45,887

The accompanying notes are part of these financial statements.



## Notes to the Consolidated Financial Statements (in thousands)

### Note 1

#### Authority and Purpose

The Climate Change and Emissions Management Fund (CCEMF) operates under the authority of the *Climate Change and Emissions Management Act*, Chapter C-16.7.

The CCEMF may be used only for purposes related to reducing emissions of specified gases or improving Alberta's ability to adapt to climate change.

The CCEMF operates as follows:

- Revenues in the CCEMF are primarily from purchases of fund units (\$15 per tonne) used in meeting net emissions intensity limits. Facilities can also make improvements to their operations, purchase Alberta based offsets, or use emission performance credits. Emissions intensity is the ratio of greenhouse gas emissions to facilities' production for the period.
- Emissions measurement involves the use of different methodologies including estimation techniques and use of emission factors. Such techniques can involve using equipment with varying degrees of precision. Use of different techniques and emission factors will produce different results.
- Management has provided guidance to facilities and verifiers for the calculation and verification of emissions intensity. Every facility submitting a compliance report is required to have a third party verify the report at a limited level of assurance. In a limited level of assurance engagement, verifiers perform procedures with the objective of assessing whether the information reported by facilities is plausible within the framework of the guidance provided by management.

The systems and processes including the offsets purchased by facilities are new and complex.

Management believes that as the system evolves, and more guidance is developed, the calculation of emissions intensity will be refined through improved methodologies and data quality.

Management's guidance to the tillage offset verifiers allows the verifiers to rely on the offset project developers' written attestations and records as evidence that the offsets are valid. Management is in the process of revising its guidance to require verifiers to collect sufficient evidence to support claims for tillage offsets beginning with the 2012 compliance period.

### Note 2

#### Summary of Significant Accounting Policies and Reporting Practices

These financial statements are prepared in accordance with Canadian public sector accounting standards.

##### (a) Reporting Entity

The reporting entity is the CCEMF for which the Minister of Environment is accountable.

##### (b) Basis of Financial Reporting

###### **Revenues**

All revenues are reported on the accrual basis of accounting.

###### i) Facility Purchases of Fund Units

These revenues are measured from amounts assessed by management and from estimates of amounts not yet assessed based on cash received from facilities that relates to compliance period ended December 31. Revenues also include adjustments between the revenue estimates for previous years and actual amounts. Revenues do not include an estimate of adjustments to amounts not yet assessed because it cannot be reliably determined.

## Notes to the Consolidated Financial Statements (in thousands)

### Note 2 Summary of Significant Accounting Policies and Reporting Practices

#### **(b) Basis of Financial Reporting (continued)**

##### i) Facility Purchases of Fund Units

Management has adopted a regulatory threshold on emissions and production reported per facility when calculating emissions intensity. This threshold requires facilities to correct and re-verify submissions where errors exceed the threshold. Management can require errors below the threshold to be corrected. Uncorrected errors below the threshold have not been quantified.

##### ii) Completeness of Revenues from Facility Purchases of Fund Units

Facilities submitting compliance reports are expected to understand and comply with the relevant legislation. This has an impact on the completeness of revenue when facilities do not fully meet the legislative requirements and, for example, report inaccurate or incomplete emissions or production data. Management has implemented systems and processes to detect and correct situations where facilities have not complied with the legislation. These systems and controls, based on areas of highest risk, include performing verifications of facility and offset project records. Management does not estimate the effect of misrepresented revenue.

#### **Measurement Uncertainty**

Measurement uncertainty exists when there is a variance between the recognized or disclosed amount and another reasonably possible amount. The preparation of these financial statements requires management to make estimates and assumptions that affect the amounts of assets, liabilities, revenues and expenses reported.

The Revenues from Facility Purchases of Fund Units and accounts receivable in these financial statements are subject to measurement uncertainty because methodologies including estimation techniques and emission factors are used in emissions measurement.

Revenues not yet assessed by management and the related accounts receivable are recorded based on cash received from facilities.

Revenues and accounts receivable also include an estimate of \$18,371 for the amounts owing for the period January 1 to March 31, 2011 (2010 - \$16,078). Management estimated this amount as 25% of revenues for the 2010 compliance period. Actual results could vary by a material amount.

## Notes to the Consolidated Financial Statements (in thousands)

### Note 2 Summary of Significant Accounting Policies and Reporting Practices

#### (b) Basis of Financial Reporting (continued)

##### **Expenses**

Expenses are those costs the CCEMF has primary responsibility and accountability for, as reflected in the Government's budget documents.

Grants are recognized as expenses when authorized, eligibility criteria are met and a reasonable estimate of the amount can be made.

Expenses include \$1,026 for administration costs and a grant payment of \$75,115 (2010 - \$59,431) made to the Climate Change and Emissions Management Corporation.

##### **Assets**

Financial assets of the CCEMF are comprised of cash and accounts receivable.

##### **Liabilities**

Liabilities are recorded to the extent that they represent present obligations as a result of events and transactions occurring prior to the end of fiscal year. The settlement of liabilities will result in sacrifice of economic benefits in the future.

##### **Net Assets/Net Liabilities**

Net assets/net liabilities represents the difference between the carrying value of assets held by the CCEMF and its liabilities.

##### **Valuation of Financial Assets and Liabilities**

Fair value is the amount of consideration agreed upon in an arm's length transaction between knowledgeable, willing parties who are under no compulsion to act.

The fair values of cash, and accounts receivable, are estimated to approximate their carrying values because of the short term nature of these instruments.

### Note 3 Cash

Cash consists of a deposit in the Consolidated Cash Investment Trust Fund which is managed by the Province of Alberta to provide competitive interest income while maintaining maximum security and liquidity.

## Notes to the Consolidated Financial Statements (in thousands)

### Note 4 Accounts Receivable

	2011			2010
	Gross Amount	Allowance for Doubtful Accounts	Net Realizable Value	Net Realizable Value
Facility Purchases of Fund Units by Sector				
Mining, Oil and Gas Extraction	\$ 13,914	\$ -	\$ 13,914	\$ 15,145
Utilities	6,233	-	6,233	15,484
Manufacturing	1,341	-	1,341	1,231
Transportation and Warehousing	838	-	838	1,112
Waste Management and Remediation	-	-	-	-
	\$ 22,326	\$ -	\$ 22,326	\$ 32,972

Accounts receivable are unsecured and non-interest bearing.

### Note 5 Contractual Obligations

The CCEMF has a contractual grant obligation to the Climate Change and Emissions Management Corporation until September 1, 2014. The annual grant amount is equal to the revenues from Facility Purchases of Fund Units for the calendar year compliance period adjusted for accumulated interest, changes to amounts assessed and the cost of verifications initiated by management.

### Note 6 Approval of Financial Statements

The financial statements were approved by the Senior Financial Officer and the Deputy Minister.

## Other Information

Legislative amendments included:

- *Renewable Fuels Standard Amendment Regulation* ensured that fuels blended between November 1, 2010 and March 31, 2011 qualified for use when market compliance for blended fuels began as of April 1, 2011. The *Renewable Fuels Standard Regulation* establishes a standard for biofuel content in Alberta to reduce greenhouse gas emissions.
- The *Tire Designation Amendment Regulation* increased the advance disposal surcharge on medium truck tires from \$4 to \$9 and introduced an advance disposal surcharge of between \$40 and \$200 for industrial and off-road tires. The regulation created a fee structure that more closely reflects the costs of recycling different types of tires.
- From within an existing allocation of water for irrigation, the Oldman River Basin Water Allocation Amendment Order made up to 1,500 acre-feet of water available for uses other than irrigation, and 150 acre-feet for industrial purposes in the Municipal District of Pincher Creek, the Municipality of Crowsnest Pass, and the Municipal District of Ranchland No. 66. The amendment improves the likelihood of tax base recovery in this area from losses resulting from construction and filling of the Oldman Dam reservoir.
- The *Conservation and Reclamation Amendment Regulation* implemented a new Mine Financial Security Program for reclamation of coal mines and oil sands mines. The new program takes an asset to liability (risk-based) approach to reclamation. It requires a base amount of security for each project to secure a site and place it in a care and custody state if required. Beyond the base amount, financial security is not required if the project assets are more than three times the reclamation liability, the project is more than fifteen years from the end of its reserves, and is keeping with its reclamation plans. The amendment regulation expanded operation of the financial security program to operating plants on mines sites, and by removing grandfathered provisions applied to older operations it ensured consistency in the way reclamation and environmental liability is calculated.
- The *Lubricating Oil Material Recycling and Management Amendment Regulation* extended the expiry date of the regulation by a year to continue the program while additional analysis to identify policy and regulatory options to improve the program was being considered.

This annual report was printed on paper containing the Forest Stewardship Council's certified 100 per cent post-consumer fiber manufactured using biogas energy. The paper was processed chlorine free and is certified EcoLogo. In choosing this paper, Alberta Environment saved one tree; 49 kilograms of waste, equaling 1 garbage container; 1 gigajoule, or the equivalent of 6,688 60-watt light bulbs lit for one hour; 3,249 litres of water, or 9 days of an average person's water consumption; and 128 kilograms of carbon dioxide, which equals driving 856 kilometers.

ISSN No. 1492-9929 Web

ISSN No. 1492-9910 Printed in June 2011



100%